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Designing with igus®, igus® readychain®
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Cost-effective, easy to fill e-chains®
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Zip-open, easy to fill e-chains® and e-tubes
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Allrounder e-chains® and e-tubes, snap-open, micro, mini, medium sizes
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Dirt- and debris protection, snap-open e-tubes
E2 e-tubes: Series R, Series R100 and Series RX
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Universal E4 modular kit, e-chains® and e-tubes for all applications
System E4 - Series E4.1, New E4.1 light and E4/light
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Cleanroom e-chains® and e-tubes, low noise, low vibration
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Multi-axis e-chains® for robotic or 3D movements
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Strain relief... clamps, tiewrap plates, clips, etc.
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Guide troughs, e-chains® and special solutions for long travel applications
New guidefast, E4/4HD, P4, rol e-chain®, autoglide, guidelok, flizz®
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Cable protection
PMA conduits
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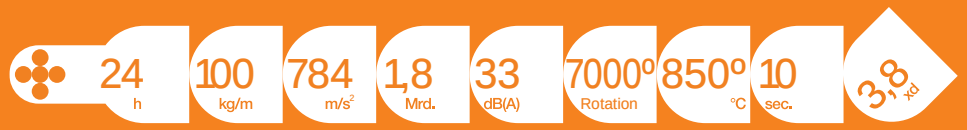
Technical annex
Fax forms, terminology index, igus® addresses
(you can now find igus® classics series in a separate catalogue or at ► www.igus.eu/classics)
from page 1392



igus® headquarters in Cologne - development, production and marketing from a single location



the-chain
Supplying energy made easy. For any industry.

For any application and any type of motion, in any industry: igus® **the-chain** greatly simplifies supplying energy and media! More than 90,000 products from stock help finding the right solution for your specific needs. From individual components from stock to complete, ready-to-install "readychain®" energy supply systems within days - igus® **the-chain** follows your production.
the-chain initiative combines a constantly growing range of new energy supply solutions for any motion with simplified product selection.

Millions of different energy supply system versions are available world-wide, a number that is growing daily. But many of you only need a few, or possibly only one of these. We are therefore pursuing the objective of reducing product selection complexity to a previously unknown level. **the-chain** means configuring and ordering within minutes, shipment within hours, and reliability for many years. We are constantly upgrading our product range - with the intent of supplying any customer with the respectively best energy supply system solution on the basis of our e-chain® construction kit within hours - fully matching the customer needs, as individual components or a complete system, even locally installed.

Available from stock.
Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

No minimum order value!
No surchages!
You can find our prices online at www.igus.eu

Guarantee
Beyond the legal warranty we also vouch for wear and tear. With a warranty certificate!

"8 to 8 plus Saturday" service
Monday till Friday 8:00 am to 8:00 pm and Saturday from 8:00 am to 12:00 pm

Hotline
Phone +49 2203 9649-800
Fax +49 2203 9649-222

Onlineshop www.igus.eu
Product finder, configurator, online catalogs, CAD modules and many more. Order around-the-clock!

plastics for longer life® -
Increase the service-life of your machines with e-chains® from igus®
Reducing maintenance work, while cutting costs and extending the service-life, everything delivered from stock immediately - this is the core idea and the objective behind all igus® products. This catalogue contains more than 90,000 products available from stock or at short delivery times, and starting at a "lot size of one". We look forward to your call or email.

Orders can be placed until 8:00 pm local time.
Phone +49 2203 9649-800
"Emergency-Service" around the clock.
90.000 products from stock.
No minimum order quantities, no surcharges.

igus® is certified in accordance with DIN EN ISO 9001:2008 and ISO/TS 16949:2009 in the field of energy chains® with cables and harnessing, as well as plastic plain bearings.

© igus® GmbH - 07/2013

24h/90.000
DIN EN ISO 9001:2008
ISO/TS 16949:2009

the-chain
igus® e-chains® are lifelines to automated systems

e-chains® are the umbilical cord of modern machines. They are constantly moving and supply power, data and energy. igus® has been developing, producing and testing polymer e-chains® since 1971. Our expert knowledge is being refined continuously with the help of our customers to constantly improve our product range.

Universal applications for igus® e-chains®

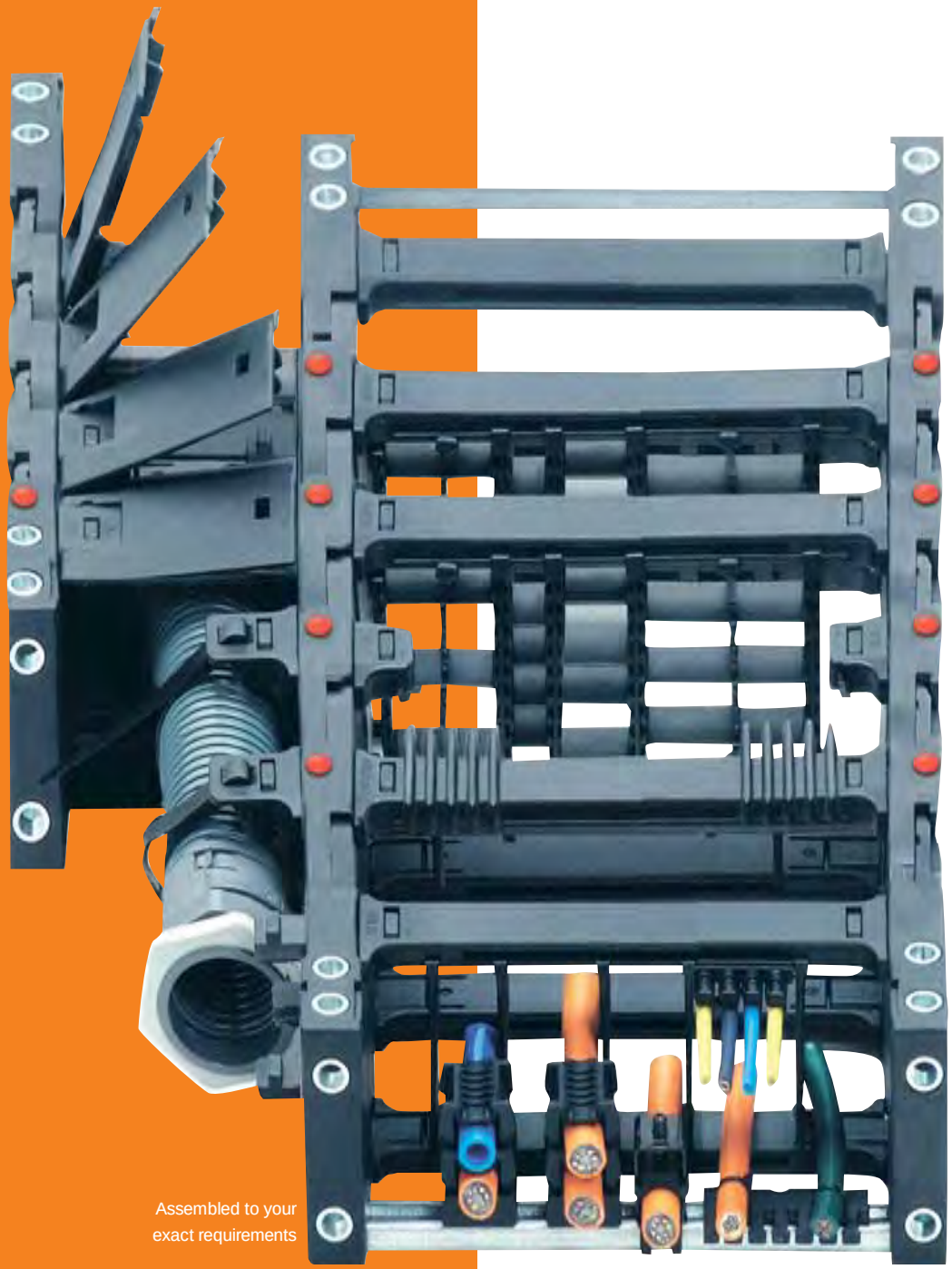
- Multitude of possibilities in terms of movement and length
- To carry sensitive bus, data cables and fibre optics cables and energy sources such as electricity, gas, air and liquids
- To accommodate very high dynamic loads and stringent service life requirements
- Handle very different environments and climates
- Space-saving installation
- High speeds and accelerations can be achieved
- Modular systems allow quick assembly and retrofit

Save time and money when purchasing and utilising e-chains®!

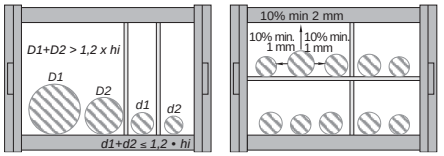
- Innovative products that can be assembled quickly
- Rapid delivery time - saves you storage costs
- Large range of products - find the right solution immediately
- System quotes, including made-to-measure production and "turnkey" assembly
- Rapid system design and support with an ever-growing close-knit network of local sales engineers worldwide

clip Find a video online
www.igus.de/automated

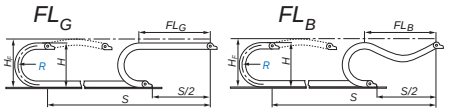
The award-winning igus® e-chainsystems® are certified and tested



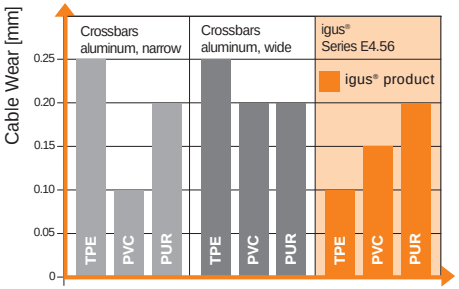
Assembled to your exact requirements



igus® interior separation systems significantly lengthen the life cycle of cables and enable neat layout of e-chains®.
Filling guidelines ► from page 122



Large unsupported lengths with igus® e-chains®.
Notes, calculations and load diagrams are provided
► from page 95



Optimum service life for cables -
Reduce cable wear with igus® polymer crossbars



Proven toughness - strength testing in the igus® laboratory

chainflex® lasts. Or your money back.

Your production processes must remain trouble-free, and that means your energy supply systems too. This requires fully reliable operation by all relevant components, including cables. igus® was the first company to develop complete e-chain-systems®. igus® chainflex® cables and e-chains® are offered together from a single source with a system guarantee depending on the application involved design principles based on knowledge of cables and exhaustive test Series since 1989 prevent machine downtimes in plants all over the world today.

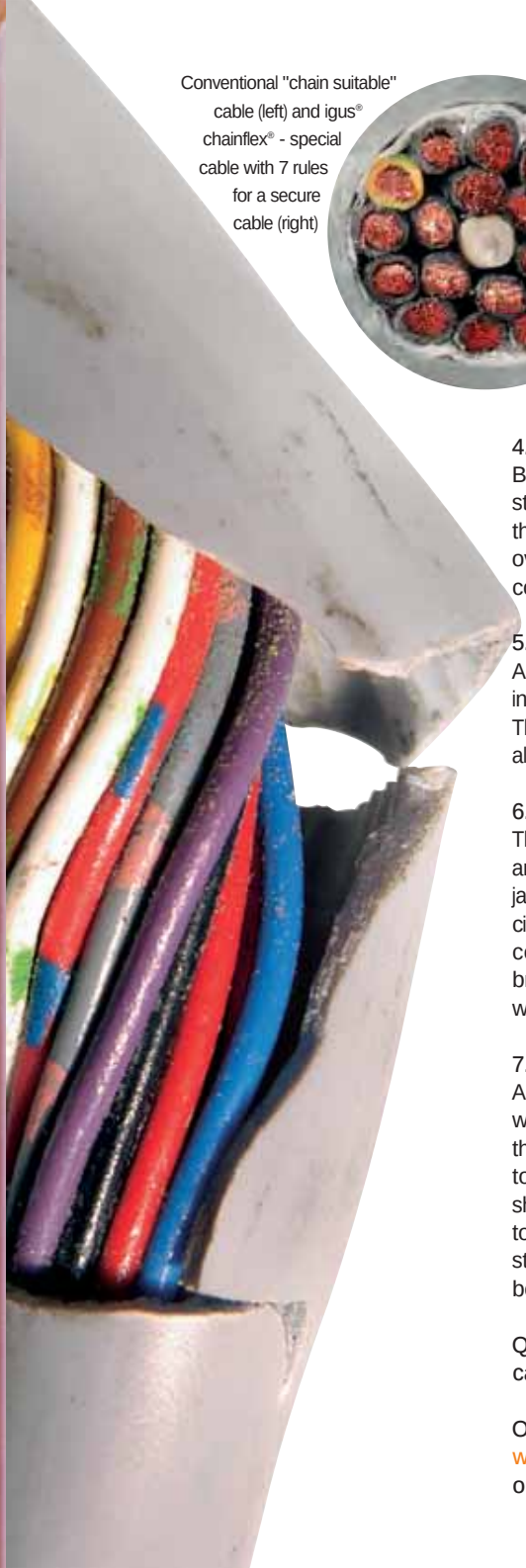
7 rules for making a good cable

1. Strain-relieved core
Empty space arises at the core of the cable depending on the number and cross-section of the conductors. This core space should be filled to the greatest possible extent with a proper rope (not with the usual fillers or dummy wires made of waste material). This reliably braces the surrounding strands and prevents them from sliding into the middle of the cable.

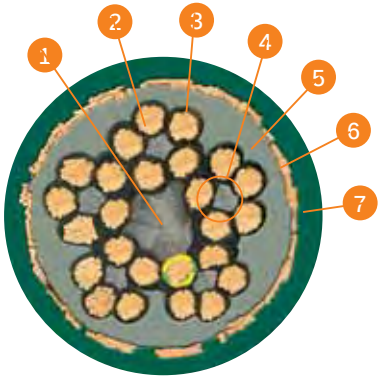
2. Strands
Experience has shown that the strand structure should be as flexible as possible. Although very thin individual wires result in very flexible conductors, these are highly susceptible to damage. Extensive test Series have helped to determine which combination of wire diameter, strand pitch and strand direction optimizes bending resistance.

3. Core insulation
Insulating materials must be designed so that they do not stick together once inside the cable. Furthermore, the insulation should brace the individual wires of the cable. For this purpose, we use only the best PVC and TPE extruded at high pressure and proven in millions of kilometres of wire forming part of e-chain® applications.





Conventional "chain suitable" cable (left) and igus® chainflex® - special cable with 7 rules for a secure cable (right)



4. Braids
Braids must have an optimized, short pitch around a stable, strain-resistant core. To co-exist properly with the insulating materials, braids must allow movement over a certain range. Starting from a quantity of 12 cores stranding in bundles should be applied.

5. Inner jacket
A gusset-filling, extruded inner jacket should be used instead of low-cost non-woven fabric, filler or tracer. This permits secure longitudinal routing of the braid. It also prevents the braid from loosening and drifting.

6. Shielding
The shield should generally have a taut structure with an optimized angle of twist about an extruded inner jacket. Loose, open structures or, worse yet, purely circumferential windings notably reduce electromagnetic compatibility and can fail easily as a result of wire breakage. A taut shield braid makes the underlying wire braid more resistant to torsional strain.

7. Outer jacket
An external jacket made of ideal materials can meet a wide range of specifications: From UV resistance through low-temperature flexibility and oil resistance to cost-effectiveness. However, all external jackets should have the following in common: Highly resistant to abrasion without sticking and highly flexible while still supportive. In addition, all external jackets should be extruded at high pressure (gusset-filling).

QuickPin 2.0 - Online connector-cable-configurator ► page 23

Order separate catalog online
www.igus.eu/eu/chainflex
or phone +49 2203 9649-0

igus® readychain® - ready made e-chainsystems®



Eliminate storage costs for cables, e-chains® and plugs

Our short and guaranteed delivery periods enable you to dispense entirely with a storage of ultra-flexible cables, related plugs and add-ons.

Shorten turnaround times by half

Thanks to sophisticated logistics, igus® is able to supply complete systems within 10 days of the guaranteed deadline to almost any part of the world.

Flexible response to order fluctuations

With readychains®, you remain prepared for all phases of an economic cycle. Fluctuations in your capacity utilization are absorbed by our product logistics.

Reduce the number of subcontractors and related orders by 75%

One order, one invoice, one delivery, one partner. You no longer need to procure countless individual components from a host of subcontractors; we know how to acquire the right parts quickly and economically.

Minimize your machine downtimes

External purchases of numerous individual components not only make your systems more susceptible to malfunction but also make trouble-shooting more difficult. readychains® provide you with standardized systems. Every system is tested at out facility prior to delivery. igus® is certified in accordance with DIN EN ISO 9001:2008 and ISO/TS 16949:2009 in the field of energy chains® with cables and harnessing, as well as plastic plain bearings.
www.igus.eu/eu/readychain

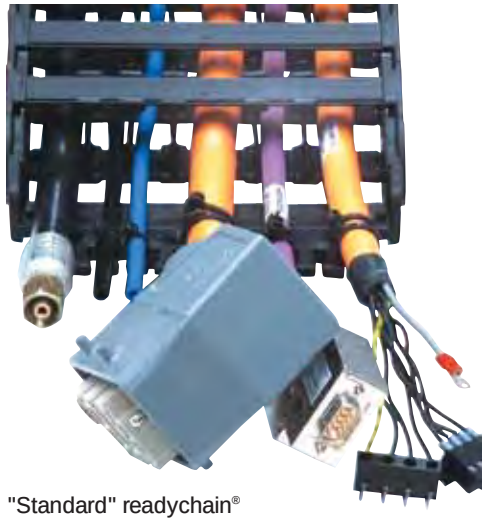
Find a video online
www.igus.eu/eu/RC_movie



"Basic" readychain®

Simple, harnessed e-chainsystems® including installed cables without plug connections, labelled and tail-lengths according to your specifications.

Delivery time*: 3 days



"Standard" readychain®

Simple, harnessed e-chainsystems® including installed cables with all plug connections, labelled and tail-lengths according to your specifications.

Delivery time*: 3-5 days

Figure left: "Premium" readychain®

A harnessed e-chainsystem® with cables of all kinds, as well as plugs, connectors, tail-lengths and components according to your specifications. Special shafts and plain bearings machined according to your specifications.

Delivery time*: 10 days

*Delivery time means time until shipping of goods (after technical release)

Quality from the igus® laboratory: Tested and proven every day.

Applications involving high cycle counts, speeds and accelerations or demanding environmental conditions require proven systems especially when it comes to e-chains®, cables, polymer slide bearings and linear systems. igus® regularly conducts tests at its own laboratory under realistic conditions. Every year, we conduct more than 15,000 for e-chains®, cables an polymer bearings. These tests focus on push/pull forces, friction values, wear rates, drive forces and abrasion under all possible conditions at diverse speeds. Influential factors like soiling, weathering, cold and impact are examined. Tests are also performed on electric cables and hydraulic and pneumatic hoses. Our laboratory is at your disposal. Should we lack data for your application type, we will gladly conduct tests according to your requirements.

Find a video online
www.igus.de/testlab



igus® system warranty - Every application is different. igus® warranty certificates will be issued for your application individually. Ask for igus® warranty: **"chain, cable, guarantee"**

Figure center: Partial view, igus® test-lab: More than 80 tests every day with e-chains® and chainflex®-cables





igus® ESD-tests
in the production line



Electronic check and archiving
for every chain production run



Cables are also tested
for torsion properties



Noise level test inside
an igus® acoustic cell



igus® dynamic
bending test



Long term wear test
of P4 profile-rol e-chains®



Push Pull forces speed up to 10 m/s, acceleration up to 200 m/s² are tested by igus®



Long travel test field: 125 m travel length, speed 300 m/min

All products are tested and available from a single source.
Examples of test certificates and quality seals for igus® products

Quick and reliable. igus® delivery service.



8 to 8 plus Saturday service
Over 90,000 products ex-stock! Order 0.1 m of chainflex® cable, just one e-chain® link or two bearings without surcharges. Invoices and acknowledgements available by post, fax or e-mail. There are 2,150 employees in Germany and 30 international subsidiaries and offices to guarantee a rapid delivery worldwide.

- Delivery and consultation daily from 8 am to 8 pm, Saturday from 8 am to 12 pm
- No minimum order values
- No surcharges
- Order tracking on the Internet right up to the point of delivery
- Simple returns procedure

i-net customer information system
At: www.igus.eu track your orders in real time with igus® i-net. Just request a password, log into i-net and track your jobstatus via a webcam. igus® i-net shipment tracking permits a monitoring of deliveries from igus® outlet right up to your doorstep.

- Detailed order data including an overview of target and actual deadlines
- Order confirmation via post, fax or e-mail as required
- Track your orders via webcam

igus® delivery service -
No minimum order quantities, no surcharges.
www.igus.eu/eu/deliveryservice



Request order tracking here:
www.igus.eu/eu/i-net

Available from stock.
Delivery time* in 24h or today!

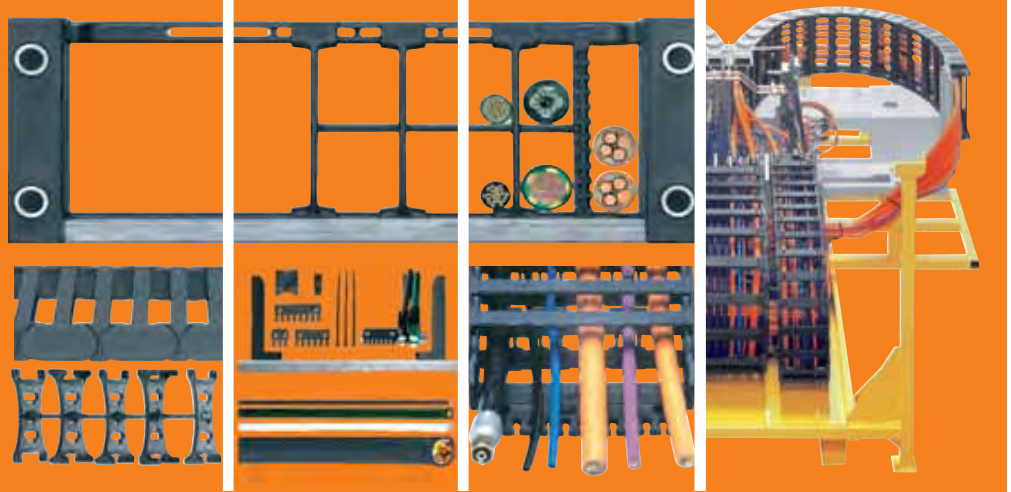
Delivery time* 24-48h

Delivery time* 3-5 work days

Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Individual components	Customized e-chainsystems®	Simple pre-fabricated systems	Complex pre-fabricated systems
For example: One e-chain® link, 6 m of e-chain®, 3 strain-relief elements	*For example: 11.46 m of e-chains® with interior separators, mounting brackets and strain relief elements according to your specifications. Additional with loose accessories as chainflex®-cables, guiding troughs, mounting brackets, strain reliefs and assembly parts*	*For example: "Basic" readychain®: Simple customized e-chainsystems® including installed cables without plug connections, labeled and tail-lengths according to your specifications*	*For example: Premium readychain®: Complex customized e-chainsystem® including cables as well as plug connections, mounting brackets, tail-lengths and components according to your specifications.*



The igus® story since 1964 until today

Innovation with plastics

The igus® story begins on October 15th, 1964 with Günter Blase in a double garage in Cologne-Mülheim. In its first 20 years, igus® operated as a supplier of intricate technical plastic components. In 1983, son Frank Blase started to concentrate on full products like e-chainsystems® and Polymer Bearings and established a separate marketing department. Between 1985 and today, igus® expanded from 40 to over 2150 staff members distributed all over the world. igus® will continue to invest in expansion in the coming years. Modern materials have opened up further opportunities for innovative products.



igus® Sales & Marketing, from left.: Tobias Vogel, Head of Sales & marketing Polymer Bearings, Harald Nehring, authorized signatory, e-chainsystems® & chainflex®, Gerhard Baus, authorized signatory Polymer Bearings, Michael Blaß, Head of Sales & marketing e-chainsystems®, Frank Blase, CEO.



Today: Automated plastic production



Today: Large tool development and production facility

1965 First iglidur® sliding element: Plug valve for the company Pierburg

1971 First e-chain® (series 20)

1979 First e-chain® catalog, 2 pages

1980 First Polymer Bearings catalog, 8 pages

1989 First chainflex®-cable CF1

1989 E4 e-tubes, to open on both sides

1991 xigus 1.0 electronic catalog

1993 introduction of drylin® R

1994 introduction of igubal®

1995 readychain®, with the slogan "Chain-Cable Guarantee"

1997 drylin® T

2001 System E6 e-chains®

2001 drylin® N

2003 triflex® R

2003 drylin® W

2005 iglidur®-PRT slewing ring bearings

2006 levichain

2006 System P4 rol e-chain®

2007 System E4.1 e-chain®

2007 drylin® ZLW

2008 E4.350 – largest polymer e-chain®

2008 xiros® polymer ball bearings

2009 E4.1 – new interior separation tool box

2009 RX – chip-proof e-tube

2009 guidelok horizontal – for long travels

2009 igus® robolink®

2010 igus®-twisterband: turn 7000°

2010 pikchain®, for Pick & Place

2010 E2/000 – Chain opener

2010 drylin® lead screw nut with Anti-Backlash

2011 E4.1 light – allround e-chains® for high dynamics

2011 GLSL-F – safe vertical guide of e-chains®

2011 drylin® E – linear axes with stepper motor

2011 iglidur® N54 – iglidur® goes green

2012 alternative to cable drums: e-spool modular kit

2012 flip open chain links at triflex® R

2012 xiros® polymer ball bearing, double row

2012 drylin® low profile axis 22x28 mm

65 70 75 80 85 90 95 00 05 06 07 08 09 10 11 12

Company founders Günter and Margret Blase in front of their "double garage" from 1964

1977: Relocation to the Locher Mühle in Bergisch Gladbach

1994: Relocation to the new igus® factory in Cologne

2009: Extension by around 60% of the igus® factory in Cologne

2012: 2nd extension of the igus® factory in Cologne

staff

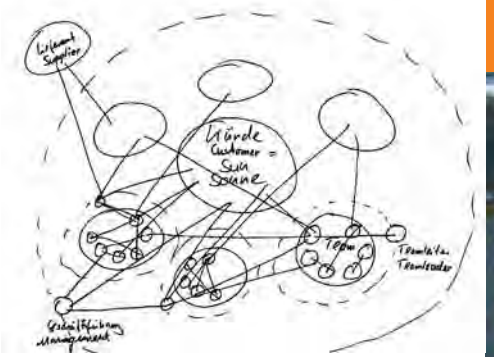
products with variants

5 10 27 160 1,000 8,000 45,000 1,000 80,000 1,600 1,800 90,000 2,000

The flexible igus®-factory



The environment at igus® is fully open - anyone can contact anyone else directly, everyone works at identical desks, has the same work equipment, the same choice of meals at the cafeteria and the same bathroom facilities.



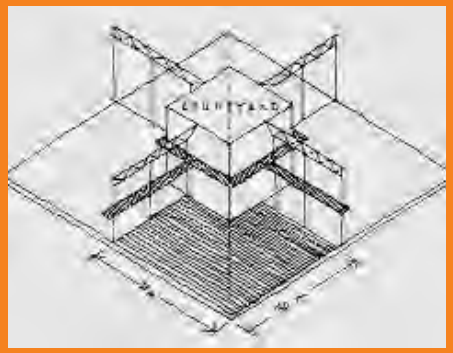
For us, customers have the same significance as the sun to life on earth. The sun gives light, warmth and energy - our customers give us ideas, work and money.

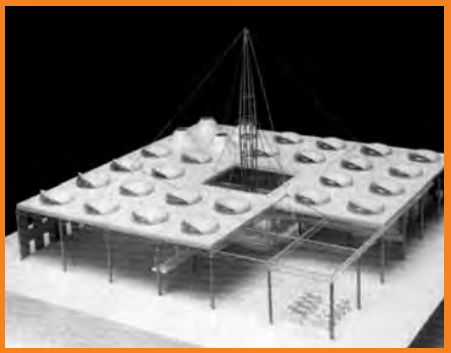
Figure right: The extension by around 60 percent to our lean igus® factory in Cologne is now finished and been put into operation. We supply 90,000 products from stock in 24 hours or on the same day, from a quantity of one and without minimum quantity surcharges.

Investments in better technology and faster delivery times

Catalog items have to be on stock, to mount the modules according to customer requests within hours and shipped. igus® send out from stock in 24 hours or at the same day. We deliver from batch size one and have no minimum order value. igus® are continuing their growth trend and is focusing more than ever on sophisticated yet simpler solutions for all innovations and investments. Nine facilities worldwide were expanded 2012 by between 50% and 250% last year, the factory in Cologne allready expanded by 60% in 2009 and is being expanded by more 10,000 m² in 2013, and innovation speed stepped up to 134 product innovations (2013). New capacities are being created particularly in the readychain® factory, which is already designed to produce about 50,000 pre-assembled cables per month.

Find a video online
www.igus.de/igus_Film





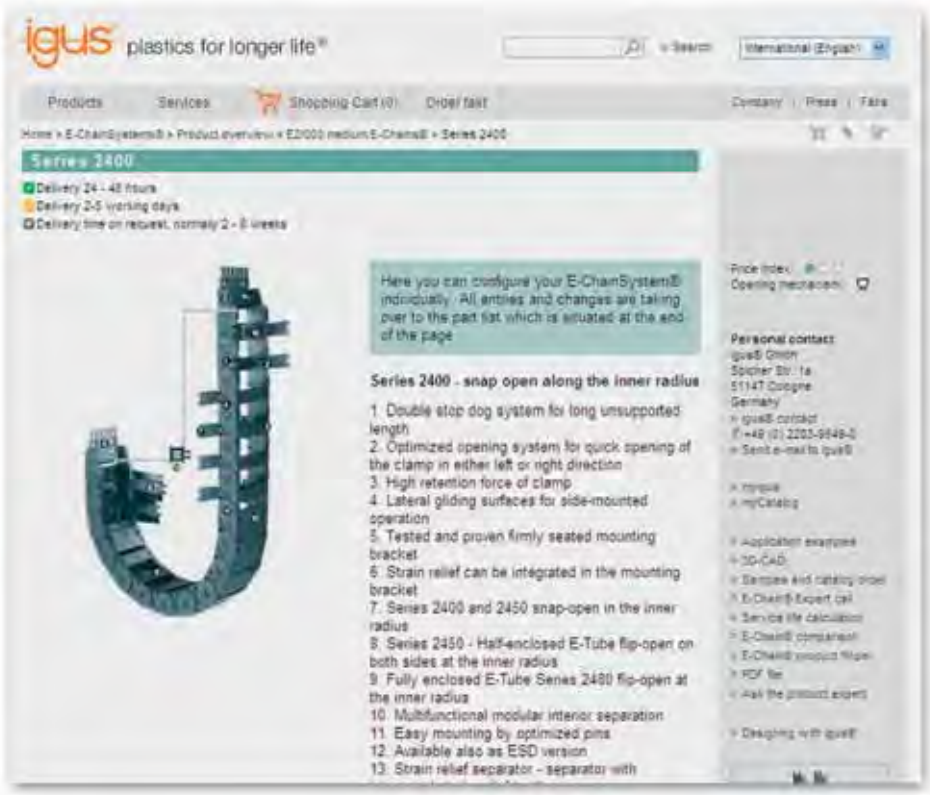
Excerpt of architect's briefing...

"In October 1988, igus® acquired a plot sized about 40,000 m² in the Porz-Lind district of Cologne. This will be the future site of development, production, sales, administration and planning. As the centre of all activities, this location will serve as the new igus® headquarters. igus® has made preparations for fast growth, fast change and flexible response in all areas...

Offering the necessary facilities and technology, the new "igus® premises" will also be designed to promote staff performance. The interior and exterior will be designed to reflect the enterprise's products and key philosophy: innovation - service - reliability, the customer being comparable to a solar system's centre orbited by all igus® staff and igus® entities dedicated toward solving the customer's problems."



QuickLink - igus®
e-chains® on the internet!



Go online and make use of all advantages at www.igus.eu or every product in this catalog, there is a special QuickLink or direct online pointer to further useful details, data and facts. These include:

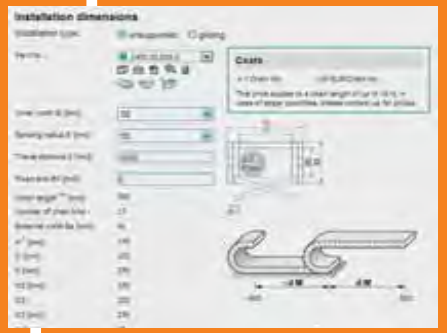
- Application videos and pictures
- Assembly instructions
- 3D-CAD files
- DXF data
- Comparisons and selection aids
- Online configuration tools
- Online wizard for calculations of service life
- PDF-data and other formats for download: ePlan-Download
- Personal support
- Catalog, CD and sample ordering forms

Example:
www.igus.eu/eu/2400

Create your complete e-chain® with cables. A complete e-chainsystem® at few mouse clicks
www.igus.eu/eu/konfigurator

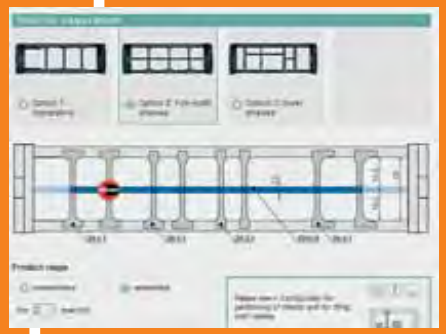


"Search" -
e-chain® product finder
Find the right e-chain® quickly and easily by entering known application data and other parameters.



"Calculate chain length"
e-chain® length calculation.
Calculate the e-chain® length and see all installation heights

"Configure" e-chain® interior separator configuration
Quickly and easily determine interior separation for the selected e-chain® via Drag & Drop. The configuration can be transfered automatically to your part list.

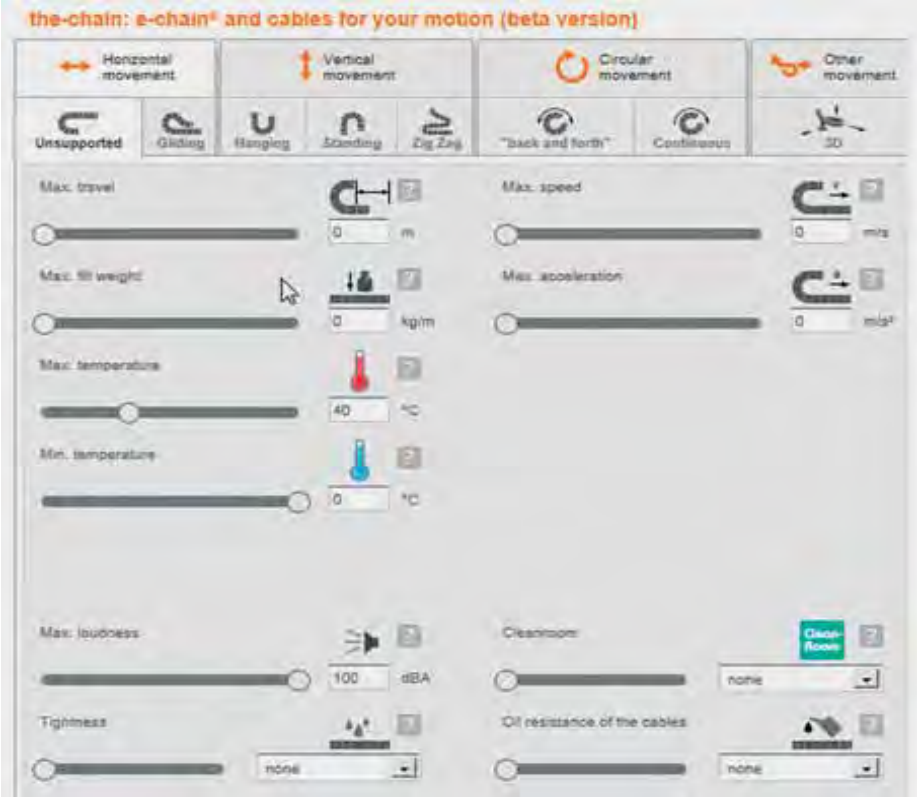


"Generate 3D file"
e-chain® CAD library
Download and save CAD data free of charge without having to register. Data on all products are updated and extended on a regular basis - nearly 30 3-D and 2-D formats are available



Take a tour www.igus-CAD.com

igus® the-chain
Quickly and easily find the matching energy supply system



the-chain: e-chains® and cables for my motion - one website for any installation type
www.igus.eu/the-chain quickly and easily finds the right e-chain® and cables for various motions. Simply select between horizontal, vertical, circular and undefined motions. Enter the required application parameters with a few clicks and immediately obtain an overview of matching e-chains® and cables.

- Quickly find the right e-chains® and cables
- Combined product selection aid for e-chains® and cables
- Very simple and fast selection by motion type
- Direct access to the online catalog

Online-tool: www.igus.eu/the-chain

igus® online - The desired cable within 3 minutes using the chainflex® custom cable configurator









igus® revolutionises the production of custom cables that are not shown in any catalogue Based on the "igus® chainflex® supply chain organization", igus® is now in a position to supply customers with an almost "infinite" variety of customised cables and to manufacture at igus® tested quality with a fast turnaround. This program combines igus® tested chainflex® quality from the chainflex®/e-chain® lab (more than 1,750 m² floorspace) with the specific requirements of our customers.

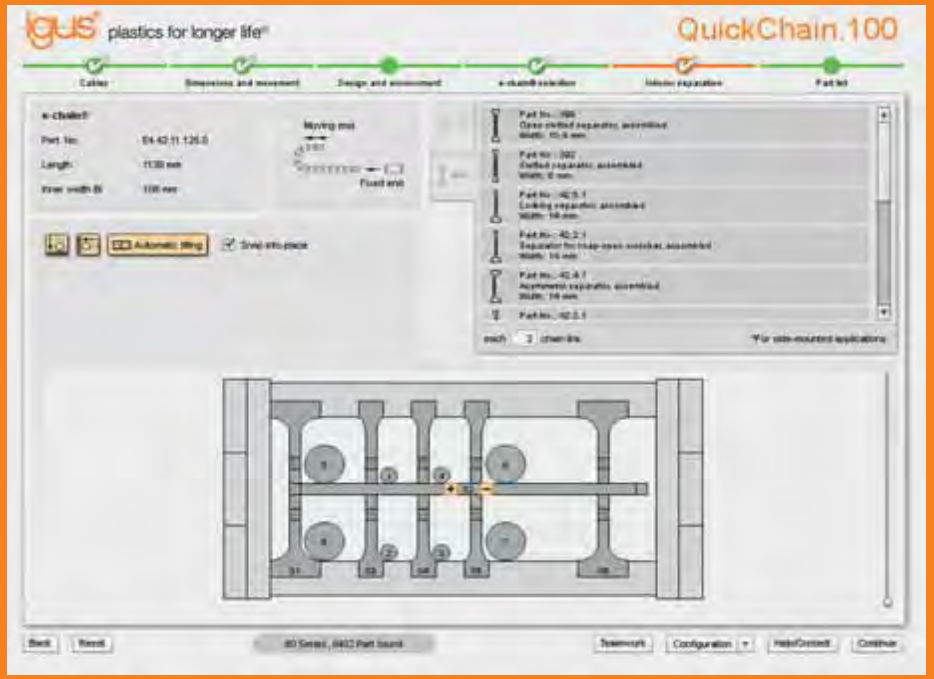
The new chainflex® custom cable on-line tool provides the option to select

- the cable type
- the configuration
- the shielding
- the jacket material
- the colour
- the custom labeling...

Starting immediately, this custom chainflex® cable can be ordered within 3 minutes at the daily prices starting at 300 m, and is shipped within 3 weeks.

Online-tool: www.igus.eu/eu/CCC

igus® online configurator for interior separation- www.igus.eu/eu/quickchain100



Change the e-chain® and accurately select the correct width directly in the configurator - Cable overview for better handling

igus® online configurator for interior separation!
Quickly and accurately to the correct e-chain® and chainflex® cable combination
With the interior shelving configurator you design the complete filling of an e-chain® easily and quickly and generate a 3D-CAD-file with one click.

- Interior shelving configuration now with logical check of min. bending radius
- No manual calculation and crosscheck of the chainflex® cable diameter and e-chain® cross section necessary
- Now with cable overview for better handling
- Changing of the e-chain® width - now possible also in the inner shelving configurator
- Download e-chain® partlist with interior shelving and cables in Excel format

www.igus.eu/eu/quickchain100

Quick & Easy - QuickPin 2.0 - Pin-Out Configurator - www.igus.eu/eu/quickpin

QuickPin 2.0 - connector-cable configurator, directly integrated in *ePLAN* P8
In only 3 minutes you choose out of more than 950 chainflex® cables and 3,000 connector components, configure cables online, order directly and generate an *ePLAN* electric P8 macro

- Create a new configuration directly from *ePLAN*
- Opening of existing configuration
- Verification of cable configuration
- Acquisition of existing configuration via the download manager for cable macros
- Available in *ePLAN* P8
- Quick and easy configuration and ordering of chainflex® cables and connectors. Per mouse click and drag & drop
- Circular plug-in connector, squared plug-in connectors, sensor connector M8/M12, D-Sub and free cable ending possible
- Just a click to transfer the configurated cable to the shopping basket and inquire, order or memorize for a later order
- Possibility to recall inquired cables from order history for new inquiries
- Online pricing, including copper charge
- Save design work: free of charge delivery of *ePLAN* electric P8 marcro of the configurated cable
- Harnessing from one source -100 % tested
- Details of your personal contact person available on the spot
- No installation required
- Many languages available
- Individual connector specification or components by manufacturers part numbers available

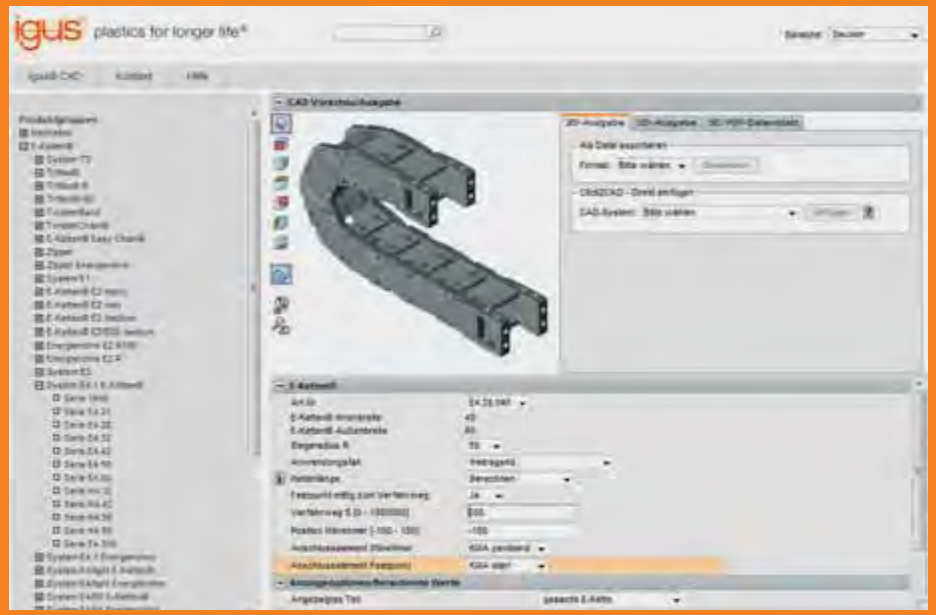
Find a video online
www.igus.eu/eu/quickpin-demo







CAD online/offline... The 3D-CAD system is now also available offline



Now available: QuickCAD offline version

QuickCAD offline version

For all situations with limited internet access QuickCad is now also available as an offline version.

- Generation of 3D CAD models in 32 file formats
- CAD direct insertion driver for faster data transfer to various CAD systems (e.g. AutoCad, Inventor, Solidworks, CATIA, etc.)
- Quick and easy creation of 2D derivatives
- Integrated 2D and 3D CAD viewer
- Generation of 3D PDF datasheets
- 2D and 3D CAD files can be directly integrated in PDF files
- Available in 16 languages
- Runs without installation
- Of course, as ever before, all CAD data are available to you without registration at: www.igus-cad.com for quick downloading

www.igus.eu/eu/quickcad-download

igus® applications.

Many example applications with igus® e-chainsystems® from next page

New for your tablet - igus® WebGuide app

Fast and intuitive access to the desired product, facilitated by reducing the required information to a minimum and tight integration with on-line configurators, videos and CAD data. Find - review - configure - order at a touch. The app is available for free at Apple's app store and at the Google Play store.

More information ▶www.igus.eu/webguide



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Practical examples: Installation methods

The world-wide largest plastic e-chain® (as of 05/2013), the igus® E4.1 Series E4.350. Equipped with rollers, it travels energy-efficiently. In this case for a slurry vacuum application. 150 m travel, 100 kg/m filling weight



Series E4.1 with side-mounted clip band as a guide for a suction hose. Partiallly with unsupported lower run



Standing application of an E2/000 e-chain® with opening crossbars for gentle guidance of large hoses



Several igus® e-chains® for various requirements on this torch cutting machine



A host of standing igus® E2/000 e-chains® reliably supply this machining center



igus® E4 e-tubes - unsupported, standing, or nested - supply this CNC machine. Fill weight up to 24 kg/m and v = 50 m/s



The igus® E4 clamp chain additionally guides an igus® E2/000 e-chain® filled with cables

Practical examples: Installation methods



Data gloves with easy chain® Series E03 - Protect the sensors which makes it easier to take off an put on the gloves. Inner height of 5 mm



Two fully harnessed E2/000 e-chains® with high fill weight, side mounted



Unsupported application with harnessed e-chainsystem® E4



E2/000 - high stability in this elevator with an height of 160 m



Series R68 works in an apple-sorting-machine: humidity and dirt



Standing application with System E4 and fixed KMA mounting brackets



Drive simulator. High fill weights (60 kg/m) with E4 System

Applications: long strokes

Solutions with igus® e-chainsystems®
igus® e-chainsystems® guide and protect moving cables and hoses on automated equipment. They can be used in a wide variety of applications; some examples following. More exciting examples **www.igus.eu/eu/EKPraxis**

Find a video online
www.vector-award.eu

The worldwide longest e-chain® travel of 615 m with igus® rol e-chains® and chainflex® cables in a power plant



System E6, side mounted, in high-speed camera positioning system - high speeds and low vibrations



Long travel length with the super-alu-trough in a cold store



igus® steel guide trough used in a shelf conveyor application, series 3500 and chainflex® cables



igus® steel guide trough used in a long travel robotics application



e-chain® Series 4040RHD rol e-chain® in an igus® super-alu-trough = up to 75% less driving power



Travel up to 195 m with the igus® System E4, safely guided in an igus® steel trough

Applications: machine tools

Portal milling machine with fully closed E4 e-tube with special material igumid HT. 850°C hot chips - no problem



Series E4.42 in a machine tool, completely assembled with igus® chainflex® cables



readychain® with combined motions on tooling machines. Turnkey delivered with special parts for your machines



E2/000 dirt resistant e-chain®, which saves installation space - here machine tool for workpieces



Machine tool gantry with various E4 e-chains® - fast movements and high cycle counts



E4 e-chain® was used here in curved sections with a 45 m travel distance



Short travel lengths and high accelerations with Series E2 mini

Applications: cranes & offshore

OpenHydro tidal turbine generates electric power through the inflow and outflow of water at low and high tide. Series 4040 protects the deployed chainflex® cables during the lifting and lowering movements of the turbine and also protects them against aggressive ambient conditions. The travel distance amounts to approx. 20 meters in a vertical direction above and under water with the robust e-chain® guided in a steel trough. The vertical travel is transformed into a horizontal stroke by turning through 90 degrees.



Seawater resistant super-alu-trough in a RTG-crane. Long travel with the E4 system



Stable guidance without oscillation. Long travel with 32 m, crane operating speed 80 m/min.



E4 as ZigZag version in a crane. The E4-Series guarantee very high availabily of the facility



E4 with extension link at a ship loader for coal unloading. Travel 105 m, speed 240 m/min, load 53 kg/m



Installation of an E4.1 e-chain® Series 800 in an igus® steel guide trough



e-chain® at the mast of the shelf conveyor rolls from one aluminum guide trough to the opposite one

Applications: high speed & smooth running

Long travel and side mounted installation with the vibration-free and low noise Series E6.29 in this camera application



System E6 in a pick and place robot.
Handles injection molded CD covers in a split second



E6 accelerates the work sequences in the case of this application for wafer handling - a = 4 m/s², v = 6 m/s



igus® Series E3.15 side
mounted in a flat-bed scanner



igus® System E6 - High
acceleration (8 g) and ESD safety



Nested e-chains® reduce vibrations
and improve milling accuracy Series E6.62



Low-noise low vibrations with E6.
Designed to withstand high dynamic loads

Applications:
circular & 3D-movements



easy triflex® e-chains® for multidimen-
sional movements on a production line



E4 "RBR"- application in a telescope -
cold temperatures and snow - failsafe



Laser measuring telescope with triflex® R. Rotary motion
in both directions ≤ 310° possible at high speeds ≤ 20 m/s



An igus® twisterband guides the energy of the 5-axis cutting
heat in this wood working machine, safe and cost-effective



Circular movement with System E4 -
safe energy supply on cranes



triflex® R in a magnesium die-casting industry
(heat, dirt, oil, metal chips, dust, etc.) - failsafe



E2 mini, Series B15 - The motor spindle
has a swivelling range of approx. 210°

Products overview

Cost-effective, easy to fill

Simply press cables in easy chain® | Version E



5-48,5 Split crossbar along the outer radius. (Some series available with multiple chamber system) ▶ from page 146

Simply press cables in easy chain® | Version Z



9,4-48,5 Split crossbar along the inner radius. (Some series available with multiple chamber system) ▶ from page 146

Cost effective

e-chain® on one strip System E1



10-20 Snap-open lids along the outer radius, very easy to fill ▶ from page 206

For simple applications

Loop e-chains® snapchain



50-120 Adjustable loops, to be opened along the inner (TZ) and outer (TE) radius ▶ from page 220

Zip fastening e-chains® and e-tubes

Fast assembly with zipper zipper | e-chains®



9-32 Zip-open along outer radius, fast assembly ▶ from page 228

Fast assembly with zipper zipper | e-tubes



10,3-32 Zip-open along outer radius, fast assembly ▶ from page 228

Smallest e-chains®

Smallest sizes, one-piece E2 micro | Non snap-open



5-15 Non snap-open. Smallest inner heights and bending radii ▶ from page 292

Smallest sizes, one-piece E2 micro | Snap-open



10,9-14,3 Snap-open along inner radius with film-hinge ▶ from page 292

Smallest sizes, two-piece E2 micro | Snap-open



10,3-14,3 Snap-open along outer radius ▶ from page 292

Small e-chains®

Small sizes, one-piece E2 mini | Non snap-open



18-41 Non snap-open. Large pins and double stop dog system ▶ from page 346

Small sizes, one-piece E2 mini | Snap-open with film-hinge



20-32 Snap-open along inner radius with film-hinge ▶ from page 346

Small sizes, two-piece E2 mini | Snap-open



17-32 Snap-open along outer radius, double stop dog system ▶ from page 346

Small sizes, two-piece E2 mini | Snap-open



17-32 Snap-open along inner radius, double stop dog system ▶ from page 346

Allrounder e-chains® and e-tubes

Medium sizes, **e-chain®**, two-piece E2/000 | Snap-open



21-45 Snap-open along inner radius.High stability, quiet motion ▶ from page 400

Medium sizes, **e-chain®**, two-piece E2/000 | Snap-open



21-45 Snap-open along outer radius. High stability, quiet motion ▶ from page 400

Medium sizes, **half e-tube**, two-piece E2/000 | Snap-open



21-45 Snap-open along inner radius. High stability, quiet motion ▶ from page 400

Medium sizes, **e-tube**, two-piece E2/000 | Snap-open



21-45 Snap-openalong inner radius. High stability, quiet motion ▶ from page 400

Chip protection

Snap-open along inner radii E2 e-tubes | R100



21-50 Snap-open on both sides. Excellent chip protection ▶ from page 492

Products overview

Continuation

Protection against dirt,dust and chips

Snap-open along outer radii
E2 e-tubes | R100



21-50

Snap-open on both sides. Excellent chip protection ▶ from page 492

Removable lids along outer radius
E2 e-tubes | R



25-45

Removable lids along outer radius. Small pitch for smooth operation ▶ from page 530

Openable along outer radius
RX e-tubes | Extremely chip repellent



41-73

Extremely chip repellent without undercuts, projecting edges and gaps ▶ from page 574

E4.1 - universal E4 modular kit, e-chains® and e-tubes for almost any application

Standard, 4-piece, openable
E4.1 | Crossbars every link

New in this calalog | E4.112



21-350

Long travels, large unsupported lengths, openable ▶ from page 612

Standard, 4-piece, openable
H4.1 | Crossbars every 2nd link



32-80

Long travels, large unsupported lengths, openable ▶ from page 612

Standard, 4-piece, hinged, removable lids
R4.1 | e-tubes, fully enclosed



28-112

Long travels, large unsupported lengths, openable ▶ from page 612

E4.1 light - light design

4-piece, swivelable, less weight
E4.1 light | e-chains® and e-tubes

New in this calalog



38-48

Light design, high dynamics, cost effective, swivelable crossbars and lids ▶ from page 746

E4/light - low weight, economic and stable

4-piece, openable
E4/light | Crossbars every link



56-86

Light and stable. Inner-/outer-link design. Save weight and money! ▶ from page 774

4-piece, openable
E4/light | Crossbars every 2nd link



56-86

Light and stable. Inner-/outer-link design. Save weight and money! ▶ from page 774

4-piece, hinged, removable lids
E4/light | e-tubes, fully enclosed



56-80

Light and stable. Inner-/outer-link design. Save weight and money! ▶ from page 774

Highly flexible

For highly dynamic applications, low-noise
T3 | e-chains® | T-band



29

Openable from both sides. Cost-effective for simple applications ▶ from page 880

Highly dynamic

Superquiet in small spaces
E3 | e-chains®



10-22

Openable along outer radius. Fast assembly, crossbars on a string ▶ from page 896

E6 - extremely low-noise

Super quiet, low vibration, cleanroom
E6 | e-chains®



29-80

No pin/bore connections, minimal abrasion, openable along both radii ▶ from page 916

Super quiet, low vibration, cleanroom
R6 | e-tubes, removable lids



29-52

No pin/bore connections, minimal abrasion, openable along both radii ▶ from page 916

E6.1 - 2nd generation

Super quiet, low vibration, less weight
E6.1 | e-chains®

New in this calalog



29-52

No pin/bore connections, crossbars removable along both radii ▶ from page 994

Robotic- and 3D e-chains® and e-tubes

Robotic, 3D, chip-resistant
triflex® R TRC | closed design



TRC: closed design, smooth and robust exterior ▶ from page 1018

Robotic, 3D, simply press cables in
triflex® R TRE | "easy"-design



TRE: light and cost-effective alternative with "easy"-design ▶ from page 1018

Robotic, 3D, light and economical
triflex® R TRL | light design



TRL: lightweight and cost-effective 3D e-chain® ▶ from page 1018

Products overview

Continuation

Robotic- and 3D

Robotic, 3D, with snap lock mechanism
triflex® R TRLF | light design



Light-variant with snap lock mechanism. Openable by hand ▶ from page 1018

For 3D-applications

3D applications
easy triflex® | "easy"-design





easy triflex®: "easy"-design, simple filling from 2 sides ▶ from page 1052

3D, closed

3D applications
triflex® | Closed version





Protection against dirt and chips, combined circle- and stroke-movements ▶ from page 1066

Circular movements

Circular movements, new generation
twisterchain® new | Openable





Circular e-chains®, rotary and spiral movements up to 540°, high loads ▶ from page 1082

Circular movements, first generation
twisterchain® classic | Openable





First generation, openable cross-bars on both sides, circular motions ▶ from page 1108

Rotary motion

Rotary motion, small space, compact
twisterband* (7000° rotation[1])





Rotary motions in small spaces, 20 times around its own axis ▶ from page 1130

Guiding media reliably

The alternative to the cable drum
e-spool



Low space requirements, used for versatile motions of various media ▶ from page 1142

chainfix strain relief, clamps

For maximum pull forces, adjustable
Clamps | CFX | CFXL



CFX standard clamps and CFXL with wide base for maximum pull forces. Galvanized or stainless steel (Material 1.4301) ▶ from page 1158

For various possibilities
Multi-Clamps



chainfix-Adapter. Save assembly time, space and money. Compact and modular. For small outer diameters ▶ page 1160

Further strain relief options

For universal tiewrap, bolted or clip-on
Tiewrap plates



chainfix tiewrap plates as single parts, suitable for assembly in the KMA mounting brackets ▶ from page 1164

Clip-on connection for the C-profile
Tiewrap plates



Clip-on connection for the C-profile. Easy to assemble and disassemble without any screws ▶ from page 1166

High tensile forces, modular, clip-on
Clips



For C-profiles, also suitable for assembly in the KMA mounting brackets and clip-on strain relief for crossbars ▶ from page 1168

Separators with integrated strain relief
Strain relief separators



Separator with integrated strain relief. Easy strain relief with cable tiewraps ▶ from page 1170

For top hat rail and C-profile
Nuggets



Completely simple and universal cable fixation for top hat rail and C-profile ▶ page 1172

Strain relief for hoses
Blocks | Conventional | CFB



Conventional blocks and CFB polymer strain relief connector system, for many cables in a very confined space ▶ from page 1173

Aluminum SuperTrough

Basic version, for general use
Aluminum SuperTrough





The igus® standard guide trough. Very simple, modular assembly ▶ from page 1184

Heavy-duty version, for Heavy-Duty use
Aluminum SuperTrough

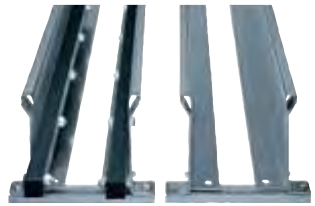




Recommended for Heavy-Duty use
▶ www.igus.eu/eu/salun

Steel guide trough

Stable, rugged for Heavy-Duty applications
Steel guide troughs





For applications in rough environments. Huge product range ▶ from page 1210

Products overview

Technical Details

Futher guide trough systems

Energy supply for crane girders
guidefast

New in this calalog



Economical energy supply for crane girders and indoor cranes, quickly installed
▸ from page 1242

Lets light and dirt through
Tubular troughs | System RS



56-112

Resistant to dirt. Easy assembly and cost-effective
▸ from page 1246

Cost-effective, easy assembly
Snap-in troughs | System SP



56-112

Very small trough. Easy assembly and cost-effective
▸ from page 1252

Support tray tool kit
Support tray



Support tray tool kit for support of the lower run, cost effective
▸ from page 1258

e-chains® for long travels

Heavy-duty, for demanding applications
E4/4HD | Crossbars every link



56-80

Particularly high additional loads. For long travels
▸ from page 1269

Heavy-duty, fully enclosed
E4/4HD | e-tubes, enclosed



56-80

Particularly high additional loads. For long travels
▸ from page 1269

Energy efficiency system for long travels
System P4 | profile-rol e-chain®



32-80

Reduce 57% energy consumption. For very long travels, high speeds
▸ from page 1284

Rolling instead of gliding
rol e-chain® | Crossbars every link

Optional as Heavy-Duty version!



32-80

Robust for long travels up to 800 m
▸ from page 1304

Rolling instead of gliding
rol e-chain® | e-tubes, fully enclosed

Optional as Heavy-Duty version!



32-80

Robust for long travels up to 800 m
▸ from page 1304

Self-guiding, for System E4.1
autoglide | Option 01



32-56

Self-guiding e-chainsystem®. No guide troughs required
▸ from page 1320

Self-guiding, for System E2/000
autoglide | Option 02

New in this calalog



25-45

Self-guiding e-chainsystem®. No guide troughs required
▸ from page 1320

Self-guiding, with easy chain® design
autoglide | Option 03



32-25

Self-guiding e-chainsystem®. No guide troughs required
▸ from page 1320

Self-guiding, with special glide elements
autoglide | Option 04



25-35

Self-guiding e-chainsystem®. No guide troughs required
▸ from page 1320

Special solutions for long travels

Unsupported travels up to 50 m, in chip areas
guidelok horizontal



Upper run guide for long travels, unsupported in critical chip areas
▸ from page 1352

Safe vertical guidance
guidelok slimline F



For e-chains® in high-speed rack feeders. No swinging of the e-chain®, high reliability through guiding rails
▸ from page 1354

Enclosed plastic trough
lbt flizz®



24

Enclosed polymer trough, cost-effective
▸ from page 1356

Small e-chains® in aluminum profile
micro flizz®

New in this calalog | MF10



11-13

Master long travels with the smallest e-chains® without failures
▸ from page 1360

Project

Fast project planning, completely from stock
Modular system for projects



Faster quotations, faster project planning
▸ from page 1370

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

easy chain® - very easy to fill, simply press cables in

E-Version | Split crossbar along the outer radius





Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E03	5	ø 3	5 - 10	8	8,7 - 13,7	10 - 28	10	0,24	0,4	–	–	–	–	○	■	●	■	●●●	156
E04	7	ø 4,5	7	10	13	15 - 48	16,7	0,35	0,55	–	–	–	–	▲	■	●	●	●●●	160
E045	9,4	ø 5,5	10 - 27	12,5	16 - 37	18 - 38	13	0,25	0,4	–	●	–	–	▲	■	●	■	●●●	164
E06	10,7	ø 6,5	10 - 20	15	16,5 - 26,5	18 - 38	20	0,45	0,55	–	–	–	–	▲	■	●	●	●●●	168
E065	11,3	ø 7	16 - 36	15	24,8 - 49,3	18 - 38	15	0,45	0,6	–	●	–	–	▲	■	●	●	●●●	172
E08	14,6	ø 10	10 - 50	19,3	18,2 - 58,2	28 - 48	20	0,7	1	–	–	–	–	▲	■	●	●	●●●	176
E14	19	ø 13	15 - 50	25	27 - 62	28 - 125	30,5	0,5	0,65	–	–	–	–	▲	■	●	●	●●●	180
E200	24,3	ø 20	57	35	74,4	55 - 200	46	2	1,75	–	–	–	–	▲	■	●	●	●●●	184
E200.2	24,3	ø 20	74 - 100	35	94,4 - 120,4	55 - 200	46	2	1,75	–	●	–	–	▲	■	●	●	●●●	184
E16	32	ø 25	23 - 100	39	37,5 - 115,3	60 - 100	30,5	0,7	1	–	–	–	–	▲	■	●	●	●●●	190
E26	36,5	ø 28	75	50	92	63 - 250	56	4	2	–	–	–	–	▲	■	●	●	●●●	194
E26.2	37,1	ø 20	48 / 48	50	117	63 - 250	56	4	2	–	●	–	–	▲	■	●	●	●●●	194
E26.3	37,1	ø 20	47 / 48 / 47	50	167	63 - 250	56	4	2	–	●	–	–	▲	■	●	●	●●●	194
E300	48,5	ø 35	75	64	95	75 - 300	67	8	2,25	–	–	–	–	▲	■	●	●	●●●	200
E300.2	48,5	ø 18	48 / 48	64	120	75 - 300	67	8	2,25	–	●	–	–	▲	■	●	●	●●●	200
E300.3	48,5	ø 18	47 / 46 / 47	64	170	75 - 300	67	8	2,25	–	●	–	●	▲	■	●	●	●●●	200

Z-Version | Split crossbar along the inner radius



Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
Z045	9,4	ø 5,5	14 - 16	12,5	23	18 - 38	13	0,25	0,4	–	●	–	–	▲	■	●	■	●●●	164
Z06	10,5	ø 6,5	10 - 16	15	16,5- 26,5	18 - 38	20	0,45	0,55	–	–	–	–	▲	■	●	●	●●●	168
Z065	11,3	ø 7	27	15	39,3	18 - 38	15	0,45	0,6	–	●	–	–	▲	■	●	●	●●●	172
Z08	14,7	ø 10	10 - 50	19,3	18,2- 58,2	28 - 48	20	0,7	1	–	–	–	–	▲	■	●	●	●●●	176
Z14	19	ø 13	15 - 50	25	27- 62	28 - 125	30,5	0,5	0,65	–	–	–	–	▲	■	●	●	●●●	180
Z200	24,3	ø 20	57	35	74,4	55 - 200	46	2	1,75	–	–	–	–	▲	■	●	●	●●●	184
Z200.2	24,3	ø 20	74 - 100	35	94,4- 120,4	55 - 200	46	2	1,75	–	●	–	–	▲	■	●	●	●●●	184
Z16	32	ø 25	23 - 100	39	37,5- 115,3	40 - 100	30,5	0,7	1	–	–	–	–	▲	■	●	●	●●●	190
Z26	36,5	ø 28	75	50	92	63 - 250	56	4	2	–	–	–	–	▲	■	●	●	●●●	194
Z26.2	37,1	ø 20	48 / 48	50	117	63 - 250	56	4	2	–	●	–	–	▲	■	●	●	●●●	194
Z26.3	37,1	ø 20	47 / 48 / 47	50	167	63 - 250	56	4	2	–	●	–	–	▲	■	●	●	●●●	194
Z300	48,5	ø 35	75	64	95	75 - 300	67	8	2,25	–	–	–	–	▲	■	●	●	●●●	200
Z300.2	48,5	ø 18	48 / 48	64	120	75 - 300	67	8	2,25	–	●	–	–	▲	■	●	●	●●●	200
Z300.3	48,5	ø 18	47 / 46 / 47	64	170	75 - 300	67	8	2,25	–	●	–	●	▲	■	●	●	●●●	200

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

	Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to		Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
System E1 - modular, 1-piece strip design for simple applications																					
e-chains® | Snap-open along the outer radius																					
		E1.10	10 ø 9	13	15,5	16,5	18		20	upon request	–	–	–	–	–	○	●	▲	●	●●●	212
		E1.17	17 ø 15	21 - 44	25	26 - 49	28		25,5	upon request	–	–	–	–	–	○	●	▲	●	●●●	214
		E1.18	18 ø 16	15	26	20	28		25,25	upon request	–	–	–	–	–	○	●	▲	●	●●●	216
		E1.20	20 ø 18	15	27	22	28		25	upon request	–	–	–	–	–	○	●	▲	●	●●●	218
snapchain - fit cable assemblies quickly in bunches																					
e-chains® | Loops to be opened along the outer radius																					
		TE14.50	Loop length: 50 mm	–	–	–	28 - 125		30,5	–	–	–	–	–	–	–	–	▲	●	●●●	224
		TE26.120	Loop length: 120 mm	–	–	–	63 - 200		56	–	–	–	–	–	–	–	–	▲	●	●●●	226
e-chains® | Loops to be opened along the inner radius																					
		TZ14.50	Loop length: 50 mm	–	–	–	28 - 125		30,5	–	–	–	–	–	–	–	–	▲	●	●●●	224
		TZ26.120	Loop length: 120 mm	–	–	–	63 - 200		56	–	–	–	–	–	–	–	–	▲	●	●●●	226
zipper e-chains® and e-tubes - lightning-fast opening and closing																					
e-chains® | Zip-open along the outer radius																					
		047	9 ø 7	10 - 16	12,5	16 - 22	18 - 38		13	0,25	0,4	–	–	–	–	▲	●	▲	■	●◐○	238
		07	10,3 ø 8	6 - 64	15	12,5 - 71	18 - 48		20	0,4	0,55	–	–	–	–	▲[2] ■	●	▲	■	●◐○	242
		09	15 ø 12,5	10 - 50	19,3	18,2 - 58,2	28 - 48		20	0,7	1	–	●	●	–	▲[2] ■	●	▲	■	●◐○	250
		15	17 ø 15	15 - 100	24	26 - 113	38 - 180		30,5	1,5	1,2	–	●	●	–	▲	●	▲	■	●◐○	260
		17	32 ø 28	15 - 100	39	25,5 - 113	63 - 125		30,5	1	1	–	●	●	–	▲	●	▲	■	●◐○	276
e-tubes | Zip-open along the outer radius																					
		R07	10,3 ø 8	10 - 50	15	16,5 - 57	38 - 48		20	0,4	0,55	–	–	–	–	▲	●	▲	■	●◐○	246
		R09	15 ø 12,5	10 - 50	19,3	18,2 - 58,2	48 - 100		20	0,7	1	–	–	–	–	▲	●	▲	■	●◐○	256
		R15	17 ø 15	25 - 80	24	36 - 94	63 - 180		30,5	1,5	1,2	–	●	●	–	▲	●	▲	■	●◐○	268
		R17	32 ø 28	15 - 63	39	26 - 74	63 - 125		30,5	1,5	1,2	–	●	●	–	▲	●	▲	■	●◐○	282

2) ESD-option, available from stock. Delivery time in 24h or today!

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

	Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possibilities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E2 micro - one-piece e-chains®, small sizes																				
Non snap-open																				
		03	5 ø 3,5	5 - 10	8	8,7 - 13,7	10 - 28	10	0,24	0,4	–	–	–	–	○	○	●	■	●●●	302
		04	7 ø 5	7 - 30	10	12 - 35	15 - 48	16,7	0,35	0,5	–	–	–	–	▲	○	▲	●	●●●	306
		045	10,3 ø 8	6 - 64	12,5	12 - 70	18 - 83	13	0,25	0,5	–	▲	–	–	▲	○	▲	■	●●●	310
		05	10 ø 8	6 - 64	12	10 - 68	18 - 38	20	0,375	0,55	–	–	–	–	▲	○	▲	●	●●●	314
		06	10,5 ø 8	6 - 64	15	12,5 - 71	18 - 38	20	0,48	0,6	–	▲	–	–	▲	○	▲	●	●●●	318
		08	15 ø 12	10 - 50	19,3	18,2 - 58,2	25 - 48	20	0,75	1	–	–	–	–	▲	○	▲	●	●●●	334
Snap-open along inner radius																				
		074	10,9 ø 8,5	10	15	16,3	18 - 38	20	0,4	0,55	–	–	–	–	○	●	●	●	●●●	
		094	14,3 ø 13	10	19,3	18,2	28 - 48	20	0,7	1	–	–	–	–	○	●	●	●	●●●	326
																				330
Snap-open along inner radius																				
		B07	10,3 ø 8	16 - 40	15	22,5 - 47	18 - 38	20	0,4	0,55	–	–	–	–	○	●	▲	■	●●●	322
		B09	14,3 ø 12,8	16 - 40	19,3	24,2 - 48,2	28 - 48	20	0,7	1	–	●	●	–	○	●	▲	■	●●●	340
E2 mini - one/two-piece e-chains®, small and medium sizes																				
Non snap-open																				
		10	18 ø 16	15 - 100	23	26 - 113	28 - 180	30,5	1,5	1,2	–	●	–	–	▲	●	▲	●	●●●	356
		11.031	23 ø 21	31	28	41,2	45 - 70	30,5	1,5	1,35	–	–	–	–	▲	○	▲	●	●●●	364
		11.080	28 ø 25	80	33,4	93	38	30,5	1,5	1,5	–	–	–	–	▲	○	▲	●	●●●	368
		11.1/11.2	41 ø 22,5	15 - 25	46	25,5 - 35,5	40 - 100	30,5	1,5	1,35	–	–	–	–	▲	○	▲	●	●●●	372
Snap-open along inner radius																				
		14	20 ø 16	15 - 50	25	26 - 61	28 - 125	30,5	0,5	0,65	–	–	–	–	▲	■	●	●	●●●	376
		B15i	17 ø 14	15 - 100	23	26 - 113	38 - 180	30,5	1,5	1,2	–	●	●	–	▲	●	▲	●	●●●	380
		B17i	32 ø 28	38	39	35,5 - 48,5	48 - 125	30,5	1	1	–	●	●	–	▲	○	▲	●	●●●	388
		F17	32 ø 14	15	39	26	48	30,5	1,5	1,2	–	●	●	–	▲	○	●	●	●●●	394
Snap-open along outer radius																				
		B15	17 ø 14	15 - 100	23	26 - 113	38 - 180	30,5	1,5	1,2	–	●	●	–	▲	●	▲	●	●●●	380
		B17	32 ø 28	15 - 100	39	25,5 - 113	48 - 125	30,5	1	1	–	●	●	–	▲	○	▲	●	●●●	388

Next generation of small igus e-chains ®

● Lighter, more stable and easier to open ● In 2 sizes available ● An e-chain® opener is included with every Series E2.1 that can be opened, which significantly reduces installation time ● Many accesories More information ▶ www.igus.eu/E2.1open



Continuation

Legend
- ● Standard
- ○ Limited suitability
- ▲ Options
- ■ Especially suitable

Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Interior separation possiblities: Full-width shelves	Interior separation possiblities: Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E2/000 e-chain® - two-piece e-chains®, the E2 standard!																			
e-chains® | Snap-open along inner radius																			
		1400 21 ø 18	15 - 125	28	28,5 - 138,5	35 - 180	33,3	2	1,75	75 [1]	●	●	–	▲	■	▲	●	●●●	412
		2400 25 ø 23	25 - 125	35	41 - 141	55 - 250	46	5	2,25	100 [1]	●	●	●	▲	■	▲	●	●●●	426
		2600 35 ø 32	50 - 175	50	66 - 194	63 - 250	56	8	2,75	120 [1]	●	●	●	▲	●	▲	●	●●●	444
		3400 45 ø 42	50 - 250	64	70 - 270	75 - 300	67	13	3	150 [1]	●	●	●	▲	●	▲	●	●●●	462
e-chains® | Snap-open along outer radius																			
		1500 21 ø 18	15 - 125	28	28,5 - 138,5	35 - 180	33,3	2	1,75	75	●	●	–	▲[2] ■	■	▲	●	●●●	412
		2500 25 ø 23	25 - 125	35	41 - 141	55 - 250	46	5	2,25	100	●	●	●	▲[2] ■	■	▲	●	●●●	426
		2700 35 ø 32	50 - 175	50	66 - 194	63 - 250	56	8	2,75	120	●	●	●	▲[2] ■	●	▲	●	●●●	444
		3500 45 ø 42	50 - 250	64	70 - 270	75 - 300	67	13	3	150	●	●	●	▲	●	▲	●	●●●	462
		255 24 ø 22	38 - 103	35	54 - 119	55 - 250	27,8	2	1,8	100	●	●	●	▲	●	▲	■	●●●	480
Half e-tubes | Snap-open along inner radius																			
		1450 21 ø 18	15 - 125	28	28,5 - 138,5	75 - 180	33,3	2	1,75	75 [1]	●	●	–	●	■	▲	●	●●●	412
		2450 25 ø 23	25 - 125	35	41 - 141	75 - 250	46	5	2,25	100 [1]	●	●	▲	●	■	▲	●	●●●	426
		2650 35 ø 32	50 - 175	50	66 - 194	100 - 250	56	8	2,75	120 [1]	●	●	●	●	●	▲	●	●●●	444
		3450 45 ø 42	50 - 250	64	70 - 270	125 - 300	67	13	3	150 [1]	●	●	●	▲	●	▲	●	●●●	462
e-tubes | Snap-open along inner radius																			
		1480 21 ø 18	15 - 125	28	28,5 -138,5	75 - 180	33,3	2	1,75	75 [1]	●	●	–	▲	■	▲	○	●●●	412
		2480 25 ø 23	25 - 125	35	41 - 141	75 - 250	46	5	2,25	100 [1]	●	●	▲	▲	■	▲	○	●●●	426
		2680 35 ø 32	50 - 175	50	66 - 194	100 - 250	56	8	2,75	120 [1]	●	●	●	▲	●	▲	○	●●●	444
		3480 45 ø 42	50 - 250	64	70 - 270	125 - 300	67	13	3	150 [1]	●	●	●	▲	●	▲	○	●●●	462

1) Conditionally suitable in inner radii 2) ESD-option, available from stock. Delivery time in 24h or today!

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

E2 R100 - two-piece e-tube, hinged lids

E2 R100 | Hinged, snap-open on both sides of the inner radius



Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
R117	21	ø 17	20 - 100	28	32 - 112	63 - 180	30,5	1,5	1,2	–	●	–	–	–	○	▲	○	●●●	502
R157	40	ø 37	40 - 200	50	56 - 216	100 - 250	46	8	2,25	–	●	●	●	▲	○	▲	○	●●●	508
R167	50	ø 46	50 - 250	64	68 - 268	100 - 300	58,8	10	2,5	–	●	●	●	▲	○	▲	○	●●●	520

E2 R100 | Hinged, snap-open on both sides of the outer radius | Standard



Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
R118	21	ø 17	25 - 80	28	37 - 92	63 - 180	30,5	1,5	1,2	–	●	–	–	–	○	▲	○	●●●	502
R158	40	ø 37	40 - 200	50	56 - 216	100 - 250	46	8	2,25	–	●	●	●	▲	○	▲	○	●●●	508
R168	50	ø 46	50 - 200	64	68 - 218	100 - 300	58,8	10	2,5	–	●	●	●	▲	○	▲	○	●●●	520

E2 R - two-piece e-tubes, small pitch

E2 R | Removable lids along outer radius



Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
R48	25	ø 22	25 - 130	36	36 - 141	60 - 250	30,3	1	1,5	50	●	▲	–	▲	○	▲	●	●●●	540
R58	35	ø 32	50 - 200	50	66 - 216	75 - 250	33,3	8	2,3	75	●	●	●	▲	○	▲	●	●●●	550
R68	45	ø 42	50 - 250	64	68 - 268	100 - 300	36	10	2,5	100	●	●	●	▲	○	▲	●	●●●	562

RX - full chip protection without undercuts, projecting edges and gaps

System RX | Openable along outer radius



Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
RX32	42	ø 37	80	56	98,4	80 - 150	32	4	1,7	–	–	–	–	▲	○	▲	●	●●●	582
RX40	52	ø 48	100	70	123	100 - 300	40	6	1,8	–	–	–	–	▲	○	▲	●	●●●	588
RX48	62	ø 56	120	84	147,5	120 - 150	48	9	2,1	–	●	●	–	▲	○	▲	●	●●●	594
RX56	73	ø 65	140	98	172,2	140	56	11	2,3	–	●	●	–	▲	○	▲	●	●●●	600

Legend
- ● Standard
- ○ Limited suitability
- ▲ Options
- ■ Especially suitable

E4.1 - ONE e-chain® family for all applications — Can be opened from both sides - the E4 standard!

E4.1 e-chains® | Crossbars every link - robust version





Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E4.21	21	ø 18	30 - 140	28	44 - 154	38 - 200	30,5	4	2,5	120	●	●	–	▲2) ■	▲■	▲	▲■	●●●	626
E4.28	28	ø 25	40 - 300	42	60 - 320	55 - 250	46	10	2,5	200	●	●	●	▲2) ■	▲	▲	▲■	●●●	634
E4.32	32	ø 28	50 - 400	54	73 - 423	63 - 300	56	15	3,3	200	●	–	●	▲2) ■	▲■	▲	▲■	●●●	646
E4.42	42	ø 38	50 - 400	64	76 - 426	75 - 350	67	37	4	300	●	–	●	▲2) ■	▲	▲	▲■	●●●	662
E4.56	56	ø 50	50 - 600	84	84 - 634	135 - 500	91	62,5	5	400	●	–	●	▲2) ■	▲	▲	▲■	●●●	678
E4.80	80	ø 72	50 - 600	108	100 - 650	150 - 1000	111	80	6,2	400	●	–	●	▲2) ■	▲	▲	▲■	●●●	694
E4.112 New*	112	ø 100	50 - 600	140	102 - 652	200 - 1000	143	85	6,5	450	●	–	●	▲■	▲	▲	▲■	●●●	710
800	200	ø 184	200 - 600	236	260 - 660	325 - 1000	250	90	8	450	●	–	●	▲	○	▲	■	●●●	724
840	204	ø 184	100 - 563	236	160 - 623	325 - 1000	250	90	8	450	●	–	–	▲	○	▲	■	●●●	732
E4.350	350	ø 315	400 - 800	450	540 - 940	500 - 1000	470	600	6,2	–	●	–	●	–	–	▲	–	●●●	740

H4.1 e-chains® | Crossbars every 2nd link - standard version





Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
H4.32	32	ø 28	50 - 400	54	73 - 423	63 - 300	56	15	3,3	200	●	–	●	▲■	■	▲■	▲■	●◐●	646
H4.42	42	ø 38	50 - 400	64	76 - 426	75 - 350	67	37	4	300	●	–	●	▲■	▲	▲	▲■	●◐●	662
H4.56	56	ø 50	50 - 600	84	84 - 634	135 - 500	91	62,5	5	400	●	–	●	▲■	▲	▲	▲■	●◐●	678
H4.80	80	ø 72	50 - 600	108	100 - 650	150 - 1000	111	80	6,2	400	●	–	●	▲■	▲	▲	▲■	●◐●	694
H4.112 New*	112	ø 100	50 - 600	140	102 - 652	200 - 1000	143	85	6,5	450	●	–	●	▲■	▲	▲	▲■	●●●	710

R4.1 e-tubes | Fully enclosed - protection against chips, dust and dirt





Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
R4.28	28	ø 25	50 - 300	42	70 - 320	75 - 250	46	10	2,5	200	●	●	●	▲■	▲	▲	▲■	●●◐	634
R4.32	32	ø 28	50 - 300	54	73 - 323	125 - 300	56	15	3,3	200	●	–	●	▲■	▲■	▲	▲■	●●◐	646
R4.42	42	ø 38	50 - 300	64	76 - 326	125 - 350	67	37	4	300	●	–	●	▲■	▲	▲	▲■	●●◐	662
R4.56	56	ø 50	75 - 462	84	109 - 497	150 - 500	91	62,5	5	400	●	–	●	▲■	▲	▲	▲■	●●◐	678
R4.80	80	ø 72	150 - 462	108	200 - 513	200 - 1000	111	80	6,2	400	●	–	●	▲■	▲	▲	▲■	●●◐	694
R4.112 New*	108	ø 100	200 - 400	140	102 - 652	250 - 1000	143	85	6,5	450	●	–	●	▲■	▲	▲	▲■	●●●	710

*New in this catalog

2) ESD-option, available from stock. Delivery time in 24h or today!

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to		Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E4.1 light - specialty: light weight, high dynamics, cost effective																					
New snap-open mechanism. Crossbars, lids are swivelable on both sides																					
e-chains® | Crossbars are swivelable on both sides, openable on the inner- and outer radius																					
	E4.38L New*	38	ø 34	50 - 175	54	66 - 191	063 - 300		56	13	2,75	80	●	–	●	▲	–	▲	▲■	●◐○	754
	E4.48L New*	48	ø 43	50 - 175	64	70 - 195	075 - 350		67	26	3,75	100	●	–	●	▲	–	▲	▲■	●◐○	764
e-tubes | Fully enclosed - Lids are swivelable on both sides, openable on the inner- and outer radius																					
	R4.38L New*	38	ø 34	100	54	116	125 - 300		56	13	2,75	80	●	–	●	▲	–	▲	▲■	●◐○	754
	R4.48L New*	48	ø 43	75 - 175	64	95 - 195	125 - 300		67	26	3,75	100	●	–	●	▲	–	▲	▲■	●◐○	764
E4/light - specialty: light weight, cost effective																					
e-chains® | Crossbars every 2nd link - standard version																					
	14040	56	ø 50	50 - 600	84	76 - 626	135 - 500		91	40	4	150	●	–	●	▲■	○	▲	●	●◐○	784
	14240	62	ø 56	50 - 400	84	76 - 426	135 - 500		91	40	4	150	●	–	●	▲2) ■	○	▲	●	●○○	800
	14550	70	ø 62	50 - 600	98	77 - 627	150 - 600		91	55	4,2	250	●	–	●	▲■	○	▲	●	●◐○	816
	15050	80	ø 72	50 - 600	108	80 - 630	150 - 600		91	55	4,6	250	●	–	●	▲2) ■	○	▲	●	●◐○	830
	15250	86	ø 75	50 - 400	108	80 - 430	150 - 600		91	55	4,6	250	●	–	●	▲■	○	▲	●	●◐○	846
	1640	112	ø 100	50 - 600	140	84 - 634	200 - 600		143	50	4,5	400	●	–	●	▲■	○	▲	●	●●○	860
e-chains® | Crossbars every link - robust version																					
	14140	56	ø 50	50 - 600	84	76 - 626	135 - 500		91	40	4	150	●	–	●	▲■	○	▲	●	●○○	784
	14340	62	ø 56	50 - 400	84	76 - 426	135 - 500		91	40	4	150	●	–	●	▲■	○	▲	●	●○○	800
	14650	70	ø 62	50 - 600	98	77 - 627	150 - 600		91	55	4,2	250	●	–	●	▲■	○	▲	●	●◐○	816
	15150	80	ø 72	50 - 600	108	80 - 630	150 - 600		91	55	4,6	250	●	–	●	▲■	○	▲	●	●○○	830
	15350	86	ø 75	50 - 400	108	80 - 430	150 - 600		91	55	4,6	250	●	–	●	▲■	○	▲	●	●◐○	846
e-tubes | Fully enclosed - protection against chips, dust and dirt																					
	18840	56	ø 50	75 - 462	84	101 - 489	150 - 500		91	40	4	150	●	–	●	▲■	○	▲	●	●●○	784
	19050	70	ø 62	75 - 462	98	102 - 489	200 - 600		91	55	4,2	250	●	–	●	▲■	○	▲	●	●◐○	816
	19850	80	ø 72	75 - 462	108	105 - 493	200 - 600		91	55	4,6	250	●	–	●	▲■	○	▲	●	●●○	830
	1608	108	ø 100	200 - 387	140	234 - 421	250 - 600		143	50	4,5	400	●	–	●	▲■	○	▲	●	●●◐	860

*New in this catalog

2) ESD-option, available from stock. Delivery time in 24h or today!

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

T3 - 3-piece, T-shaped band e-chain®, very light weight and quiet

e-chain® | Openable from both sides



Opening principle	Series / Product	Inner height hi [mm] + ø cable max.		Inner width Bi [mm] from - to	Outer height ha [mm]	Outer width Ba [mm] from - to	Bending radius R [mm] from - to		Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
	T3.29	29	ø 25	30 - 140	35	55 - 165	38		15	1	1,45	–	●	●	●	▲	■■	▲	■■	●●○	888

E3 - 3-piece e-chain®, small, high dynamics, smooth and low noise

e-chain® | Zip open lids



	E3.10	10	ø 8	20 - 60	15	32 - 72	15 - 48		16,7	0,3	0,7	–	●	–	–	▲	■■	▲	■■	●●◐	904
	E3.15	15	ø 13	20 - 60	20	32 - 72	32 - 75		16,7	0,7	0,9	–	●	▲	–	▲	■■	▲	■■	●●◐	908
	E3.22	22	ø 20	20 - 60	27	32 - 72	44 - 75		16,7	0,85	1,2	–	●	▲	–	▲	■■	▲	■■	●●◐	912

E6 - 6-piece e-chain®, for extremely low-noise operations

e-chain® | Crossbars every other link



	E6.29	29	ø 25	30 - 140	35	46 - 156	55 - 150		22	3	1,75	–	●	●	●	▲	■■	▲	■■	●●●	928
	E6.35	35	ø 31	30 - 140	42	50 - 160	55 - 150		25	6	1,9	–	●	●	●	▲	■■	▲	■■	●●●	938
	E6.40	40	ø 36	40 - 300	54	60 - 320	63 - 200		27,8	10	2,75	60 [1]	●	●	●	▲	■■	▲	■■	●●●	946
	E6.52	52	ø 46	40 - 300	65	64 - 324	75 - 250		30	15	3	80 [1]	●	●	●	▲	■■	▲	■■	●●●	956
	E6.62	62	ø 54	50 - 400	84	86 - 436	115 - 350		50	43	4	100 [1]	●	●	●	▲	■■	▲	■■	●●●	966
	E6.80L	80	ø 72	87 - 550	108	115 - 578	175		65	25	2,5	–	●	–	●	▲	■■	▲	■■	●●●	976
	E6.80	80	ø 72	50 - 600	108	100 - 650	150 - 450		65	55	5,25	120 [1]	●	–	●	▲	■■	▲	■■	●●●	984

e-tube | Fully enclosed



	R6.29	28	ø 25	30 - 120	35	46 - 136	55 - 150		22	3	1,75	–	●	–	–	▲	■■	▲	■■	●●●	928
	R6.40	40	ø 36	50 - 125	54	70 - 145	63 - 200		27,8	10	2,75	60 [1]	●	–	–	▲	■■	▲	■■	●●●	946
	R6.52	52	ø 46	50 - 175	66	74 - 199	75 - 250		30	15	3	80 [1]	●	–	–	▲	■■	▲	■■	●●●	956

E6.1 - even more smooth running, easier to open, for cleanroom applications

e-chain® | Crossbars removable along both radii



	E61.29 New*	29	ø 25	30 - 140	35	44 - 144	55 - 150		22	3,5	1,5	–	●	●	●	▲	■■	▲	■■	●●●	1002
	E61.52 New*	52	ø 46	40 - 300	65	64 - 324	75 - 200		30	11	1,7	–	●	●	●	▲	■■	▲	■■	●●●	1008

*New in this catalog

1) In preparation / upon request

Legend
- ● Standard
- ○ Limited suitability
- ▲ Options
- ■ Especially suitable

triflex® R - 3D e-chain® for robot applications

TRC | Closed design



	Opening principle	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
TRC.30		12/10 ø 10	12/10	ø 34,5	ø 34,5	50	11,3	–	–	–	●	–	–	1)	○	●	●	●●●	1024
TRC.40		15/13 ø 13	15/13	ø 43	ø 43	58	13,9	–	–	–	●	–	–	▲2)	○	●	●	●●●	1024
TRC.60		22,5/19,5 ø 20,5	22,5/19,5	ø 65	ø 65	87	20,4	–	–	–	●	–	–	▲2)	○	●	●	●●●	1024
TRC.70		28/24 ø 26	28/24	ø 81	ø 81	110	25,6	–	–	–	●	–	–	▲2)	○	●	●	●●●	1024
TRC.85		33/28 ø 31	33/28	ø 94,5	ø 94,5	135	30,6	–	–	–	●	–	–	▲	○	●	●	●●●	1024
TRC.100		37,5/32,5 ø 35,5	37,5/32,5	ø 108	ø 108	145	34,5	–	–	–	●	–	–	▲	○	●	●	●●●	1024
TRC.125		43,3/43,3 ø 41	43,3/43,3	ø 135	ø 135	182	44,6	–	–	–	●	–	–	▲	○	●	●	●●●	1024

TRE | "easy"-design for fast installation of cables and hoses



	Opening principle	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
TRE.30		12/10 ø 10	12/10	ø 34,5	ø 34,5	50	11,3	–	–	–	●	–	–	–	○	●	●	●●○	1028
TRE.40		15/13 ø 13	15/13	ø 43	ø 43	58	13,9	–	–	–	●	–	–	–	○	●	●	●●○	1028
TRE.60		22,5/19,5 ø 20,5	22,5/19,5	ø 65	ø 65	87	20,4	–	–	–	●	–	–	–	○	●	●	●●○	1028
TRE.70		28/24 ø 26	28/24	ø 81	ø 81	110	25,6	–	–	–	●	–	–	–	○	●	●	●●○	1028
TRE.85		33/28 ø 31	33/28	ø 94,5	ø 94,5	135	30,6	–	–	–	●	–	–	–	○	●	●	●●○	1028
TRE.100		37,5/32,5 ø 35,5	37,5/32,5	ø 108	ø 108	145	34,5	–	–	–	●	–	–	–	○	●	●	●●○	1028
TRE.125		43,3/43,3 ø 41	43,3/43,3	ø 135	ø 135	182	44,6	–	–	–	●	–	–	–	○	●	●	●●○	1028

TRL | Light version with "easy"-design



	Opening principle	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
TRL.30		12/10 ø 10	12/10	ø 34,5	ø 34,5	50	11,3	–	–	–	●	–	–	–	○	●	●	●○○	1032
TRL.40		15/13 ø 13	15/13	ø 45	ø 45	58	13,9	–	–	–	●	–	–	–	○	●	●	●○○	1032
TRL.60		22,5/19,5 ø 20,5	22,5/19,5	ø 65	ø 65	87	20,4	–	–	–	●	–	–	–	○	●	●	●○○	1032
TRL.70		28/24 ø 26	28/24	ø 81	ø 81	110	25,6	–	–	–	●	–	–	–	○	●	●	●○○	1032
TRL.100		37,5/32,5 ø 35,5	37,5/32,5	ø 108	ø 108	145	34,5	–	–	–	●	–	–	–	○	●	●	●○○	1032

TRLF | Light version with snap lock mechanism



	Opening principle	Inner height *hi* [mm] + ø cable max.	Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
TRLF.65 New*		24,4 ø 22	24,4	ø 70,2	ø 70,2	100	23,1	–	–	–	●	–	–	–	○	●	●	●●○	1036
TRLF.85 New*		32,8 ø 30	32,8	ø 94,5	ø 94,5	135	31	–	–	–	●	–	–	–	○	●	●	●●○	1036
TRLF.100 New*		37,5 ø 35,5	37,5	ø 108	ø 108	145	34,5	–	–	–	●	–	–	–	○	●	●	●●○	1036

*New in this catalog

1) In preparation / upon request 2) ESD-option, available from stock. Delivery time in 24h or today!

Legend
- ● Standard
- ○ Limited suitability
- ▲ Options
- ■ Especially suitable

easy triflex® - for 3D motion, simple filling from 2 sides

"easy"-design for fast installation of cables and hoses



Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E332.25	25	ø 09	25	34	34	48 - 200	14,5	–	–	–	●	–	–	▲	○	●	●	●◐○	1060
E332.32	32	ø 12	32	50	50	75 - 250	25	–	–	–	●	–	–	▲	○	●	●	●◐○	1060
E332.50	50	ø 21	50	68	68	100 - 250	30	–	–	–	●	–	–	▲	○	●	●	●◐○	1060
E332.75	75	ø 33	75	96	96	140 - 300	36	–	–	–	●	–	–	▲	○	●	●	●◐○	1060
E333.25	25	ø 09	25	34	34	48 - 200	14,5	–	–	–	●	–	–	▲	○	●	●	●◐○	1062
E333.32	32	ø 12	32	50	50	75 - 250	25	–	–	–	●	–	–	▲	○	●	●	●◐○	1062
E333.50	50	ø 21	50	68	68	100 - 250	30	–	–	–	●	–	–	▲	○	●	●	●◐○	1062
E333.75	75	ø 33	75	96	96	140 - 300	36	–	–	–	●	–	–	▲	○	●	●	●◐○	1062

triflex® - for 3D motion, closed

Closed design



332.16	16	ø 14	16	26	26	38 - 100	13,3	–	–	–	–	–	–	▲	○	▲	○	●◐○	1074
332.32	32	ø 28	32	50	50	75 - 250	25	–	–	–	●	–	–	▲	○	▲	○	●◐○	1074
332.50	50	ø 45	50	68	68	100 - 250	30	–	–	–	●	–	–	▲	○	▲	○	●◐○	1074
332.75	75	ø 67	75	96	96	140 - 300	36	–	–	–	●	–	–	▲	○	▲	○	●◐○	1074
333.16	16	ø 14	16	26	26	38 - 100	13,3	–	–	–	–	–	–	▲	○	▲	○	●◐○	1077
333.32	32	ø 28	32	50	50	75 - 250	25	–	–	–	●	–	–	▲	○	▲	○	●◐○	1077
333.50	50	ø 45	50	68	68	100 - 250	30	–	–	–	●	–	–	▲	○	▲	○	●◐○	1077
333.75	75	ø 67	75	96	96	140 - 300	36	–	–		●	–	–	▲	○	▲	○	●◐○	1077

Openable



352.50	50	ø 45	50	68	68	100 - 250	30	–	–	–	●	–	–	▲	○	▲	○	●●●	1074
353.50	50	ø 45	50	68	68	100 - 250	30	–	–	–	●	–	–	▲	○	▲	○	●●●	1077

Legend
- ● Standard
- ○ Limited suitability
- ▲ Options
- ■ Especially suitable

twisterchain® new - higher loads and speeds for circular/spiral movements

Higher speeds and loads

Openable along inner radius from both sides



Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m] Fill weight max [kg/m] 180°	360°	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
	TC32	32	ø 28	87,5 - 150	54	108,5 - 171	100 - 250	56	4	2	–	–	●	●	●	▲	○	▲	●	●●◐	1092
	TC42	42	ø 38	87,5 - 200	64	110,5 - 223	100 - 250	67	6	3,6	–	–	●	●	●	▲	○	▲	●	●●◐	1094
	TC56	56	ø 50	125 - 200	84	155,0 - 230	150 - 400	91	8	5	–	–	●	●	●	▲	○	▲	●	●●◐	1096

twisterchain® classic - first generation for circular and spiral movements

For new designs we recommend twisterchain® new!

Openable from both sides



Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Fill weight max [kg/m] 180°	360°	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
	2208	28	ø 25	52,5 - 112,5	42	80 - 140	55 - 150	44	1,5	1	–	–	●	●	●	▲	○	▲	●	●●◐	1117
	2808	32	ø 29	50 - 150	54	81 - 181	100 - 250	56	2	1	–	–	●	●	●	▲	○	▲	●	●●◐	1118
	3808	42	ø 39	50 - 200	64	85 - 235	100 - 250	67	3	1,8	–	–	●	●	●	▲	○	▲	●	●●◐	1120
	4008	56	ø 53	50 - 200	84	93 - 243	150 - 400	91	4	2,5	–	–	●	●	●	▲	○	▲	●	●●◐	1122

twisterband (7000° rotation) - rotary movements in minimum space

Snap-open with film-hinge or to be opened with "easy"-design



Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	*R min.* *R max.*		Pitch [mm]	Fill weight max [kg/m] 180°	360°	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
	TB12.23.09	9	ø 7	23	42	80 - 140	24	35	–	≈0,8	≈0,6	–	–	–	–	–	○	▲	○	●	●●◐	1136
	TB20.44.12	12	ø 9	44	54	81 - 181	34	57	–	≈1,25	≈1,0	–	–	–	–	–	○	▲	○	●	●●◐	1136
	TB20.44.18	18	ø 14	44	64	85 - 235	34	57	–	≈1,25	≈1,0	–	–	●	–	–	○	▲	○	●	●●◐	1136
	TB30.75.22	22	ø 17	75	84	93 - 243	44	77	–	≈1,7	≈1,3	–	–	●	–	–	○	▲	○	●	●●◐	1136



e-spool - the alternative to cable drums New in this catalog

Cable-friendly and guides various media safely. Guide many different cables in very narrow spaces ● Different media and diameters in the same drum are feasible ● Energy supply in all directions is possible ● Space-saving, no "chain junction" ● No lower run is left behind, the paths remain free More information ▶www.igus.eu/eu/e-spool ▶from page 1142

igus® strain relief	Product	ø [mm] von - bis	For Series easy chain®	For Series E2/000	For Series E2 e-tubes	For Series E4.1 / E4.1 light	For Series E4/light	For Series E6 / E6.1	Page
Clamps and stainless steel clamps - for maximum pull forces									
	CFX [1] Single, double, triple standard clamps	6 - 42	–	X	–	X	X	X	1158
	CFXL [1] Single, double, triple clamps with wide base for maximum pull forces	6 - 42	–	X	–	X	X	X	1159
	Saddle elements - bottom and stacker saddles	6 - 42	–	X	–	X	X	X	1160
	chainfix Multi-Clamps [1]	6 -12	–	X	–	X	X	X	1161
Standard C-profiles and C-profiles for Heavy-Duty applications									
	Standard C-profiles Part No. CF.92.42. (to be integrated into KMA!)		–	X	–	X	X	X	1162
	C-profiles Part No. CF.92.52. with increased pull force (mounting in front of e-chain®)		–	X	–	X	X	X	1162
Tiewrap plates - for universal tiewrap, bolted or clip-on									
	Option 1A: Tiewrap plates as single part Series 2000 + cable tiewraps	max. 36	X	X	X	X	X	X	1164
	Option 1B: Tiewrap plates as single part Series 3000 + cable tiewraps	max. 36	X	X	X	X	X	X	1165
Tiewrap plates, with clip-on connection for the C-profile									
	Option 2: Tiewrap plates with clip-on connection for the C-profile		–	X	–	X	X	X	1166
	Option 3: Integrated strain relief for E2 e-tubes - Series R		–	–	X	–	–	–	1166
	Option 4: Tiewrap plates for fixed crossbars		X	X	–	–	–	–	1167
	Option 5: Tiewrap plates for opening crossbars		–	X	–	X	X	X	1167
Clips - high pull forces, plug-in									
	Option 1: for all e-chains® with C-profiles and also suitable for assembly in the KMA mounting brackets	4 - 24	–	X	–	X	X	X	1168
	Option 2: Clip-on strain relief for opening crossbars	4 - 24	–	–	–	X	X	X	1169
Strain relief separators - with integrated teeth									
	Separator with integrated strain relief - easy strain relief with tiewrap	20 - 30	–	X	X	X	X	X	1170
Nuggets - for top hat rail and C-profile									
	Option 1: completey simple and universal cable fixation, for diameter with Ø 20 mm and Ø 30 mm	≤ 30	–	X	–	X	X	X	1172
	Option 2: Fastening through clipping onto standard top hat rail	≤ 20	–	X	–	X	X	X	1172
Blocks - special strain relief for hoses									
	Conventional igus® blocks - strain relief for hoses	4,3 - 14	Please contact igus® for idividual designing						1173
	CFB polymer strain relief connector system, many cables in a very confined space								1174

1) Standard material: galvanized steel. Also available as stainless steel-version (material stainless steel: 1.4301)

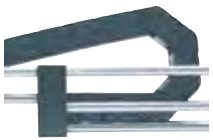
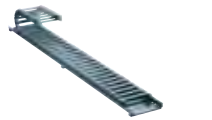
X = available for this Series – = not available

Legend of materials
● Aluminum, sea water-resistant
○ Galvanized steel
■ Stainless steel upon request
▲ Galvanized steel/polymer

Series / Product	Outer height Trough side part [mm]	Series zipper	Series E2 mini	Series E2/000 1) Conditionally suitable in inner radii	Series E2 e-tubes		System E4.1	System E4.1 light	System E4/light	System E6 please consult igus® for long travels	Material of side parts (see legend)	Price index	Page / Link
Super-alu-trough - Basic version, for general use													
Basic version - igus® recommended standard trough system													
970.30.SL | 970.31.SL	77	15/R15	10/B15	–	–		–	–	–	–	●	●◐○	1190
970.30.SL | 970.32.SL	77	–	–	1400 1)/1450 1)/1480 1)/1500	–		E4.21	–	–	–	●	●◐○	1192
971.30.SL | 971.31.SL	87	–	–	2400 1)/2450 1)/2480 1)/2500/255	R48		–	–	–	E6.29/R6.29	●	●◐○	1194
972.02.30.SL | 972.02.31.SL	117	–	–	–	–		E4.28/R4.28	–	–	E6.35	●	●◐○	1196
972.30.SL | 972.31.SL	117	–	–	–	–		E4.32/H4.32/R4.32	E4.38L/R4.38L	–	E6.40/R6.40	●	●◐○	1198
972.30.SL | 972.32.SL	117	–	–	2600 1)/2650 1)/2680 1)/2700	R58		–	–	–	–	●	●◐○	1200
973.30.SL | 973.31.SL	144	–	–	3400 1)/3450 1)/3480 1)/3500	R68		E4.42/H4.42/R4.42	E4.48L/R4.48L	–	E6.52/R6.52	●	●◐○	1202
974.30.SL | 974.31.SL	184	–	–	–	–		E4.56/H4.456/R4.56	–	14040/14140/18840/14240/14340	E6.62	●	●◐○	1204
975.30.SL | 975.31.SL	236	–	–	–	–		E4.80/H4.80/R4.80	–	15050/15150/19850/15250/15350	E6.80	●	●◐○	1206
Super-alu-trough - Heavy-Duty version, for Heavy-Duty use													
Heavy-Duty version - For high load applications													
971.30.SL | 971.31.SL	87	–	–	2400 1)/2450 1)/2480 1)/2500/255	R48		–	–	–	E6.29/R6.29	●	●◐○	www.igus.eu/eu/salun
972.02.30.SL | 972.02.31.SL	117	–	–	–	–		E4.28/R4.28	–	–	E6.35	●	●◐○	www.igus.eu/eu/salun
972.30.SL | 972.31.SL	117	–	–	–	–		E4.32/H4.32/R4.32	E4.38L/R4.38L	–	E6.40/R6.40	●	●◐○	www.igus.eu/eu/salun
972.30.SL | 972.32.SL	117	–	–	2600 1)/2650 1)/2680 1)/2700	R58		–	–	–	–	●	●◐○	www.igus.eu/eu/salun
973.30.SL | 973.31.SL	144	–	–	3400 1)/3450 1)/3480 1)/3500	R68		E4.42/H4.42/R4.42	E4.48L/R4.48L	–	E6.52/R6.52	●	●◐○	www.igus.eu/eu/salun
974.30.SL | 974.31.SL	184	–	–	–	–		E4.56/H4.456/R4.56	–	14040/14140/18840/14240/14340	E6.62	●	●◐○	www.igus.eu/eu/salun
975.30.SL | 975.31.SL	236	–	–	–	–		E4.80/H4.80/R4.80	–	15050/15150/19850/15250/15350	E6.80	●	●◐○	www.igus.eu/eu/salun
Specialty: steel guide trough, for harsh environments													
Steel Guide Trough - Very stable and rugged for heavy-duty applications													
92.30 | 92.31	70	–	–	2400 1)/2450 1)/2480 1)/2500/255	–		–	–	–	E6.29/R6.29	○ ■	●◐○	1216
95.30 | 95.31	100	–	–	2600 1)/2650 1)/2680 1)/2700	R58		–	–	–	–	○ ■	●◐○	1218
99.30 | 99.31	100	–	–	–	–		E4.28/R4.28	–	–	E6.35	○ ■	●◐○	1220
97.30 | 97.31	130	–	–	–	–		E4.32/H4.32/R4.32	E4.38L/R4.38L	–	E6.40/R6.40	○ ■	●◐○	1222
93.30 | 93.31	130	–	–	3400 1)/3450 1)/3480 1)/3500	R68		E4.42/H4.42/R4.42	E4.48L/R4.48L	–	E6.52/R6.52	○ ■	●◐○	1224
94.30 | 94.31	170	–	–	–	–		E4.56/H4.456/R4.56	–	14040/14140/14240/14340/18840	E6.62	○ ■	●◐○	1226
94.14450.30 | 94.14450.31 New*	170	–	–	–	–		–	–	14550/14650/R19050	–	○ ■	●◐○	1228
96.30 | 96.31	220	–	–	–	–		E4.80/H4.80/R480	–	15050/15150/19850	E6.80	○ ■	●◐○	1230
98.30 | 98.31	300	–	–	–	–		E4.112/H4.112/R4.112	–	1640/1608	–	○ ■	●◐○	1232
90.30 | 90.31	480	–	–	–	–		–		800/840	–	○ ■	●◐○	1234
Steel Guide Trough - One-piece, U-shaped, special solution for Series 10, B15, 15													
91.10 - 91.71	48										○ ■	●◐○	1237

*New in this catalog

Legend of materials
❑ Steel, powder coated
○ Galvanized steel
■ Stainless steel upon request
▲ Galvanized steel/polymer

Series / Product	Outer height Trough side part [mm]	Series zipper	Series E2 mini	Series E2/000	Series E2 e-tubes		System E4.1	System E4.1 light	System E4/light	System E6/E6.1 please consult igus® for long travels	Material (see legend)	Price index	Page
guidefast - energy supply for crane girders													
Economical energy supply for crane girders and indoor cranes													
													
GF91.30/31.025 New*	113	–	–	1500	–		–	–	–	–	○	●○○	1244
GF91.30/31.050 New*	113	–	–	500	–		–	–	–	–	○	●○○	1244
GF92.30/31.05 New*	113	–	–	2500/255	–		–	–	–	–	○	●○○	1244
GF92.30/31.07 New*	113	–	–	2500/255	–		–	–	–	–	○	●○○	1244
GF92.30/31.10 New*	113	–	–	2500/255	–		–	–	–	–	○	●○○	1244
GF95.30/31.05 New*	113	–	–	2700	–		–	–	–	–	○	●○○	1244
GF95.30/31.07 New*	113	–	–	2700	–		–	–	–	–	○	●○○	1244
GF95.30/31.10 New*	113	–	–	2700	–		–	–	–	–	○	●○○	1244
Tubular trough system RS - lets light and chips through													
Cost-effective guide trough													
													
92.70 / 92.71	90	–	–	2500/255	–		–	–	–	–	▲	●◐○	1248
93.70 / 93.71	146	–	–	3500	–		–	–	–	–	▲	●◐○	1249
95.70 / 95.71	126,3	–	–	2700	–		–	–	–	–	▲	●◐○	1250
Snap-in trough system SP - simple and cost effective													
Very narrow trough, fast assembly													
													
91.930	55,5	15/R15	10/B15	–	–		–	–	–	–	▲	●○○	1254
92.930	76,6	–	–	2500/255	–		–	–	–	–	▲	●○○	1255
93.930	138,6	–	–	3500	–		–	–	–	–	▲	●○○	1256
95.930	106,6	–	–	2700	–		–	–	–	–	▲	●○○	1257
Support tray tool kit, for support of the lower run													
Support tray - Type 01													
													
S9.010/011.05.	43	–	–	2500.../2700.../	–		E1.21/E4.28/E4.32	E4.38L/R4.38L	–	E6.29/E61.29/E6.35/E6.40	❑	●○○	1260
S9.010/011.07.	43	–	–	2500.../2700.../	–		E1.21/E4.28/E4.32	E4.38L/R4.38L	–	E6.29/E61.29/E6.35/E6.40	❑	●○○	1260
S9.010/011.10.	43	–	–	2500.../2700.../	–		E1.21/E4.28/E4.32	E4.38L/R4.38L	–	E6.29/E61.29/E6.35/E6.40	❑	●○○	1260
S9.010/011.15.	43	–	–	2700.../	–		E4.28/E4.32	E4.38L/R4.38L	–	E6.40	❑	●○○	1260
Support tray - Type 02													
													
S9.020/021.10.	53	–	–	3400.../	–		E1.42/E4.56/E4.80	E4.48L/R4.48L	14040/14240/14550/15050/15250	E6.52/E61.52/E6.62/E6.80	❑	●○○	1262
S9.020/021.15.	53	–	–	3400.../	–		E1.42/E4.56/E4.80	E4.48L/R4.48L	14040/14240/14550/15050/15250	E6.52/E61.52/E6.62/E6.80	❑	●○○	1262
S9.020/021.20.	53	–	–	3400.../	–		E1.42/E4.56/E4.80	E4.48L/R4.48L	14040/14240/14550/15050/15250	E6.52/E61.52/E6.62/E6.80	❑	●○○	1262
S9.020/021.25.	53	–	–	3400.../	–		E1.42/E4.56/E4.80	E4.48L/R4.48L	14040/14240/14550/15050/15250	E6.52/E61.52/E6.62/E6.80	❑	●○○	1262

*New in this catalog

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

	Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to	Pitch [mm]	Unsupported fill weight max [kg/m]	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
E4/4HD Heavy-Duty - particularly high additional loads for long travels																					
e-chains® | Heavy-Duty, crossbars every link - extra robust version																					
		4040HD	56	ø 50	50 - 600	84	104 - 654	135 - 300	91	16	–	> 350	●	●	●	○	○	▲	–	●●○	1272
		5050HD	80	ø 74	50 - 600	108	110 - 660	200 - 500	91	60	–	> 500	●	●	●	○	○	▲	–	●●○	1278
e-tubes | Heavy-Duty, fully enclosed - protection against chips, dust and dirt - extra robust version																					
		8840HD	56	ø 50	75 - 462	84	129 - 516	150 - 300	91	16	–	> 350	●	●	●	○	○	▲	–	●●●	1272
		9850HD	80	ø 74	75 - 462	108	135 - 522	200 - 500	91	60	–	> 500	●	●	●	○	○	▲	–	●●●	1278
System P4 profile-rol e-chain® - reduce 57% energy consumption, high speeds																					
P4 profile-rol e-chain® | Crossbars every link																					
		P4.32	32	ø 28	100 - 200	54	132 - 232	150 - 250	56	6,0	–	> 500	●	●	●	○	○	▲	–	●●◐	1288
		P4.42	42	ø 38	100 - 200	64	154 - 254	100 - 350	67	7,0	–	> 600	●	●	●	○	○	▲	–	●●◐	1292
		P4.56	56	ø 50	180 - 400	84	250 - 470	250 - 350	91	13,0	–	> 800	●	●	●	○	○	▲	–	●●◐	1296
		P4.80	80	ø 72	180 - 400	108	256 - 476	250 - 350	100	30,0	–	> 800	●	●	●	○	○	▲	–	●●◐	1300
rol e-chain® - rolling instead of gliding, robust																					
e-chains® | Crossbars every link																					
		2828R	32	ø 28	50 - 400	54	74 - 424	125 - 300	56	6,0	–	> 250	●	●	●	○	○	▲	–	●●○	1308
		3838R	42	ø 38	50 - 400	64	77 - 427	150 - 350	67	7,0	–	> 330	●	●	●	○	○	▲	–	●●○	1310
		4040R	56	ø 50	50 - 600	84	86 - 636	200 - 400	91	13,0	–	> 500	●	●	●	○	○	▲	–	●●○	1312
		5050R	80	ø 72	50 - 600	108	100 - 650	250 - 500	100	16,0	–	> 600	●	●	●	○	○	▲	–	●●○	1316
e-tubes | Fully enclosed - protection against chips, dust and dirt																					
		7728R	32	ø 28	50 - 300	54	74 - 324	150 - 300	55	6,0	–	> 250	●	●	●	○	○	▲	–	●●◐	1308
		7838R	42	ø 38	50 - 300	64	77 - 427	200 - 350	67	7,0	–	> 330	●	●	●	○	○	▲	–	●●◐	1310
		8840R	56	ø 50	75 - 462	84	111 - 499	300 - 400	91	13,0	–	> 500	●	●	●	○	○	▲	–	●●◐	1312
		9850R	80	ø 72	75 - 462	108	125 - 513	300 - 500	100	16,0	–	> 600	●	●	●	○	○	▲	–	●●◐	1316
rol e-chain® RHD Heavy-Duty - particularly high additional loads																					
e-chains® | Crossbars every link																					
		4040RHD	56	ø 50	50 - 600	84	104 - 654	300 - 400	91	16,0	–	> 600	●	●	●	○	○	▲	–	●●○	1314
		5050RHD	80	ø 72	50 - 600	108	110 - 660	300 - 500	100	30,0	–	> 800	●	●	●	○	○	▲	–	●●○	1318
e-tubes | Fully enclosed - protection against chips, dust and dirt																					
		8840RHD	56	ø 50	57 - 125	84	129 - 516	200 - 400	91	16,0	–	> 600	●	●	●	○	○	▲	–	●●◐	1314
		9850RHD	80	ø 72	73 - 141	108	135 - 522	250 - 500	100	30,	–	> 800	●	●	●	○	○	▲	–	●●◐	1318

Legend
● Standard
○ Limited suitability
▲ Options
■ Especially suitable

	Opening principle	Series / Product	Inner height *hi* [mm] + ø cable max.		Inner width *Bi* [mm] from - to	Outer height *ha* [mm]	Outer width *Ba* [mm] from - to	Bending radius *R* [mm] from - to		Pitch [mm]	Unsupported fill weight max [kg/m] *depending on radius	Unsupported length FL_B max [m]	Long travel max [m]	Interior separation possiblities: Separators	Full-width shelves	Shelves	ESD/ATEX igus.eu/eu/esd	Cleanroom	UL-V2 / V0	Low noise	Price index	Page
autoglide, self-guiding e-chains® - cutting costs on long travels																						
Option 01 - for E4.1 | Self-guiding e-chains®																						
		E4.32AG	32	ø 28	112 - 262	54	136 - 286	100 - 300		56	5,0 - 7,0*	–	60,0	●	●	●	○	○	▲	–	●●◐	1324
		E4.42AG	42	ø 38	112 - 262	64	139 - 289	125 - 350		67	4,0 - 9,6*	–	70,0	●	●	●	○	○	▲	–	●●◐	1326
		E4.56AG	56	ø 50	150 - 250	84	184 - 284	150 - 500		91	6,4 - 12*	–	80,0	●	●	●	○	○	▲	–	●●◐	1328
Option 02 - for E2/000 | Self-guiding e-chains®																						
		2400AG New*	25	ø 23	57 - 77	35	73 - 93	075 - 250		46	2,0	–	40	●	●	●	○	○	▲	–	●◐◐	1332
		2600AG New*	35	ø 32	50 - 75	50	66 - 91	075 - 250		56	2,5	–	60	●	●	●	○	○	▲	–	●◐◐	1334
		3400AG New*	45	ø 42	75 - 100	64	95 - 120	100 - 300		67	5,0 - 8,0*	–	70	●	●	●	○	○	▲	–	●◐◐	1336
Option 03 - with easy chain® design | Self-guiding e-chains®																						
		EA16	32	ø 28,5	48	39	60	065 - 100		30,5	4,0	–	20	●	●	●	○	○	▲	–	●◐◐	1340
		EA25	25	ø 22,5	50	25,2	60	075 - 100		25	4,0	–	20	●	●	●	○	○	▲	–	●◐◐	1341
Option 04 - with special glide elements | Self-guiding e-chains®										E2/000: e-chains®, e-tubes and half e-tubes												
		2400/2500.AG	25	ø 23	57 - 125	35	73 - 141	055 - 250		46	1,6	–	20	●	●	●	○	○	▲	–	●◐◐	1344
		2600/2700.AG	35	ø 32	50 - 250	50	66 - 194	075 - 250		56	2,0	–	30	●	●	●	○	○	▲	–	●◐◐	1346

*New in this catalog

Legend of materials
- ● Aluminum, sea water-resistant
- ○ Galvanized steel
- ■ Stainless steel upon request
- ▲ Galvanized steel/polymer

Description	Typical industries and applications	Travel max. [m]	Travel speed max. [m/s]	Inner heights [mm]	Price index	Page
guidelok horizontal - unsupported travels up to 50 m, in chip areas						
 Upper run guide for long travels, self-supporting in chip areas. Unsupported travels up to 50 m are possible. Chips cannot get stuck between upper and lower run. Modular system with few parts.	● Machine tools ● Applications in the chip area ● Wherever a gliding application is not recommended	≈ 50	≈ 2	56 mm	●○○	1352
guidelok slimline F - safe and fast vertical guidance						
 For e-chains® in high-speed rack feeders - up to 7 m/s and 10 m/s². No swinging of the e-chain®, high reliability through lever mechanism and guiding rails. No bouncing of e-chains® in vertical applications with horizontal dynamics.	● Automated storage/retrieval systems ● Lifts ● Revolving storage systems ● Diagonal lifts ● All vertical applications	≈ 80	≈ 7	25 mm	●○○	1354
lbt flizz® - enclosed plastic trough						
 In its entirety, this system encompasses the igus® e-chain®, lbt flizz® guide trough and - as an option - fully configured igus® chainflex® cables. The lbt flizz® guide trough is a modular kit comprising of extruded guide profiles and a supporting frame with continuous tubes providing stabilization.	● Sewage treatment plants ● Rainwater overflow basins ● Galvanic equipment ● Cranes	≈ 120	≈ 8	24 mm (In use of e-chain® Series 255)	◐○○	1356
micro flizz® - small e-chains® in aluminum profile						
 Compact, cost-saving complete system for safe guidance of energy, data and air. Maintenance-free alternative for power bar.	● Indoor-cranes ● Storage and retrieval machines ● Industry gates ● Control panels ● Studio equipment (lighting)	≈ 70	≈ 6	11/13/20 mm (Inner height of the applied e-chain®)	●○○	1360

Modular system for projects - fast, all ex stock

Special components, tested and approved in numerous projects, have now become available as a modular standard system ● Faster quotations ● Faster project planning ▶ from page 1370



Selection by inner heights



Selection by product, series and page

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5 - 10 mm			
5	03	E2 micro	302
5	E03	easy chain®	156
7	04	E2 micro	306
7	E04	easy chain®	160
9	047	zipper	238
9	TB12.23.09	twisterband	1136
9,4	E045	easy chain®	164
9,4	Z045	easy chain®	164
10	E1.10	E1	212
10	05	E2 micro	314
10	E3.10	E3	904
10,3 - 16 mm			
10,3	045	E2 micro	310
10,3	B07	E2 micro	322
10,3	07	zipper	242
10,3	R07	zipper e-tube	246
10,5	06	E2 micro	318
10,5	Z06	easy chain®	168
10,7	E06	easy chain®	168
10,9	074	E2 micro	326
11,3	E065	easy chain®	172
11,3	Z065	easy chain®	172
12	TRC/TRE/TRL.30	triflex® R	1024/1028/1032
12	TB20.44.12	twisterband	1136
14,3	B09	E2 micro	340
14,3	094	E2 micro	330
14,6	E08	easy chain®	176
14,7	Z08	easy chain®	176
15	08	E2 micro	334
15	E3.15	E3	908
15	09	zipper	250
15	R09	zipper e-tube	256
15	TRC/TRE/TRL.40	triflex® R	1024/1028/1032
16	332.16	triflex®	1072
16	333.16	triflex®	1072
17 - 23 mm			
17	E1.17	E1	214
17	B15	E2 mini	380
17	B15i	E2 mini	380
17	15	zipper	260
17	R15	zipper e-tube	268
18	E1.18	E1	216
18	10	E2 mini	356
18	TE14	snapchain	224
18	TZ14	snapchain	224
18	TB20.44.18	twisterband	1136
19	E14	easy chain®	180
19	Z14	easy chain®	180
20	E1.20	E1	218
20	14	E2 mini	376
21	R117	E2 R100 e-tube	502
21	R118	E2 R100 e-tube	502
21	1400	E2/000	412
21	1450	E2/000	412
21	1500	E2/000	412
21	1480	E2/000 e-tube	412
21	E4.21	E4.1	626
22	E3.22	E3	912
22	TB30.75.22	twisterband	1136
22,5	TRC/TRE/TRL.60	triflex® R	1024/1028/1032
23	11.031	E2 mini	364
24 - 29 mm			
24	255	E2/000	480
24,3	E200	easy chain®	184
24,3	E200.2	easy chain®	184
24,3	Z200	easy chain®	184
24,3	Z200.2	easy chain®	184
24,4	TRLF.65 New*	triflex® R	1036
25	R48	E2 R e-tube	540
25	2400	E2/000	426
25	2450	E2/000	426
25	2500	E2/000	426
25	2480	E2/000 e-tube	426
28	11.080	E2 mini	368
28	E4.28	E4.1	634
28	R4.28	E4.1 e-tube	634
28	TRC/TRE/TRL.70	triflex® R	1024/1028/1032
28	2208	twisterchain® classic	1114
29	E6.29	E6	928
29	E61.29 New*	E6.1	1002
29	R6.29	E6 e-tube	928
29	T3.29	T3 Band	888
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32	B17i	E2 mini	388
32	F17	E2 mini	394
32	E4.32	E4.1	646
32	H4.32	E4.1	646
32	R4.32	E4.1 e-tube	646
32	E16	easy chain®	190
32	Z16	easy chain®	190
32	P4.32	P4 profile-rol e-chain®	646
32	2828R / R7728R	rol e-chain®	1308
32	17	zipper	276
32	R17	zipper e-tube	282
32	332.32	triflex®	1072
32	333.32	triflex®	1072
32	TC32	twisterchain®	1088
32	2808	twisterchain® classic	1114
32,8	TRLF.85 New*	triflex® R	1036
33	TRC/TRE.85	triflex® R	1024/1028
35	R58	E2 R e-tube	550
35	2600	E2/000	444
35	2650	E2/000	444
35	2700	E2/000	444
35	2680	E2/000 e-tube	444
35	E6.35	E6	938
36,5 - 48,5 mm			
36,5	E26	easy chain®	194
36,5	Z26	easy chain®	194
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37,1	E26.3	easy chain®	194
37,1	Z26.2	easy chain®	194
37,1	Z26.3	easy chain®	194
37,5	TRC/TRE/TRL	triflex® R	1024/1028/1032
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38	E4.38L/R4.38L* New*	E4.1 light	754
40	R157	E2 R100 e-tube	508
40	R158	E2 R100 e-tube	508
40	E6.40	E6	946
40	R6.40	E6 e-tube	946
41	11. 1	E2 mini	372
41	11. 2	E2 mini	372
42	E4.42	E4.1	662
42	H4.42	E4.1	662
42	R4.42	E4.1 e-tube	662
42	P4.42	P4 profile-rol e-chain®	1292
42	3838R / R7838R	rol e-chain®	1310
42	RX32	RX e-tube	582
42	TC42	twisterchain®	1088
42	3808	twisterchain® classic	1114
43,3	TRC/TRE.125	triflex® R	1024/1028
45	R68	E2 R e-tube	562
45	3400	E2/000	462
45	3450	E2/000	462
45	3500	E2/000	462
45	3480	E2/000 e-tube	462
47	TE26	snapchain	226
47	TZ26	snapchain	226
48	E4.48L/R4.48L* New*	E4.1 light	764
48,5	E300	easy chain®	200
48,5	E300.2	easy chain®	200
48,5	E300.3	easy chain®	200
48,5	Z300	easy chain®	200
48,5	Z300.2	easy chain®	200
48,5	Z300.3	easy chain®	200
50 - 56 mm			
50	R167	E2 R100 e-tube	520
50	R168	E2 R100 e-tube	520
50	332.50	triflex®	1072
50	333.50	triflex®	1072
50	352.50	triflex®	1072
50	353.50	triflex®	1072
52	E6.52	E6	956
52	E61.52 New*	E6.1	1008
52	R6.52	E6 e-tube	956
52	RX40	RX e-tube	588
56	E4.56	E4.1	678
56	H4.56	E4.1	678
56	R4.56	E4.1 e-tube	678
56	14040	E4/light	784
56	14140	E4/light	784
56	18840	E4/light e-tube	784
56	P4.56	P4 profile-rol e-chain®	1296
56	4040R / R8840R	rol e-chain®	1312
56	4040RHD	rol e-chain®	1314
56	TC56	twisterchain®	1088
56	4008	twisterchain® classic	1114
62 - 86 mm			
62	14240	E4/light	800
62	14340	E4/light	800
62	E6.62	E6	966
62	RX48	RX e-tube	594
70	14550	E4/light	816
70	14650	E4/light	816
70	19050	E4/light e-tube	816
73	RX56	RX e-tube	600
75	332.75	triflex®	1072
75	333.75	triflex®	1072
80	E4.80	E4.1	694
80	H4.80	E4.1	694
80	R4.80	E4.1 e-tube	694
80	15050	E4/light	830
80	15150	E4/light	830
80	19850	E4/light e-tube	830
80	E6.80	E6	984
80	E6.80L	E6	976
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86	15350	E4/light	846
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108	R4.112 New*	E4.1 e-tube	710
112	E4.112 New*	E4.1	710
112	H4.112 New*	E4.1	710
112	1640	E4/light	860
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204	840	E4.1	732
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*New in this catalog 1) maximal height

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17	zipper	276
255	E2/000	480
800	E4.1	724
840	E4.1	732
1400	E2/000	412
1450	E2/000	412
1480	E2/000 e-tube	412
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14650	E4/light	816
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15150	E4/light	830
15250	E4/light	846
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triflex® R, easy triflex®, triflex®, twisterchain®, twisterband, e-spool

triflex® R 1018
TRC 1024
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CFXL Single, double, triple standard clamps for maximum pull forces 1159
Saddle elements 1160
chainfix Multi-Clamps 1161
Standard C-profiles and C-profiles with increased pull force 1162
Universal tiewrap plates 1164
Tiewrap plates for C-profile 1166
Clips 1168
Strain relief separators 1170
Nuggets 1172
Blocks conventional 1173
CFB polymer strain relief connector system 1174

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970.30. | 970.32. 1192
971.30. | 971.31. 1194
972.02.30. | 972.02.31. 1196
972.30. | 972.31. 1198
972.30. | 972.32. 1200
973.30. | 973.31. 1202
974.30. | 974.31. 1204
975.30. | 975.31. 1206
Fixed end module Alu 1208
Steel Guide Trough 1210
92.30 | 92.31. 1216
95.30 | 95.31. 1218
99.30 | 99.31. 1220
97.30 | 97.31. 1222
93.30 | 93.31. 1224
94.30 | 94.31. 1226
94.14450.30 |
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*New in this catalog



Legacy products are available over the long-term - Type series E4/00, E4/4, E4/0 and E2 medium can be found in the separate "Classics Catalogue". For new designs, we recommend the equivalent, technically improved, and identical e-chain® series. The entire product range is available over the long-term. The entire product range can be found on-line using the corresponding quicklink, along with all relevant data for odering and configuring. Or in the separate igus® classics catalogue ▶ **www.igus.eu/eu/classics**

Pictograms

Accessability of e-chains® and e-tubes

- easy chain® principle: simply press cables in
- zipper principle: Zip-open along the outer radius
- Snap-open along the inner radius
- Snap-open along the outer radius
- One-piece design, can not be opened
- Snap-open along outer radius on left or right side
- Snap-open along inner radius on left or right side
- e-tubes: openable along outer radius
- RX e-tubes: openable along outer radius
- Can be opened from both sides
- Can be opened from both sides and hinged open on one side
- simple filling from 2 sides with easy principle
- triflex® R, closed design
- triflex® R,"easy"-design for fast installation of cables and hoses
- triflex® R, light version with "easy"-design
- triflex® R, light version with snap lock mechanism

Pictograms

- Unsupported - short travels
- Gliding - long travels
- Application Vertical hanging
- Application Vertical standing
- Application Zig-Zag
- Application Side-mounted
- Application Rotary motion
- Continuously revolving e-chains®
- Application Hori-zontal and vertical
- Application Nested
- Application Side by side
- Recommended Standard
- igus® information
- igus® order examples
- igus® web www.igus.eu
- Delivery time
- Order key
- Temperature
- Acceleration / Speed
- UL-Approval
- Weights
- Preferred Series
- igus® Calculation
- Mounting brackets
- chainfix Strain relief
- Interior separation
- Guide troughs
- NC-No camber version
- Low-noise version
- Quick version
- ESD-Certificate
- Other Clean room-Certificate
- iF product design award

Price index

- Low price category
- Medium price category
- Highest price category

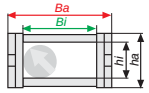


Quicklinks

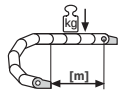
Quicklinks for more information and additional features on each page. Visit directly your chosen product online - for example ▶ www.igus.eu/eu/E4.56 and you'll find more details, 3D-CAD-files, DXF-files, PDF-downloads, application examples and many more for your chosen igus® product.

Selection guide designing e-chains®

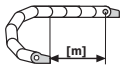
1 Dimensioning e-chains®
Determine the size of the e-chain® based on the specified installation space of your machine and/or of the selected filling (such as the number of cables/outer diameter of cable).



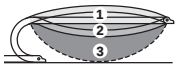
2 Determine fill weight
Determine fill weight of (cables and/or media hoses) in [kg/m] using chainflex® quick selection or manufacturer specification.

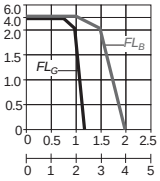


3 Determine length of travel
Compare the fill weight calculated in (point ❷) to the maximum fill weight of the selected e-chain® and check suitability for unsupported application.



4 Unsupported length
The maximum unsupported length initially depends on the fill weight and the e-chain® selected. At the same time, there are three different levels of unsupported length: ❶ FL_G - Recommended Range of Application ❷ FL_B - Permitted Sag ❸ Critical Sag: Should never be on operative installation! Twice the value of the unsupported length determines the max. travel in the un-supported type of operation. For evaluation the weight of the cables to be carried must be known, then an exact evaluation can be made using a diagram on the introductory page of the selected product. You will find the values for FL_G and FL_B in table form on the following pages of this chapter and for each Series in the catalog. They are necessary for: ● Finding the fill weight and length of travel for the appropriate e-chain® ● Identifying the maximum load of the e-chain® used.





If there is suitability for unsupported straight, then the selection follows the following criteria:

5 Opening Principle
The quick finder gives an overview of the possibilities to fill the e-chain®.



6 Bending Radius *R*
Determine the possible Bending Radius *R* [mm] of the e-chain® with respect to the cable diameter.



7 Interior separation is possible with…
Separators | Full-width shelves | Shelves

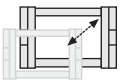


8 The price index gives you the possibility of making price comparisons of similar sizes within the range.
Low | Medium | Highest

9 Additional criteria -
For selection criteria such as pitch, permissible temperatures etc., please refer to our quick finder.

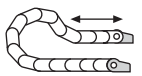
The following options are available if there is no possibility of self-supporting e-chain® application:

A You can choose the next and more stable e-chain®, that can be operated unsupported.



or

B Option
You can design your application to be gliding.



You can contact us directly or fax us your e-chain® requests! We will respond immediately!

e-chain® Part No: _____ . _____ . _____ . ___
Alternative e-chain®-dimensions:
hi: _____ *Bi*: _____ *ha*: _____ *Ba*: _____
Fill weight: _____ kg/m
Length of travel: _____ m
Your Phone: _____
Your Fax: _____
Phone. +49 2203 9649-800
Fax +49 2203 9649-222
Internet ▶ www.igus.eu/eu/finder



designing with igus®

calculation tools, diagrams

Introduction

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igus® readychain®

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The igus® assembly service

Your complete system solution from a single source . . . . . from page 144

An all-in-one energy supply system - the-chain

There are many options to supply your equipment and systems with energy and data. But there is hardly a solution as universal and durable as the e-chainsystem®. Whether you have a circular motion, a continuously circulating motion, a suspended or upright application, a long travel distance, high loads or a motion in space - igus® plastic e-chains® will help you solve nearly any type of energy supply problem, quickly, confidently and with ease. Whether you wish to reliably guide many large hoses for any type of media, sensitive fiber optic signals over long distances, disruption-free data at torsional movements, or only air at high accelerations, igus® can supply you with the matching energy supply system in addition to the optimally matched chainflex® cables.

By tapping into the expansive igus® construction kit (more than 90.000 e-chain® versions and 1.030 chainflex® cables), you will generally always find the solution to match your needs and application: from the individual component to the completed assembly at your facility. We have developed a new online tool to help you find these resources with greater ease ▶ www.igus.eu/eu/the-chain. Should you have trouble finding exactly the product you need, our developers are of course at your disposal to help you design the-chain.



Laboratory and practical experience

Our calculations and analyses are based on the result of ongoing practical tests in our Technical Center and our experience with gliding applications. The focal points of our tests are push-pull forces, friction values and abrasion under widely varying conditions and speeds, as well as factors such as dirt, weathering or impact and bumps. We test all system components such as cables, hoses, strain relief and other accessories, in addition to the e-chains® or e-tubes and Guide Troughs.



More than 1500 m² testlab for e-chains® and chainflex®-cables. Up to 15.000 tests per year

Application-Icons

- Unsupported - short travels
- Gliding - long travels
- Application Vertical hanging
- Application Vertical standing
- Application Zig-Zag
- Application Side-mounted
- Application Rotary motion
- Continuously revolving e-chains®
- Application Horizontal and vertical
- Application Nested
- Application Side by side
- Application Combined motions

Short cuts and describtion

α	=	The rotation angle of the rotating machine element	[°]
ΔM	=	Deviation of the center point	[mm]
a	=	Acceleration	[m/s²]
AR	=	Outer radius, e-chain®	[mm]
Ba	=	Outer e-chain® width	[mm]
Bi	=	Inner e-chain® width	[mm]
B_{Ra}	=	Guide trough outer width	[mm]
B_{Ri}	=	Guide trough inner width	[mm]
D	=	Over length e-chain® radius in final position	[mm]
D_2	=	Over length for long travels gliding	[mm]
FL_B	=	Unsupported length with sag	[m]
FL_G	=	Unsupported straight length	[m]
FL_U	=	Unsupported lower run	[m]
FZ_{max}	=	Maximum additional load	[kg/m]
H	=	Nominal clearance height	[mm]
H_2	=	Installation height with lowered mounting	[mm]
ha	=	Outer e-chain® height	[mm]
H_F	=	Required clearance height	[mm]
hi	=	Inner e-chain® height	[mm]
H_{Ra}	=	Outer trough height	[mm]
H_{Ri}	=	Inner trough height	[mm]
IR	=	Inner radius, e-chain® (twisterchain®)	[mm]
K	=	Add-on for bending radius (K is taken from the data tables of the individual Series)	[mm]
K_2	=	Further add-on if the mounting bracket location is set lower (for long travels)	[mm]
L_K	=	e-chain® length	[mm]
n	=	Number of links	[1]
n_{Mon}	=	Number of installation sets (left/right)	[1]
n_{Ri}	=	Number of trough-sets (left/right)	[1]
R	=	Bending radius	[mm]
RBR	=	Reverse bending radius	[mm]
S	=	Length of travel	[mm]
$^S/_2$	=	Half length of travel	[mm]
T	=	Pitch	[mm]
v	=	Speed (travel)	[m/s]
X_1	=	Inner machine-construction space (twisterchain®)	[mm]
X_2	=	Outer radius e-chain®, including clearance (twisterchain®)	[mm]

igus® Formula

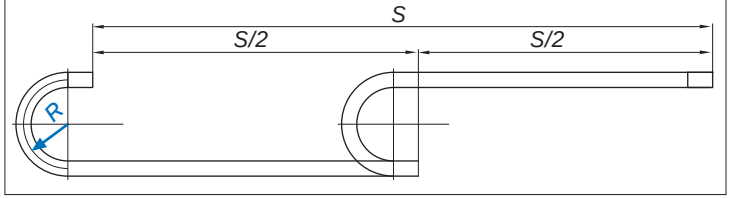
$SFL_B = 2 \times FL_B$	Calculation of maximum travel length, unsupported with sag	
$SFL_G = 2 \times FL_G$	Calculation of maximum travel length, unsupported straight	
$B_{Ri} \geq Ba + 5$	Calculation of the minimum guide trough width	
$H_{Ri} \geq 2 \times ha$	Calculation of the minimum guide trough height	
$K = \pi \times R + (2 \times T)$	Add-on for bending radius	
$L_K = {}^S/_2 + \Delta M + K$	Calculation of e-chain® lengths, fixed end is outside the center of travel (FL_G, FL_B and ΔM)	
$L_K = {}^S/_2 + K$	Calculation of e-chain® lengths For all types of applications, fixed end in the center of travel, except rotary movements and most long travels	
$L_K = {}^S/_2 + K_2$	Calculation of e-chain® lengths for long travels, fixed end in the center of travel	[m]

Calculation of e-chain® lengths

If the fixed end of the e-chain® is located in the center of the travel, the e-chain® length L_K is calculated by using half the length of travel and adding the value *K* for the curved length. (You can obtain the value *K* from the tables in the catalog.) Placing the Fixed End in the center of the travel is the **most cost-effective solution** because it requires the shortest e-chain®, cables and hoses.

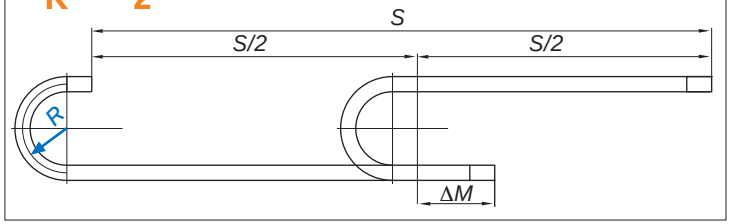
$$L_K = {}^S/_2 + K$$

This formula is generally valid for all types of applications if the fixed end is in the center of the travel. Exceptions: rotary movements and most long travels.



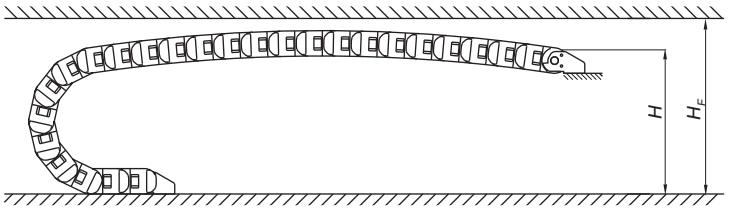
$$L_K = {}^S/_2 + \Delta M + K$$

This formula is valid if the fixed end is outside the center of the travel.



Camber

Camber is the curve of the upper run along its unsupported length. All igus® e-chains® are manufactured with camber, special "no camber" e-chains® are available on request. The camber allows for longer unsupported lengths and increases service life and operating safety. In the Installation Dimensions section of each respective e-chain® description, you will find the measurement H_F, which specifies the necessary clearance height, taking the camber into account. Upon request, we can deliver e-chains® without camber for restricted space applications - however, these "no camber" e-chains® do not have the same load-bearing capacity. Please consult igus®.



Principle of camber for igus® e-chains® H_F = required installation height

The fixed end in the center of the travel is the most favorable solution

L_K = e-chain® length
S = Length of travel
R = Bending radius
ΔM = Deviation from the center point
K = $\pi \times R + (2 \times T)$
Add-on for bending radius
(*K* is taken from the data tables of the individual igus® Series)

"No Camber" - Special "NC" e-chains® with no camber also available. Please consult igus®.

H = Nominal clearance height
H_F = Required clearance height

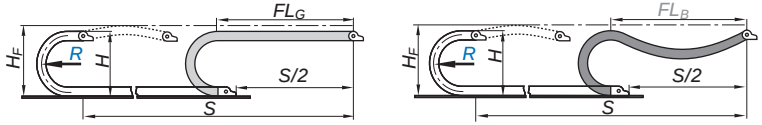
Necessary clearance height - depends on the camber of the e-chain®. Find values for the necessary clearance height H_F on each product page.

Application examples and more information online ► www.igus.eu

The FL_G type of installation always generates the longest service life and can be operated with the max. values for speed and acceleration.

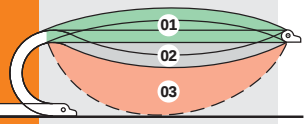


Example for unsupported straight FL_G



Unsupported applications

If the upper run of the e-chain® operates without touching the lower run over the entire travel, it is called an "unsupported" application. The distance between moving end and the beginning of the radius curve of the e-chain® is called the "**unsupported length.**" The "unsupported" application is the most common. igus® e-chains® are very well suited for high dynamics and long service life. The maximum unsupported length is dependent upon the fill weight and the type of e-chain® or e-tube. As a result, we differentiate among three types of unsupported length:



- 01) Unsupported with straight upper run FL_G
- 02) Unsupported with permitted sag FL_B
- 03) Critical sag

01) Unsupported with straight upper run FL_G

The "FL_G" e-chain® applies when the upper run either has camber, is straight, or has a maximum of 10-50 mm sag, depending on the size of the e-chain®. The "FL_G" type of installation is always preferred. The e-chain® runs quietly and is not exposed to any additional vibration.

02) Unsupported with permitted sag FL_B

The "FL_B" e-chain® applies when the sag amounts to more than 10-50 mm, depending on the e-chain® size, and less than a defined maximum sag. This maximum sag is dependent on the type of e-chain®. The "FL_B" application is technically permissible in many cases. It becomes problematic if the acceleration and the travel frequency are high.

03) "Critical sag"

If the sag is greater than permissible for "FL_B", then we refer to it as "critical sag." An installation with critical sag must be avoided or reserved for extreme circumstances. An e-chain® should never be installed with critical sag. There are applications which, after a very long period of use, reach the stage of "critical sag." The e-chain® or e-tube should be replaced at that time. Please contact us if your application reaches critical sag!

Unsupported | Short Travels

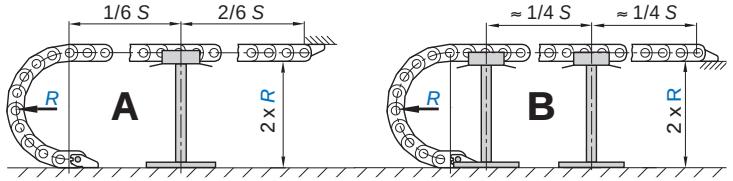


Example of unsupported permissible, FL_B

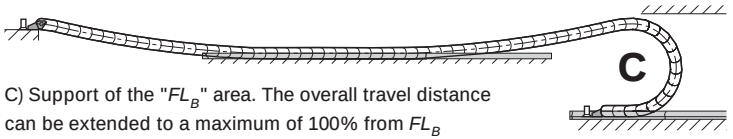
What to do if the unsupported length is insufficient

If your application, **fill weight** and **travel** fall outside the "unsupported length" parameters of the desired e-chain®, you have the following options:

● Select a stronger igus® e-chain® ● Support the e-chain® in the unsupported area (this possibility has restrictions for acceleration, speed and noise as a consequence - three fundamental examples are detailed to below - please consult igus® if you are considering this possibility - we will gladly provide you with a detailed proposal) ● Use a "multiband" e-chain® or "nest" two e-chains® inside one another (please consult igus® regarding these options) ● Design the travel distance as a "gliding application".



Support of the "FL_G" area. A) The overall "straight, unsupported travel" can be increased here by a maximum of 50% of the FL_G and in case of option B) by a maximum of 100%



C) Support of the "FL_B" area. The overall travel distance can be extended to a maximum of 100% from FL_B

For every igus® e-chain® or e-tube, you will find the values for "FL_G" and "FL_B" in two locations: On the following pages in this chapter as an overview and within every individual series' chapter. These values are essential for:

● Finding a suitable e-chain® for your fill weight and travel distance

● Identifying the maximum load for the selected e-chain®.

More application examples for short travel applications ▶ www.igus.eu

Unsupported | Short Travels

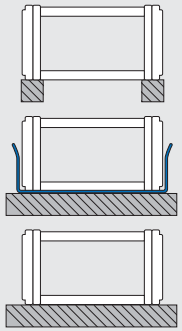
Standard

We recommend pivoting mounting brackets as standard! We recommend locking mounting brackets as standard if high speeds > 20 m/sor accelerations > 20 m/s²

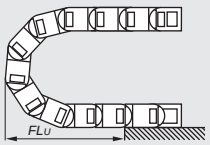
Standard values of max. speed and acceleration:

Unsupported	FL_G	FL_B
v max. [m/s]	20	3
v peak [m/s]	50	–
a max. [m/s²]	200	6
a peak m/s²]	784	–

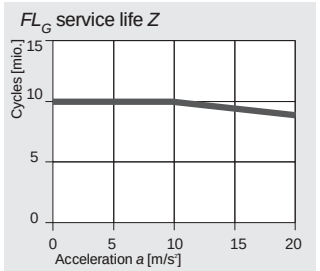
Standard value of FL_G service life: 10 million cycles



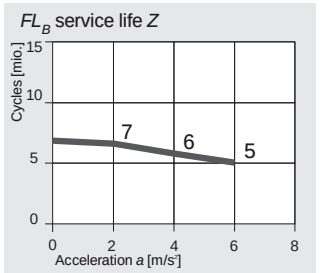
Different surfaces + guide troughs are possible



FL_U = Unsupported lower run



Standard values on service life for FL_G, dependent on acceleration



Standard values on service life for FL_B, dependent on acceleration

Speed, acceleration and service life

For unsupported applications, the acceleration *a*, is the critical parameter. High acceleration can cause the e-chain® to vibrate and reduce its service life. This is a particular danger if the e-chain® already has a sag greater than the FL_G value. Max. values for acceleration, speed and service life are achieved only with e-chains® incorporating the FL_G design. FL_G designed e-chainsystems® can sustain very high loads. To date, a peak acceleration of 784 m/s² has been achieved during continuous use. Through ongoing testing in the igus® laboratory and from practical experience, standard values for service life have been formulated. Our tests confirm that these standard values apply to all igus® e-chains® and e-tubes. It is crucial to determine whether the application will be designed as unsupported straight FL_G or unsupported, with sag FL_B.

Mounting surfaces

Unsupported e-chains® normally require some type of surface on which the lower portion of the e-chain® runs. A wide range of configurations is available, as the drawings on the right demonstrate. Many material options are feasible: Metals, polymers, stone, wood, concrete, glass, etc. We also have solutions to minimize the noise generated by the e-chain® lower portion. Please consult igus®. When selecting the running surface, be sure dirt and debris cannot collect in the e-chain® path.

Mounting brackets

We recommend pivoting mounting brackets as standard for unsupported applications. Pivoting mounting brackets compensate for the camber, can be installed more easily and decrease the load on the first e-chain® link in operation. Exception: If the acceleration is greater than 20 m/s² or if the height is limited to the H_F measurement, locking mounting brackets keep the e-chain® under the H_F measurement.

Unsupported lower run

e-chains® without support along the lower run have restricted use. The value FL_U usually must be determined in a test by igus®. The maximum permissible amount of the projection depends on the fill weight, the selected e-chain®, the dynamics, and other factors, because the various combinations of these parameters can produce very different results. If the lower run of the e-chain® cannot be supported over the whole travel, please consult igus®.

More application examples for short travel applications ▶ www.igus.eu

Unsupported | Noise-Optimized

Minimize noise levels with igus® e-chainsystems®

The igus® program offers you optimal noise-reduction e-chains®. The table below briefly illustrates the differences in noise level among various e-chains®. In addition to the e-chain®, the running surface, the dynamics and the cable and hose package play a role in overall noise generation. Have our specialists design the quietest e-chainsystem® for your application, for example:

System T3 ≤ 33 dB(A)

Optimal smoothness of motion was the prime development goal, as well as making it an economic solution. The igus® T3 e-chain® is very flexible and runs -due to the special geometry- very smooth. A measurement indicates a value of ≤ 33 dB(A) at 1 m/s and with an unsupported length with Series T3.29.050.038.0, and all this with a sound pressure level generated by external noise.

System E3 ≤ 38 dB(A)

Long-term tests in the igus® acoustic laboratory showed reductions of 19-20 db(A) compared with standard e-chains®, measured at a speed of 1.8 m/s and an acceleration of 3 m/s². Figure determined in the igus® laboratory in accordance with DIN 45635, taking into consideration background noises, for the Series E3.22.060.044.0.

System E6 ≤ 46 dB(A)

A measurement conducted by the Rhineland Technical Inspection Authority (TÜV Rheinland) in May 2002 indicates a value of ≤ 46 dB(A) at 2 m/s and with an unsupported length of 1.5 m with Series E6.52.10.100.0, and all this with at least 10 dB(A) sound pressure level generated by external noise. The System E6 runs very smoothly due to their small pitch.

System E4 ≤ 46 dB(A)

A measurement by the Rhineland Technical Inspection Authority (TÜV Rheinland) for System E4/101, Series 221.10.200.0 indicates a value of 46 dB(A) at 1,5 m/s with an unsupported length. Due to the special rubber pads (in red pictured) of the System E4, the noise will be extremly damped. The standard version of E4 is already very reduced in noise due to their special designed stop dog.

Selected noise tests - external noise corrected measurement values

e-chain® Series	System	Averaging of the corrected sound pressure levels	Test method
igus® Series T3.29	T3	≈ 33 dB(A)	unsupported 1,0 m/s
igus® Series E3.22	E3	≈ 38 dB(A)	unsupported 1,8 m/s
igus® Series E6.52	E6	≈ 46 dB(A)	unsupported 2,0 m/s
igus® Series 221	E4/00	≈ 46 dB(A)	unsupported 1,5 m/s
igus® Series ES4.42	E4.1	≈ 46 dB(A)	unsupported 1,0 m/s
igus® Series E4.42	E4.1	≈ 50 dB(A)	unsupported 1,0 m/s
igus® Series 255	E2 medium	≈ 53 dB(A)	unsupported 1,5 m/s
igus® Series e-band	e-band	≈ 59 dB(A)	unsupported 1,5 m/s
Chain 1 Third Party Product		≈ 77 dB(A)	unsupported 2,0 m/s
Chain 2 Third Party Product		≈ 68 dB(A)	unsupported 2,0 m/s
Chain 3 Third Party Product		≈ 73 dB(A)	unsupported 2,0 m/s

Source: TÜV Rheinland, except Series E3.22 - Source: igus® laboratory

More application examples for short travel applications ▶ www.igus.eu

A reduction of 3 dB(A) sounds like a 50% reduction in the noise level to the human ear







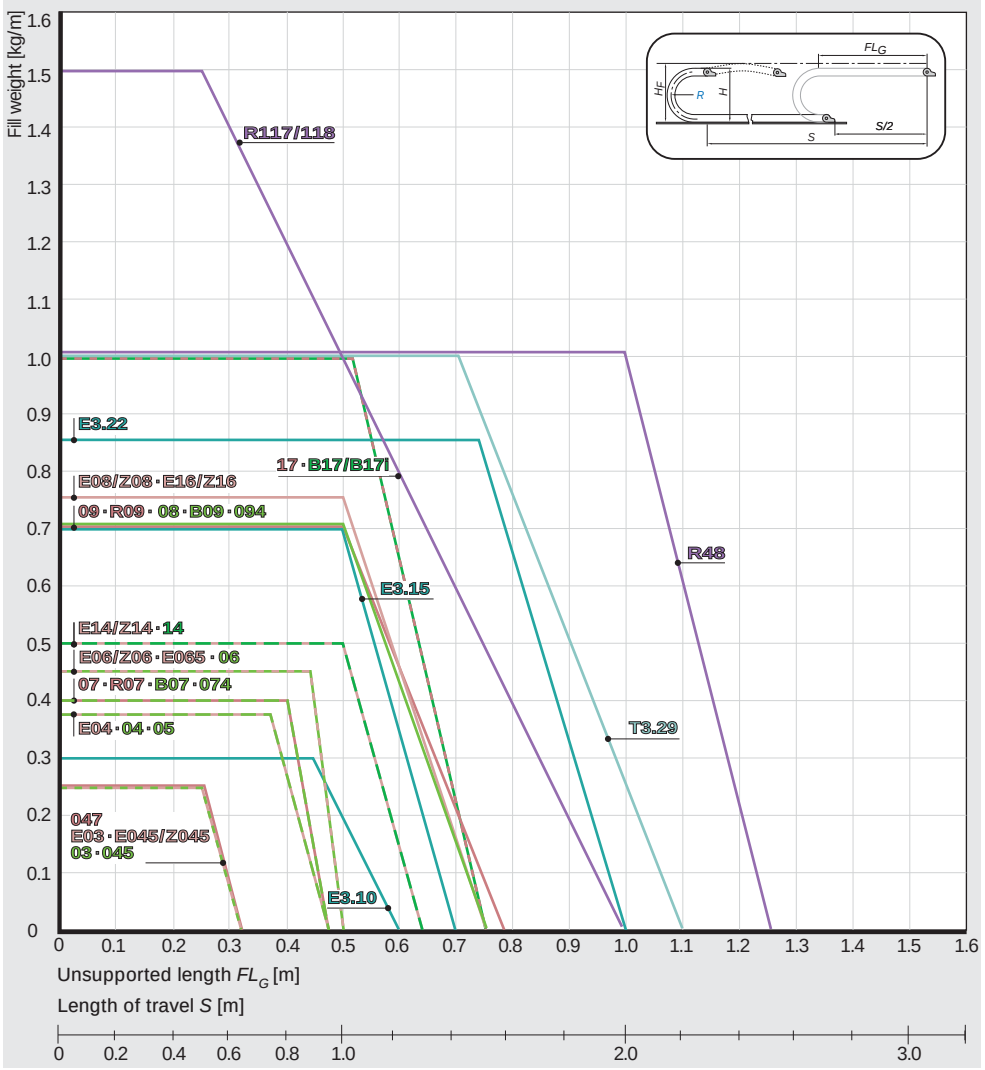




We have received an official certificate from the Rhineland Technical Inspection Authority (TÜV Rheinland Berlin-Brandenburg) and we are able to provide you with a copy on request

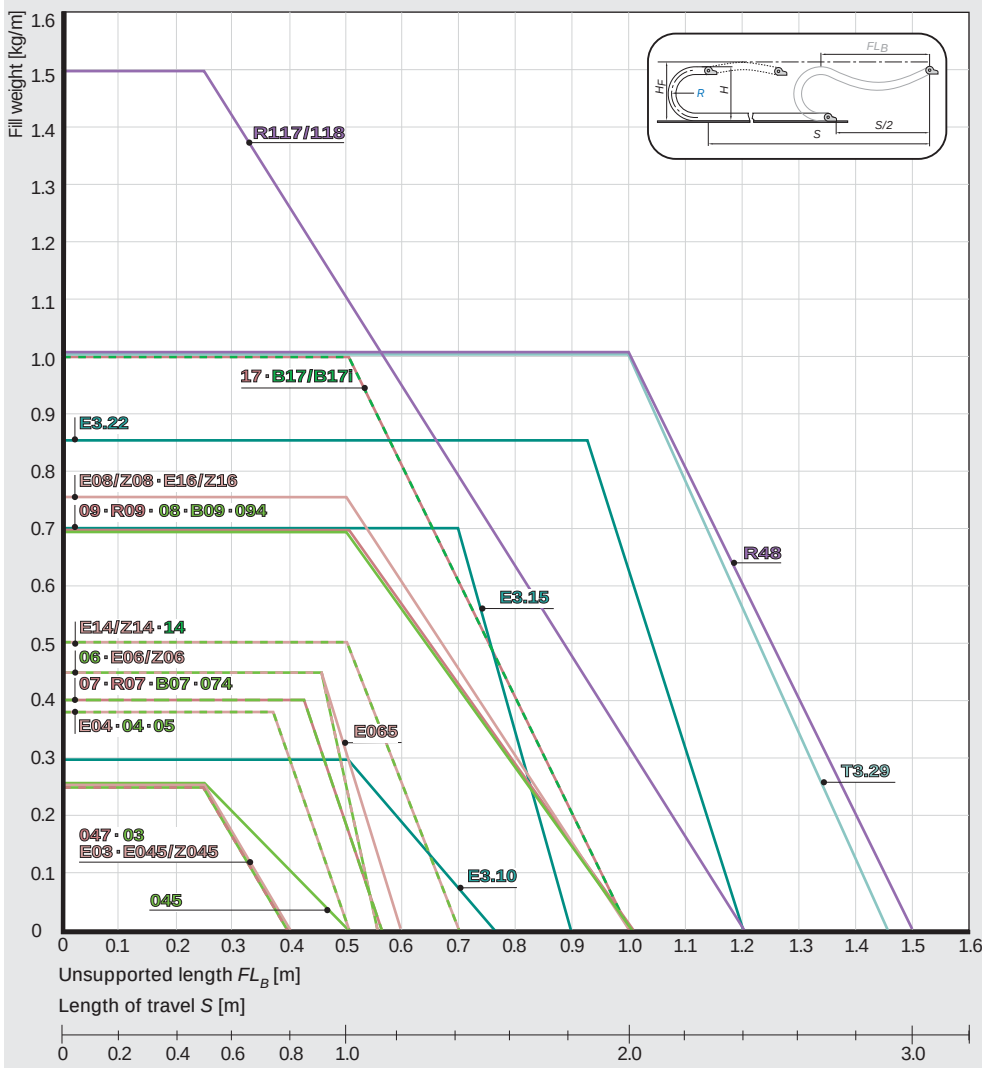
Unsupported | Straight FL_G | Fill weights up to 1,5 kg/m

Load diagram use unsupported



Unsupported | Sag FL_B | Fill weights up to 1,5 kg/m

Load diagram use unsupported



Important information

- Fill weight - Weight of all cables and hoses, including contents (for media hoses) within the e-chain®, typically given [kg/m]
- FL_G - unsupported e-chain® with straight upper run
- FL_B - unsupported e-chain® with permitted sag
- To the right of the FL_B graph of the diagram, the application is shown in "critical sag", which must be avoided!

These values are essential for: ● Finding a suitable e-chain® for your fill weight and travel distance ● Identifying the max. load for the selected e-chain®. If you cannot meet your application demands using these parameters, keep in mind these specifications are conservative maximum values. In individual cases, they can be exceeded by up to 30%. Special solutions are also possible. Please consult igus®

The maximum travel -

always amounts to 2 x 2 x FL_G or FL_B if the fixed end is in the center of the travel. In this case, the following applies:

e-chain® length: $L_K = {}^{S}l_2 + K$

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
K = π x R + (2 x T) Add-on for bending radius

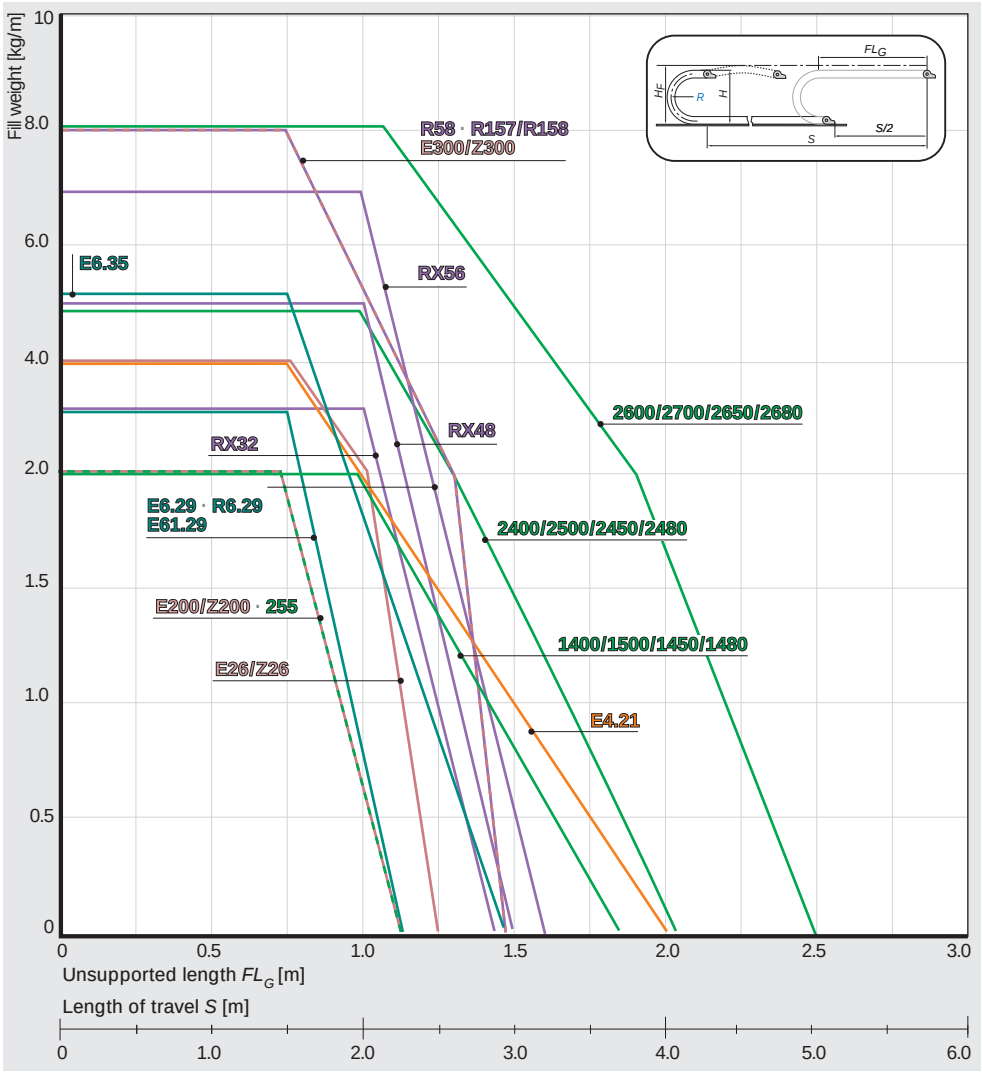
Diagramm Series

You will find both diagrams for each series listed individually in the catalog

easy chain®	▶ page 146
zipper	▶ page 228
E2 micro	▶ page 292
E2 mini	▶ page 346
E2 /RX e-tubes	▶ page 488
System T3	▶ page 880
System E3	▶ page 896

Unsupported | Straight FL_G | Fill weights up to 9,0 kg/m

Load diagram use unsupported



Important information

- Fill weight - Weight of all cables and hoses, including contents (for media hoses) within the e-chain®, typically given [kg/m]
- FL_G - unsupported e-chain® with straight upper run
- FL_B - unsupported e-chain® with permitted sag
- To the right of the FL_B graph of the diagram, the application is shown in "critical sag", which must be avoided!

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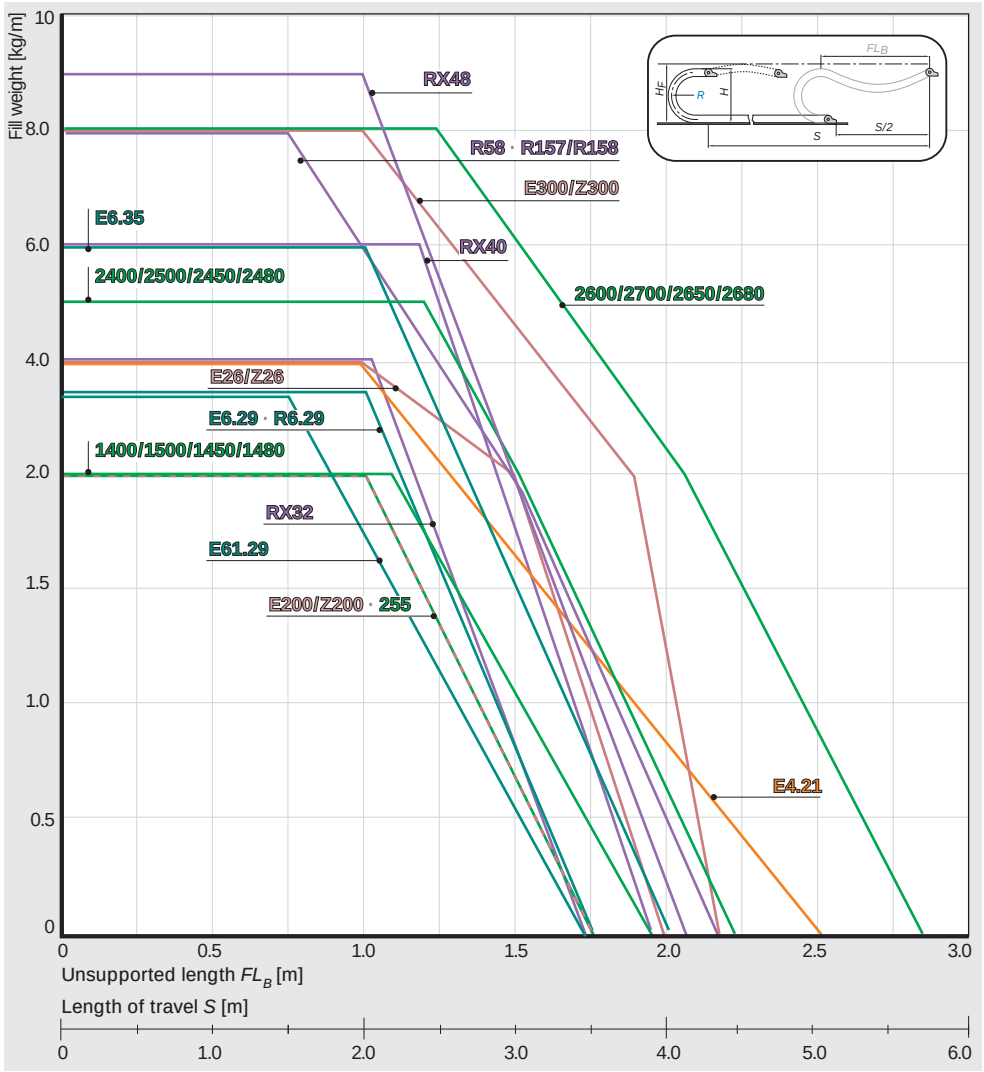
Unsupported | Sag FL_B | Fill weights up to 9,0 kg/m

Load diagram use unsupported



The maximum travel -

always amounts to 2 x 2 x FL_G or FL_B if the fixed end is in the center of the travel. In this case, the following applies:

e-chain® length: $L_K = {}^{S}l_2 + K$

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
K = π x R + (2 x T) Add-on for bending radius

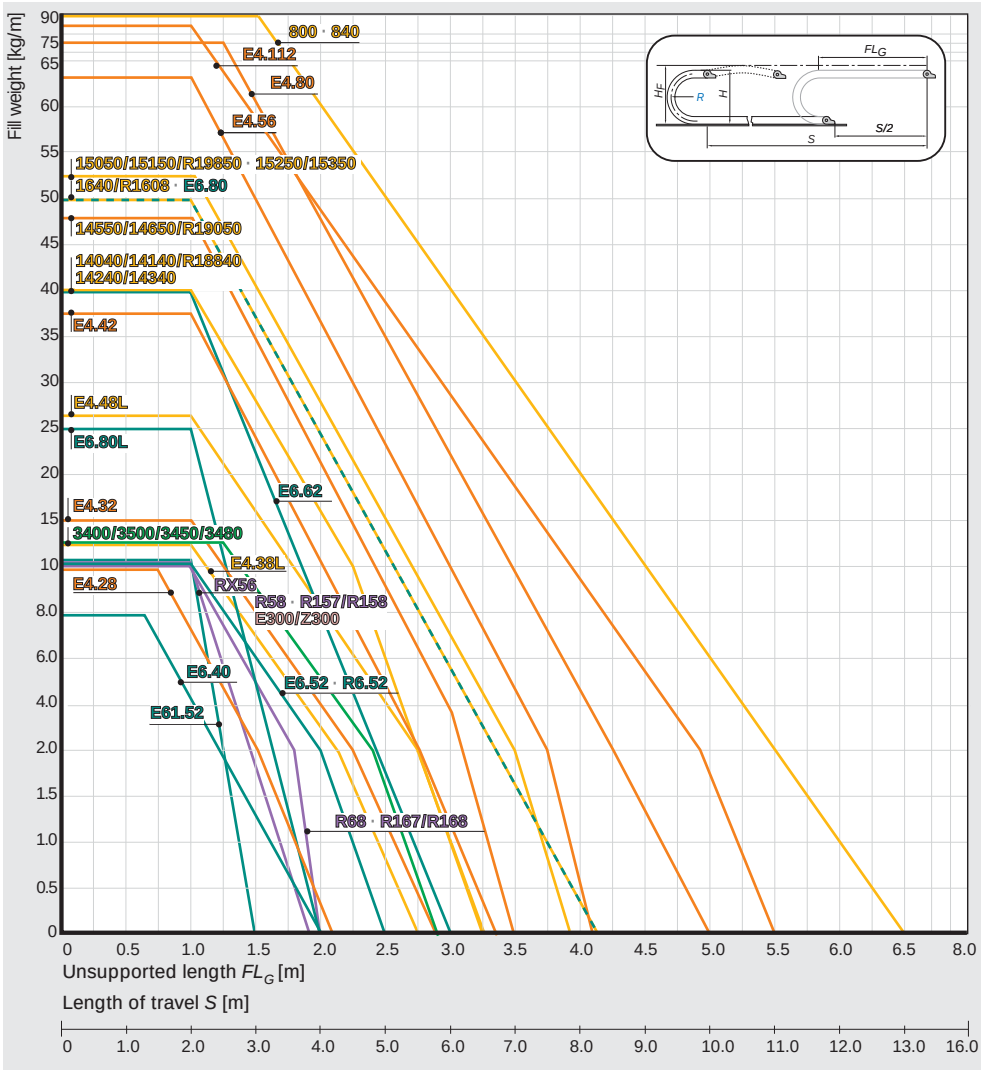
Diagramm Series

You will find both diagrams for each series listed individually in the catalog

easy chain®	▶ page 146
E2/000	▶ page 400
E2 /RX e-tubes	▶ page 488
E4.1	▶ page 612
E6	▶ page 916
E6.1	▶ page 994

Unsupported | Straight FL_G | Fill weights up to 90 kg/m

Load diagram use unsupported



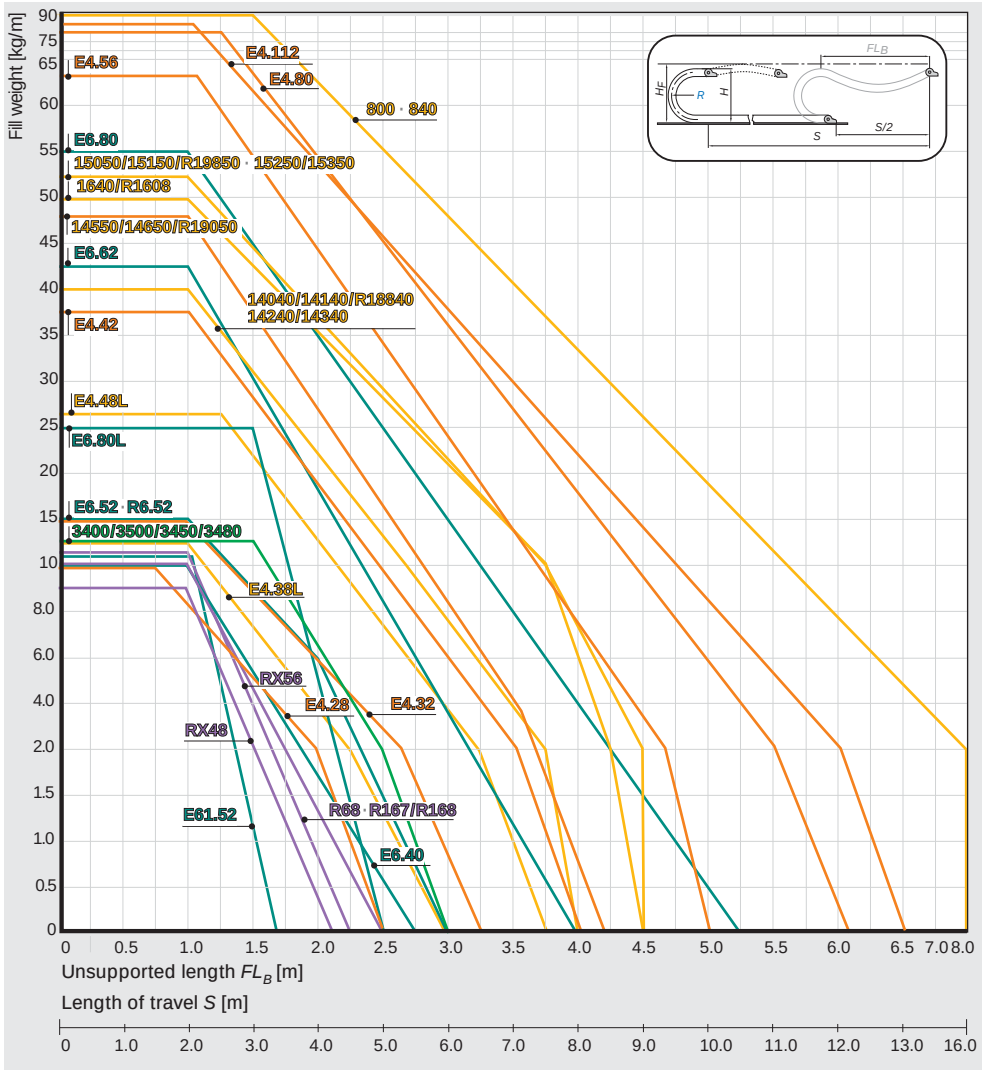
Important information

- Fill weight - Weight of all cables and hoses, including contents (for media hoses) within the e-chain®, typically given [kg/m]
- FL_G - unsupported e-chain® with straight upper run
- FL_B - unsupported e-chain® with permitted sag
- To the right of the FL_B graph of the diagram, the application is shown in "critical sag", which must be avoided!

These values are essential for: ● Finding a suitable e-chain® for your fill weight and travel distance ● Identifying the max. load for the selected e-chain®. If you cannot meet your application demands using these parameters, keep in mind these specifications are conservative maximum values. In individual cases, they can be exceeded by up to 30%. Special solutions are also possible. Please consult igus®

Unsupported | Sag FL_B | Fill weights up to 90 kg/m

Load diagram use unsupported



The maximum travel -
always amounts to 2 x 2 x FL_G or FL_B if the fixed end is in the center of the travel. In this case, the following applies:

e-chain® length: $L_K = {}^{S}l_2 + K$

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
K = π x R + (2 x T) Add-on for bending radius

Diagramm Series

You will find both diagrams for each series listed individually in the catalog

E2/000	▶ page 400
E2 /RX e-tubes	▶ page 488
E4.1	▶ page 612
E4.1 light	▶ page 746
E4/light	▶ page 774
E6	▶ page 916
E6.1	▶ page 994

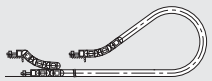
Recommended ratio of inner width *Bi* and bending radius *R*
The minimum inner width of an e-chain® on long travels depends on its bending radius. igus® specifies:

$$Bi_{min.} \geq {}^{R}/_{4}$$

$$L_k = {}^{S}/_{2} + K_2$$

L_K = e-chain® length
S = Length of travel
$S/2$ = Half length of travel
R = Bending radius
ΔCL = Offset fixed point
H_{Ri} = Trough inner height
H_2 = Installation height*
D_2 = Over length for long travels gliding
K_2 = Add-on*
*with lowered mounting

Advantages lowered moving end:
- Space saving
- Longer travels
- Higher service life





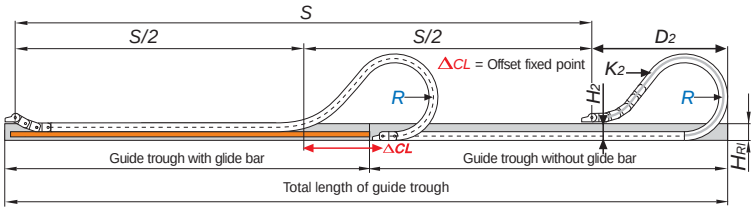
Example of lowered mounting height

Gliding applications principle

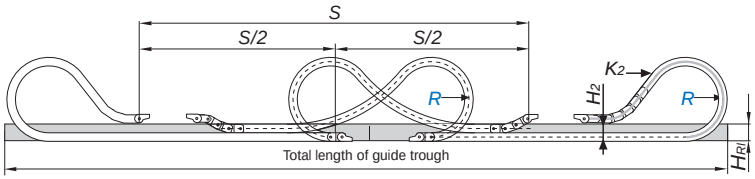
For long travels, the upper run of the igus® e-chains® rests on the lower run. The upper run glides partially on the lower run and partially at the same height on a glide bar. The diagrams below show this. For lateral guidance, a Guide Trough is necessary. If the stationary mounting bracket and the fixed end of the cables and hoses can be placed in the center, the e-chain® length is calculated as follows: $L_k = {}^{S}/_{2} + K_2$. Depending on the technical data and the selected e-chain®, the mounting point of the moving end of the e-chain® must be lowered on some units ▶ Lowered mounting height. In our system analysis for long travels, we give exact details for your specific application.



Long travel with E4 rol e-chain®, guided in a igus® steel guide trough



The function of an e-chainsystem® for gliding applications (schematically).
The fixed end of the e-chain® is located in the center of the travel distance



For a configuration involving two opposed e-chains®, the travel is measured as shown and selected when these factors apply: ● Restricted space ● High loads

Gliding | Long Travels

Advantages for long travel applications with igus® e-chains®

- Travels over 800 m
- 6 m/s speed (up to 10 m/s possible after consulation with igus®)
- Service life of 10 years and more with igus® e-chainsystems®
- Fill weights up to 70 kg/m

Further advantages of the design are: ● Many different types of cables and hoses can operate side by side in the same system (i.e. electrical, data, fiber optic cables with hydraulic and pneumatic hoses) ● Space-saving installation ● Quiet operation ● High accelerations ● Durable in wind, weather, dirt, and chemicals ● Simple assembly of the modular system on the spot ● Rapid assembly and replacement of cables and hoses



E4 e-chain® with extension links for many cables and large hoses on a long travel application

Design assistance, free of charge

We recommend that igus® calculate every gliding application for you. We will always offer the most cost-effective solution, taking the technical requirements and operating safety into consideration. The system solution designed by us is also automatically given an igus® system guarantee.

To be able to advise you accurately, we require the following specifications: ● Travel [m] ● Travel speed [m/min] or [m/s] ● Acceleration [m/s²] ● Fill weight [kg/m] ● Maximum cable/hose outer diameter [mm] ● Type and number of cables and hoses ● Required bending radius [mm] ● Cycle frequency (n/day or n/hour) ● Technical environment.



Longest igus® travel of 615 m with rol e-chain® and chainflex®-cables

Standard
Gliding applications = Pivoting mounting brackets

Please call us and within hours you will receive a detailed system proposal!

Special solutions for long travel applications without Guide Troughs
▶ from page 1264

All special solutions for long travel applications without Guide Troughs

▶ from page 1264

- System E4/4HD
- System P4
- rol e-chain®
- autoglide
- guidelok horizontal
- guidelok slimline F
- lbt flizz®
- micro flizz®



Long travel "off the reel." Up to 100 m travel pre-assembled and ready to install



Long travel application with the larges polymer e-chain® of the world. Series E4.350

Trends in long travel applications

Very long travels with igus® rol e-chain®. Rolling instead of gliding:

75% less push-/pull forces due to special roller-links. Travels up to 800 m are possible. Longest igus® travel of 615 m with rol e-chain® and chainflex®-cables ▶ igus.eu/eu/rolechain

Long travel systems "off the reel" save already at the state of assembling

Complete costum-made e-chainsystems® with cables, connectors, strain relief - are delivered on the reel and "rolled off" into the preassembled Guide Troughs. Time savings of 50 % possible ▶ igus.eu/eu/readychain

Long travels without guide troughs

Our autoglide system consists of self-guiding e-chains® for travels up to 50 m travel lengths (speed 1,5 m/s) due to special gliding elements on the crossbars ▶ igus.eu/eu/autoglide

Long travels with very small e-chains®

micro flizz® offers the guidance of cables inside a small e-chain® with high acceleration on long travel applications ▶ igus.eu/eu/flizz-n



Cleaning of a port basin in Antwerp. On a stroke of 138 meters an e-chain®
Series E4.350 guides cables and hoses with a total additional load of 98 kg/m

More examples for long travel applications ▶ www.igus.eu

PPDS -
Push Pull Force Detection System

The PPDS-System is an electronic diagnostics tool that performs online monitoring of the displacement forces on the e-chains® in order to avoid system damage and stoppages.
Excessive dirt, ice, and snow and foreign objects that fall into the e-chain® can block the system, causing the e-chain® to ascend and break. The PPDS system measures the displacement forces on the e-chain® several times per second, and compares the information with be calculated specification. If a variance occurs the plant can be automatically stopped with the help of the PPDS system. 3 PPDS systems are available: ● PPDS "basic" ● PPDS "advanced" ● PPDS "pro"



Long travels with electronics Push/Pull-force monitoring with the PPDS System

Product benefits

- Easy installation by means of non-interchangeable connectors
- Easy programming using the membrane keypad directly at the device
- Compact housing, stable, corrosion resistant, sealed in accordance with IP 65
- The force limit is programmed in tensile and compression direction
- The plant stops when the force is exceeded
- Custom programmable and event logging in the data memory

Potential applications

Facilities susceptible to interference, such as conveyor systems in power plants, waste incineration systems, and chemical plants, or crane building. Generally with long travel distances that have high fail-safe requirements. For long travel distances, if tensile and compressive force monitoring is needed.

PPDS "basic" - Push/Pull force calculation as safety standard So far the realization of Condition Monitoring Systems was limited to large-scale projects, e.g. ship-to-shore cranes. PPDS "basic" now makes this technology available for all "standard" industrial appliances. The simple force measuring function conducted at the mounting bracket of the e-chain® new also provides an emergency stop function for e-chains® in gliding applications under 100 m stroke at a reasonable price. It consists of the PPF-Sensor (igus®-force sensor), the PPDS Easy 2.0 Evaluation unit and a ready-to-install set with connection cables and assembled connectors for the evaluation unit. ● Low-cost system protection ● Emergency Shutdown or alarming in case of system overload ● Space - saving design

PPDS "advanced" - Push/Pull force calculation for long gliding applications

The system for very long gliding applications with an igus® floating moving arm (used to compensate lateral movements). The force sensor is integrated in the floating moving arm and works in connection with the PPDS Easy 2.0 evaluation unit.

PPDS "pro" - Push/Pull force calculation for very long travels

The system for very long travels, where the highest level of reliability is inevitable. Here the Full PPDS evaluation is used, which can estimate the force limits depending on the position. A load cell is mounted to the floating moving arm.

You can find an online video at ▶ www.igus.eu/eu/PPDSbasic

3 igus® PPDS-systems are available:

- PPDS "basic" New in this catalog
- PPDS "advanced"
- PPDS "pro"



PPDS "basic"
New in this catalog



PPDS "advanced"



PPDS "pro"



Floating moving arm for PPDS "advanced" and PPDS "pro"

If the fixed point is in the center of the travel, use half of the guide trough with glide bars ... and the other half of the guide trough without glide bars



Various guide trough systems are available
► Guide Troughs, page 1176

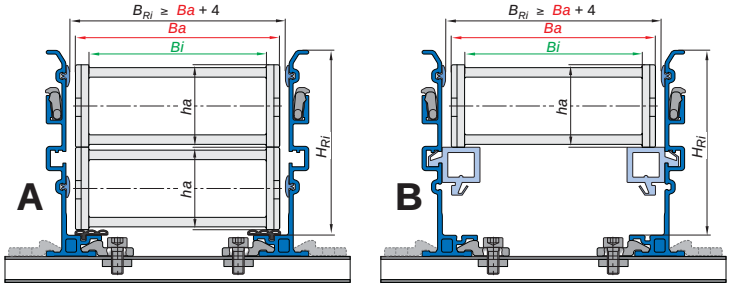
Long travels with igus® Guide troughs

Guide troughs are used for long travels. They allow igus® e-chain® and e-tubes to continue smooth, low-friction operation in these long-travel situations. Principle sketches are shown on this page. The height of the trough must be at least twice that of the e-chain® link height. The sides must provide a chamfered opening. The trough inner width is the same as the e-chain® outer width, plus 4 mm (on Alu SuperTroughs) $B_{Ri} = Ba + 4$. Along the side of the trough, where the upper run cannot glide on the lower run, glide bars must be installed. We recommend the use of polymer glide bars from igus®. They are optimally matched to the e-chain® material and achieve the lowest values for friction, noise and wear. Guide troughs with and without glide bars can be obtained for almost all igus® e-chains®. Important: When assembling the trough parts, the following points must be given particular attention: ● Properly align all trough parts upon installation ● All screw heads should be flush with the trough ● Smooth levelled transition between the end of the e-chain® and the glide bars ● Solid connection with the glide surface. These points must be observed when using assembly-friendly igus® guide troughs.

Ba = e-chain® outer width-
Bi = e-chain® inner width
ha = e-chain® outer height
H_{Ri} = Inner trough height
B_{Ri} = Inner trough width ► depending on *Ba*

$H_{Ri} \geq 2 \times ha$
$B_{Ri} \geq Ba + 4$
(Alu SuperTrough)
$B_{Ri} \geq Ba + 5$
(Steel guide trough)

- Alu SuperTrough-set
- Glide bar
- Installation set"Basic"
- C-profile



A) Aluminum SuperTrough without glide bars - upper run glides on the lower run
B) Aluminum SuperTrough with glide bars. We recommend the use of polymer glide bars from igus® made of igulen. They are optimally matched to the e-chain® material and achieve the lowest values for friction, noise and wear.

Glide friction values for igus® e-chains® made of igumid G and various glide bars

igumid G	igus® polymer bar igulen	Glide sheet steel	Anodized aluminum	Stainless steel
Friction value dynamic	0,19	0,45	0,54	0,48

Source: igus®-Labor

More examples for long travel applications ► www.igus.eu

Gliding | Long Travels

Travel speeds and accelerations

Travel speeds up to 5 m/s in continuous operation are possible and in use on current applications. In special cases, even higher speeds are possible. For example, E4 e-chains® achieve speeds of 22 m/s and accelerations of 784 m/s² in crash test units. (Only a few thousand cycles per year are required in this situation.) Acceleration plays a large role in the calculation. Differentiations must be made between normal operational acceleration and a sudden jolt of acceleration such as unexpected stops or so-called "E-stops." Even in these situations, igus® e-chains® prove to be very durable.



Automated storage/retrieval system with System E2 and chainflex® cables - travels up to 80 m and speed of 4.5 m/s

Service life

We offer service life calculations for your application based on our extensive gliding application experience. As developers of polymer plain bearings, we possess vast material behavior knowledge which we apply to the development of e-chains® as well. Units with 200 m travels have been in operation for 8 years with minimum maintenance. Units up to 60 m travels have been in operation for 15 years with almost no maintenance. (Please consult igus® for references and calculations for your project.) The maintenance-free aspects of igus® e-chainsystems® over long periods and under rough operating conditions is often the deciding factor in choosing igus®. Our system guarantee (depends on the application) provides additional peace of mind.

Technical environment

Long travel applications using igus® e-chains® run in water, in dirt, in the tropics, in explosion risk areas (with special design features) and many other conditions. Guide troughs can be supplied in corrosion-free materials. You will find more details in the Technical Environment section of this chapter.

Calculation

Comprehensive tests place us in the position of knowing our products capabilities. Important factors in these tests are: ● Push-pull forces under both ambient and extreme temperatures ● Humidity and dirt ● Friction values of the polymers, alone and against various glide surfaces ● Behavior of electrical conduits under push-pull conditions ● Behavior of hydraulic and media hoses under push-pull conditions ● Service life, and noise generation. If we cannot calculate your application based on these factors, we will perform a practical test for you in our laboratory. Please consult igus®.

Technical data - Gliding applications	
Travel max	600 - 800 m
Travel speed max	10 m/s
Travel acceleration max	dependent on calculation, can be 50 m/s² and more
Fill weight maximum	dependent on calculation, can be 70 kg/m and more

More examples for long travel applications ► www.igus.eu

Corrosion-free guide troughs are available in the material:

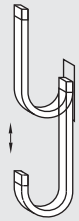
- Normally galvanized
- Upon request: Stainless steel Material 1.4571/1.4404
- Seawater resistant aluminum

Special properties - Long travel applications

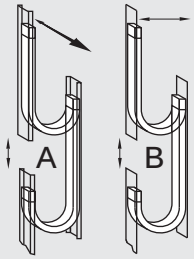
For higher fill weights igus® develops unconventional solutions and delivers standard parts from stock or special parts from stock or on short notice. e-chains® that are nested can be used in gliding applications when there is width restriction. Guide troughs with special wall heights are required. e-chains® running side by side or in "multiband" design can also be used.

Standard

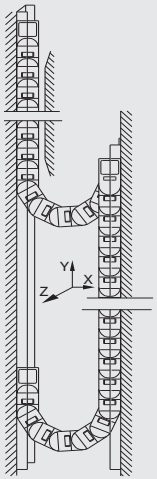
We recommend locking mounting brackets for hanging applications.



In most cases, vertical motion applications do not require lateral guidance



Lateral acceleration can occur in two directions - guidance is necessary



Principle of a hanging e-chain® with lateral guidance - lateral accelerations in both directions are contained



Standing applications with heights over 100 m are possible with e-chains®



Hanging assembly with one-sided U profile

Vertical, hanging applications

In accordance with the principle of "hanging" applications, heights of over 100 m are possible with igus® e-chains®. e-chains® with interior separation allow many different types of cables and hoses to operate together in the same system without becoming entangled.

Cables and hoses

Two important factors in vertical hanging applications are how the cables and hoses lay in the e-chain® and and how they are secured at the end points: All cables and hoses must be hung so that they bear their own weight. The e-chain® fulfills the function of orderly conduit bundling only and should not absorb any further tensile forces. igus® interior separation elements should be used for distinct division of all cables and hoses. The cables and hoses must be secured carefully to both end points of the e-chain®. The strain relief must be designed so that the opposite run cannot catch. Safe strain relief and clear separation of the cables and hoses are the basic prerequisites for hanging installations - Cables must be able to move freely and bear their own weight.

Vertical motion with lateral acceleration

If lateral acceleration occurs, lateral guidance of the e-chain® must be provided in most cases. The diagram to the right shows the principle of such guidance. Partial guidance is also an option - however, it must at least cover the area in which the e-chain® may sway. Lateral acceleration can occur in two directions. The lateral guidance must be installed accordingly. If you have a choice, the layout in Figure A is preferred. Additional guidance along the side of the e-chain® helps to stabilize the e-chain® further.

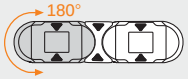
"No Camber" - Special "NC" e-chains®

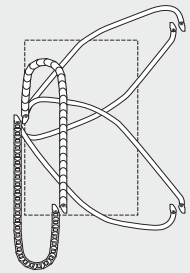
A normal igus® e-chain® with camber is suitable for hanging use if enough space is available. If there is no room - as is frequently the case for storage and retrieval systems in narrow aisles - a "no camber" e-chain® must be ordered. For long travels (gliding) we recommend also NC-version e-chains®.
With E4.1 it's easy to create a NC-version. Simple turn e-chain® outer link. Order example: E4.32.10.175.0.**NC** (NC = no camber).



The E4.1 system is one of igus® best solutions for hanging applications

With E4.1 it's easy to create a NC-version. Simple turn e-chain® outer link





Hanging and standing e-chainsystems® can reach to very different points

Technical data - vertical hanging	
Travel height max:	100 m
v max:	20 m/s dependent on height and stability of the e-chain®
a max:	50 m/s² dependent onheight and stability of the e-chain®

guidelok slimline F

No rattling and knocking during lateral accelerations - cables guided safely upward up to 50 m. High speeds of 7 m/s are no longer a rarity for lane travels of highly dynamic storage and retrieval units. The e-chains® are guided safely even at very high speeds with the new generation igus® guidelok slimline. The product range has been expanded to series 2700 and 3500 - now higher fillings and higher loads are possible.

- Up to 7 m/s and 10 m/s²
- Save up to 80% on trough parts
- Save significantly on costs and system weight
- For hanging applications up to 50 m high
- No swinging of the e-chain, high reliability- through lever mechanism and guiding rails
- Faster and easier installation
- Significant noise reduction
- Easy access for servicing
- Energy + data + media are conducted safely and without interruption in one system



Typical application areas:
Storage and retrieval equipment, lifters, elevators, builder's and crane lifts, hoists, AKL's
More information online
▶ www.igus.eu/eu/guidelok



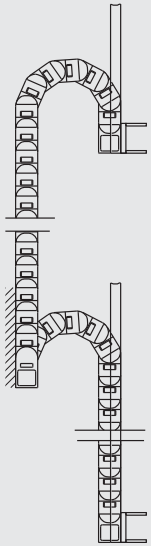
Note: Systems of this type should be designed by our system design engineers. We will be more than willing to submit an offer to you. Please contact us about this.



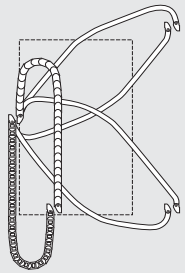
Application | Vertical Standing

Standard

We recommend locking mounting brackets for standing applications



Options for a standing application with support of the first e-chain® links: on the right, with U-shaped guidance - on the left, with the support of the first e-chain® links



Standing e-chainsystems® can reach to very different points



Locking KMA mounting brackets with flush mounting



U-shaped supported e-tube for high lateral acceleration

Vertical - standing applications

Standing applications are standard on many machines and plants. Cables will be guided safely in vertical strokes.

Mounting brackets

The mounting brackets must be attached so that the e-chain® cannot bow out. The igus® program offers locking or one-sided, locking mounting brackets for almost all types of e-chains®. Locking KMA mounting brackets are highly recommended because they can be attached flush to the machine.

Cables and hoses

Cables and hoses must be laid in the e-chain® so that they can bend freely. For precise guidance of the cables and hoses, we strongly recommend igus® interior separation elements. Cables must be strain relieved at both ends.

Lateral acceleration

If lateral acceleration occurs, the e-chain® should be supported along the outer radius. For higher e-chain® heights, it is generally recommended that at least the first three links on the outer radius be supported. For maximum heights and weights, the whole distance must often be supported. Due to the wide variety of combinations involving weights, stroke heights, e-chain® types and bending radii, we strongly recommend you make use of our consulting services.

Combined movements

Combined vertical and horizontal movements are possible with igus® e-chains® for a cost-saving solution.

Technical data - vertical - standing applications	
Max. stroke height - without support	≈ 4 m
Max. stroke height - with support of the first e-chain® links	≈ 6 m
Max. stroke height - with full support	≈ 20 m
v max (dependent upon stroke height and weight)	20 m/s
a max (dependent upon stroke height and weight)	50 m/s²

More examples for standing applications ▶ www.igus.eu

Application | Zig-Zag | liftband



Degradation of a nuclear power station.
Zig-Zag application with igus® e-chains®

"Zig-Zag" design

The modular design of igus e-chains facilitates this space-saving and unconventional solution. For modern platform technology, such as performance stages, a variety of cables and hoses which adjust the stage height must be accommodated. Lack of space almost invariably presents particular difficulties. The photo above shows an e-chain in a "Zig-Zag" configuration produced by incorporating reverse bend radii or "RBR". The unextended e-chain is stored in a "basket". If the platform is raised, the e-chain unfolds, generating little or no noise. This construction is possible with the E4.1 System as well as many other types. Please consult igus for these kinds of applications.

Technical data - Zig-Zag		
Travel max.	40 m	(more upon request)
v max	0,4 m/s	depending on the application, please check with igus®
a max	1,0 m/s²	depending on the application, please check with igus®

liftband New in this catalog

Modular, silent, space saving - guide media, energy and data up and down:

High vertical applications that have plenty of space horizontally but allow only for little system height can be implemented with the liftband.

- Alternative to Zig-Zag solution
- Lighter and smaller installation space
- Vertical applications implemented with ease
- Speeds up to 1 m/s
- Acceleration up to 2 m/s2
- Max. expansion length: 13 m
- Cable bending radius up to 250 mm

More information ▶ www.igus.eu/eu/liftband

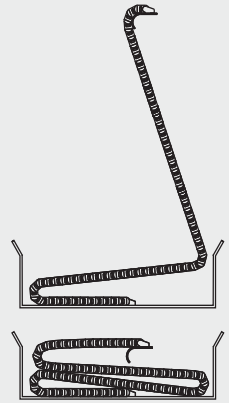


More examples for Zig-Zag applications ▶ www.igus.eu



Standard

We recommend pivoting mounting brackets for Zig-Zag applications



Space-saving installation - Travel heights of more than 20 m possible



Standard

We recommend locking mounting brackets for side-mounted applications

Side-mounted e-chains® - are strongly recommended if the installation height is restricted

Standard values for unsupported lengths, side-mounted, upon request. The unsupported lengths can be extended by supporting the links next to the mounting brackets



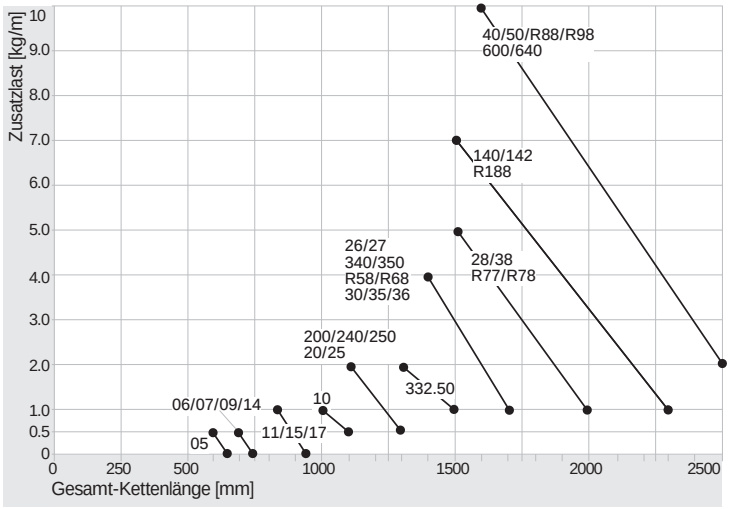
E4 e-chains® assembled in an unsupported manner on the traveling column machine. The Y and Z axes have a travel of 8,000 mm and 1,750 mm at a speed of 25 meters per minute



e-chain®, side-mounted, supported System E4

Short travels with or without support

igus® e-chains® placed on their side can be used unsupported to a limited extent. The turned "unsupported length" in this case is dependent on the following factors: ● Fill weight ● Width of the e-chain® ● Bending radius ● Parallel placement. The greater the fill weight of the e-chain®, the shorter the available unsupported length. When placed on its side, the e-chain® width, in effect, becomes the height. As this "height" increases, the e-chainsystem® becomes proportionally more stable. Small bending radii provide greater stability. If further movement in a second axis is added to the parallel motion of two e-chains®, the unsupported length is impaired. For applications with low fill weight, the standard mounting brackets are adequate. If, however, the fill weight is high and the travels are long, the e-chain® must then be supported either in whole or in part. Due to the variety of application possibilities, we strongly recommend you make use of our consulting services.



Application | Side-Mounted



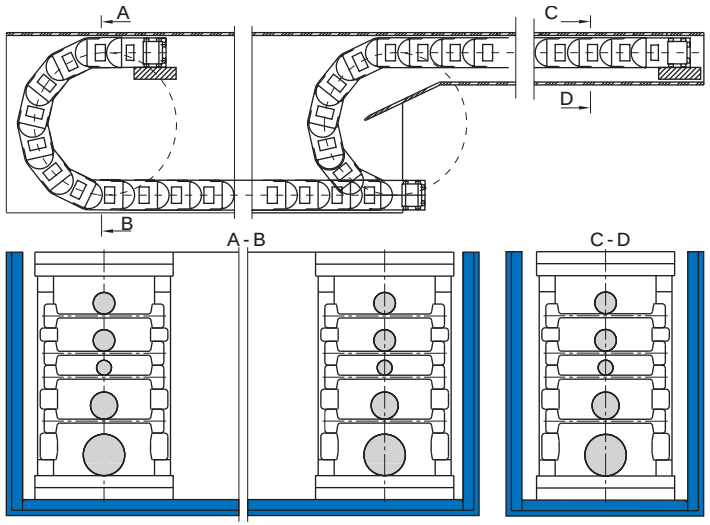
System E4/light e-tube in direct chip area

Long travel, gliding

Side-mounted e-chains® can travel over 100 m with adequate guidance. All e-chain® types are designed to operate gliding on their side. The corresponding glide surface is usually an igus® polymer, stainless steel or galvanized steel, depending on how high the demands on the travel speed and service life are. Roller and ball bearings or additional gliding elements are not necessary for igus® e-chains®.

Cables and hoses

Cables and hoses must be guided so that the e-chainsystem® can move freely at all times. The igus® modular separation options offers numerous possibilities, such as vertical separators and spacers, to keep these cables and hoses separated and bending freely for maximum service life. igus® will gladly provide an application analysis, free of charge.



Principle of a guide trough for long travel, side-mounted



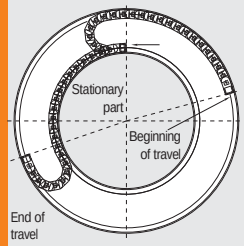
igus® - Series E4
with partial support



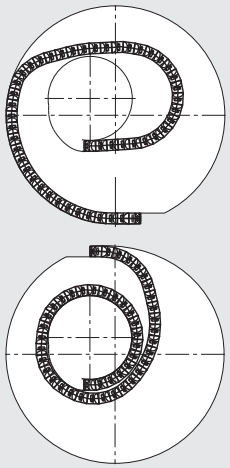
Unsupported - System E4

Standard

We reccomend pivoting mounting brackets for most applications with rotary motions



Technical data - rotary motion RBR:
max. angle of rotation = 540° (more upon request)
v max = 10 m/s
a max = 20 m/s²



Standard e-chain®
3500.075.200.0,
angle of rotation 225°



"RBR"-rotary movement with System E4, installed on a crane



Rotary motion with a "standard" e-chain®



Circular motion of 180° with standard e-chain® on a crane turret drive

Rotary motion with"RBR"

"RBR" is "reverse bending radius" and means that the e-chain® can bend in two directions. Each igus® e-chain® can incorporate RBR designs, with the exception of several radii, for the e-tubes R117 to R9850 and for the Series 07, 09, 14, 15, and 17. The RBR does not necessarily need to be identical to the normal bending radius of an e-chain®. For example: Part No. E4.32.15.100/425.0, describes a Series E4.32 e-chain® with an inner width of 150 mm, standard bending radius of *R* = 100 mm and RBR of 425 mm.
Most rotary motions can be achieved with the RBR option. Angles of rotation up to 540° have been realized. Below is an example of rotary motion using an RBR e-chain®. Please consult igus® for your particular application.

Rotary movements require less installation height. The e-chains® glide mostly on surfaces made of polymer, stainless steel or steel and are guided through channels into a rotary movement. (See "side mounted" for further design tips.) Bending radii, circular radii and e-chain® widths are variable with this product line

Rotary motion with standard e-chains®

The photo to the left shows an application which was achieved using "standard" e-chains® (in this case, standard means that the e-chain® only bends in one direction). Such solutions are possible if a great deal of space is available and if the angles of rotation are limited to a maximum of 450°. All igus® e-chains®, e-tubes and chainflex® cables are appropriate for this situation.

Technical data - rotary motion RBR

max. angle of rotation	540°	more upon request
v max	2,0 m/s	more upon request, depending on the application
a max	20 m/s²	more upon request, depending on the application

Application | Rotary Motion | RBR



System E2 medium with 360° RBR rotary motion on a robot

Product range for rotary motions with RBR

e-chains® with "RBR" are available as standard from stock for the complete triflex® range. In addition, we supply a number of e-chains® which are equipped as standard with "RBR". For all other types, "RBR" means custom-made, and we will be more than willing to offer you this option. igus® e-chains® with "RBR", available as standard ► triflex®R, easy triflex® and triflex®. The e-chain® Series appearing in the table are "RBR" - versions available from stock. Almost all igus® e-chains® can be delivered as a "RBR"- version. Please contact us for any special inquiry

- chainflex® cables with TPE-outer jacket are specially suited for e-chains® with "RBR" option
- Please use for e-chains® with "RBR"-option a strain relief only for the moving end

Table of "RBR" e-chains® available from stock

Part. No.	Series	Part. No.	Series
03.05.10/70	E2 micro	10.4.038/600	E2 mini
05.16.018/018	E2 micro	10.4.048/048	E2 mini
06.20.018/018	E2 micro	10.4.048/400	E2 mini
06.30.018/018	E2 micro	10.4.075/220	E2 mini
06.64.018/018	E2 micro	1500.038.075/450.0	E2/000
10.1.028/028	E2 mini	2400.09.055/250	E2/000
10.1.038/600	E2 mini	250.05.060/060	E2/000
10.1.048/048	E2 mini	250.07.060/060	E2/000
10.1.075/220	E2 mini	2700.15.150/090	E2/000
10.2.028/028	E2 mini	B15i.050.100/460	E2 mini
10.2.038/600	E2 mini	E/Z14.1.038/038	easy chain®
10.2.048/048	E2 mini	E/Z14.2.038/038	easy chain®
10.2.075/220	E2 mini	E/Z14.3.038/038	easy chain®
10.3.028/028	E2 mini	E/Z14.3.075/075	easy chain®
10.3.038/600	E2 mini	E/Z14.4.038/038	easy chain®
10.3.048/048	E2 mini	TE14.50.028/028	snapchain
10.3.075/220	E2 mini	TE26.120.063/063	snapchain
10.4.028/028	E2 mini		

Guide trough systems RM and MRM for RBR solutions
► next page



Vertical rotary motion of an E2 e-chain®

The e-chain® Series appearing in the table are "RBR" - versions available from stock. Almost all igus® e-chains® can be delivered as a "RBR"- version. Please contact us for any special inquiry!

Available from stock.
Delivery in 24h or today!
Delivery time means time until shipping of goods (after technical release)



Rotary motion with RBR, diameter 6000 mm, with RBR, the inner ring rotates



System RM - Guide troughs for rotary motion applications

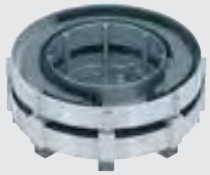
Guide Troughs- standard modular system RM

For rotary motions up to 540° igus® offers a modular system of guiding trough systems. Those systems are divided into an inner and an outer ring. Since one ring is moving together with the e-chain® there is no relative movement between e-chain® and trough, so the wear is reduced to an absolute minimum. Depeding on the application they are made from galvanized steel or stainless steel.

Realize 900° and more with igus Multi Rotation Modules (MRM)

igus® Multi Rotation Modules help to realize rotating movements up to 900° and more. Thanks to stackable add-on modules the angle of rotation can be extended "virtually" indefinitely. The Multi Rotation Modules are ideally suited also for rotary motions with high fill weights and limited space.

- Several individual systems are stacked on each other and form a complete system
- The maximum rotation of the individual levels can be easily added, thereby enabling rotary motions up to 900 degrees and more
- Compact design enables the operation even in tight spaces, extendable "at will"
- High additional loads possible
- e-chains® can be freely assembled
- Peripheral speeds up to 1 m/s
- One layer for rotation movements up to 540°, two layers for up to 900°, higher rotation angle possible with more layers



Typical application areas: Offshore, stacker and reclaimer, bucket-wheel excavators, otary cranes, other rotating applications



Functional principle

- Is the defined rotation angle of the lower layer reached, the next upper module is carried along automatically due to an integrated anchorage system
- The construction minimizes potential interferences. The Multi-Rotation Module-System is ideal for rotary applications, heavy loads and for rough environments
- Contrary to e.g. sliding contacts, the e-chain® can also guide hoses for air, gas or fluids, as well as bus and fibre optic cables
- Use also under harsh environmental conditions

Online RBR-configurator ▶ www.igus.eu/eu/rbr-configurator

Rotary motion with twisterchain®

Higher loads and smoother running. igus® new generation of twisterchain® new circular e-chains® significantly improved smoothness, stability and strength. The twisterchain® new has a modular construction for width, height and radius and therefore provides very flexible use in applications where rotating movements up to 540° are required.

- Rotary speeds up to 1 m/s and more
- Rotary/spiral movements up to 540°
- Sturdier through intermediate link - more additional load possible
- With the new generation of twisterchain® guide troughs - Save assembly time and costs - increase cycle life!
- Cable-friendly, smooth interior
- Crossbars snap-open along inner radius



Rotary motion with new igus® generation of twisterchain®



Typical application areas:
● Robots, handling machines ● Packaging machines ● Glass machines ● General mechanical engineering

twisterband - Rotary movements in minimum space - 20 times around its own axis

With the very compact igus® twisterband rotations can be implemented economically and with low wear and low maintenance in a confined space. Energy (in the process), data and media are kept secure.

- Rotary movements up to 7000° (Installation position, vertical: up to 3000°, horizontal: 7000° and more possible)
- Rotary speeds up to 360°/s possible
- Minimum installation space, builds very close around the rotary axis
- Can be reliably used in various installation positions (horizontal or vertical)
- Compact, modular and lightweight



twisterband application of two systems mounted above one another



Up to 7000° rotary motions in smallest spaces

c-chain® - modular kit of continuously revolving e-chains®

igus® offers standardized modules of the c-chain® system for many e-chains® of the series E4.1. This enables quick product solutions that are customized to the application. The avoidance of unused down journeys creates new perspectives. ● Compact, modular ready-to-install system ● Energy supply plus bus cable and pneumatics ● Speeds up to 3 m/s ● Travel distances up to 50 m and more



Product range c-chain®

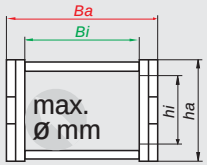
E4.21.050.075	E4.56.13.300*
E4.21.080.200*	E4.56.26.300*
E4.28.075.200*	E4.80.12.300*
E4.32.07.200*	E4.80.26.300*
E4.42.06.300*	E4.80.26.400*
E4.42.15.300*	

Infos ▶www.igus.eu/eu/c-chain

▶ www.igus.eu/eu/twisterconfigurator ▶www.igus.eu/eu/twisterband ▶www.igus.eu/eu/c-chain

Rules for:
- Maximum conduit diameters
- Separation
- Bending radius

Electrical cables need at least 10% reserve space all around, hydraulic hoses need 20%



The maximum conduit diameter is specified for each Series on its respective page



Hydraulics and electric cables are separated from one another in this example

General rules for cables and hoses in e-chains®

The key advantage of an igus® e-chainsystem® is the safe accommodation of various forms of data cables and energy suppliers in one system. We recommend the optimal separation layout of the cables and hoses in the e-chain®, but you, the customer, are still afforded the final choice. It is possible, for instance, to maintain minimum distances between bus and motor cables and mix pneumatics, electric and hydraulics in the same compartments. In addition to the quality of the cables used, the arrangement of each conduit within the e-chain® and the space allowed, are important for the service life of the system. Various separation options enable the adaptation of the e-chains® to the specific requirements of each respective application. In this chapter, we give you detailed recommendations. Due to the variety of the application parameters, we strongly recommend you take advantage of our free consultation services. Simply give us a list of your cable requirements (or merely the required electrical or other services) and you will receive our recommendation by the end of the next business day.

Maximum cable and hose diameters

The maximum cable and/or hose diameter corresponds to the inner height of the selected e-chain®/ e-tube, with additional minimum clearance. This minimum clearance would be, for example, 10% for electrical round cables, 20% for hydraulic hoses. An e-chain® is ideal if a minimum lateral gap to the next cable or hose has been factored in. Depending on the nature of the cables, the dynamics, and the expected service life, more clearance must be allowed. In specific cases, clearances may be altered further. Please consult igus.



Orderly layed cables with igus® interior separation

e-chain® interior separation

Cables and hoses with very different diameters should be laid separately. The separation is achieved using modular separators. Cables and hoses must under no circumstances have the opportunity to tangle. Therefore, the clearance height of a compartment with several similar cables or hoses next to one another must not amount to more than one and a half times the cable/-hose diameter.



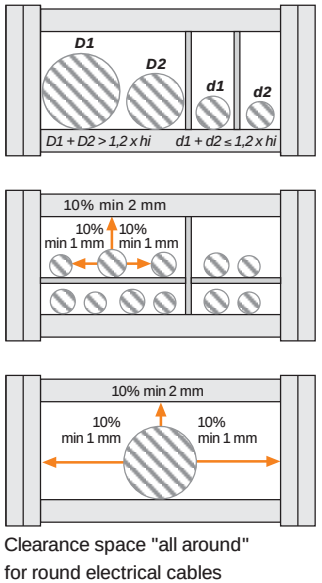
Distribution rules | Cable and Hose Packages

Reasons for distribution rules

The cables and hoses must be laid so that they can move freely at all times and so that no tensile force is exerted at the radius of the e-chains®. For high-speed applications and high cycles, cables or hoses must not be laid on top of each other without horizontal separation. The standard values for this are: Travel speed over 0.5 m/s and cycles over 10,000 p.a. igus® interior separation offers a safe solution for this situation.

Further guidelines for distribution

The cable or hose weight should be symmetrically distributed along the width of the e-chain®. Cables and hoses with different outer jacket materials must not be allowed to "stick" together. If necessary, they must be laid separately. All igus® chainflex® cables can be combined with each and other brands of cable or hose. The cables and hoses should always be fixed at the moving end. The fixed end should always involve strain relief. Exceptions are made only for certain hydraulic hoses with length compensation issues or other high pressure hoses (i.e. hydraulic hoses). Generally, the faster and more frequently the e-chain® operates, the more important the exact positioning of the cables and hoses inside the e-chain® becomes. Due to the wide variety of the possibilities, we strongly recommend you take advantage of our free consultation services for your specific applications. igus® tip: Interior Separation configurator ► www.igus.eu/eu/quickchain100



Clearance space "all around" for round electrical cables

Bending radius *R*

The bending radius of our e-chain® depends on the "thickest" or "stiffest" cable or hose in your application. The bending radii of the e-chains® should be adjusted to the recommendations of the cable or hose manufacturer. The selection of a larger radius than the minimum will positively affect service life. The specification of minimum bending radii for cables and hoses refers to use at normal temperatures - other bending radii may be recommended. Please ask your cable or hose supplier for details. We recommend complete e-chainsystems® - where bending radii for all cables and hoses, interior separation and service life are optimally matched. igus® chainflex® cables permit the smallest bending radius of 4 x d for one million strokes.



e-chain® with extension links supports a smaller e-chain® with electric cables

Distribution rules:

D1 + D2 > 1,2 x hi

Rule 1:

If *D1 + D2 > 1,2 x is e-chain® inner height*, no separation between the two cables/-hoses is necessary. Two cables/hoses should never be left unguided on top of one another or be allowed to become tangled.

d1 + d2 ≤ 1,2 x hi

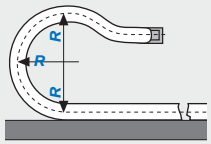
Rule 2:

If *d1 + d2 ≤ 1,2 x is e-chain® inner height*, a vertical separator or a horizontal shelf must be used to reduce the inner height, thereby preventing the entanglement of *d1* and *d2*.

All-around clearance space in % for various cables/hoses

Electrical round cables	10 %
Electrical flat cables	10 %
Pneumatics	5 -10%
Hydraulics	20 %
Media hoses	15 - 20 %

Please note: dont fill e-chains® and e-tubes more than 80% of the cross-section!



Pinciple sketch bending radius "*R*"



Corkscrewing: an effect of improper cable and hose placement in an e-chain®

Round electrical cables

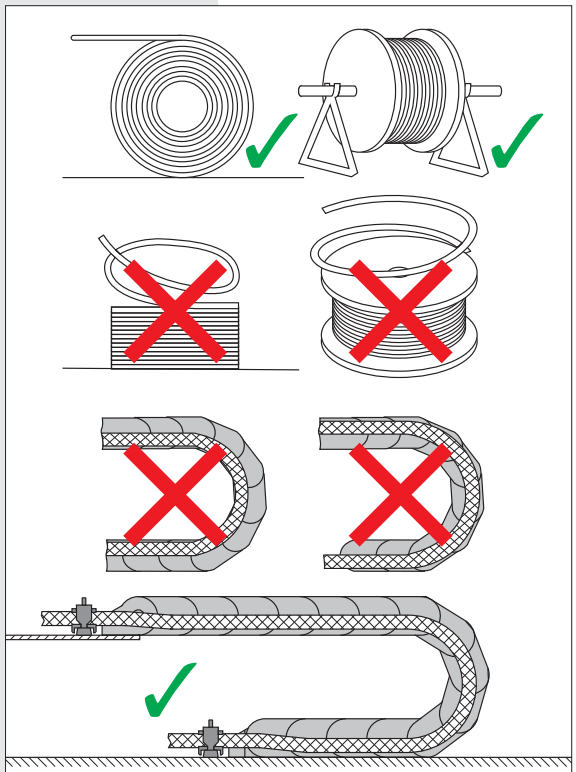
For electrical cables, the round cable is a safe, modular and cost-effective solution for e-chainsystems®. We recommend the following criteria for selecting the proper round electrical cables: ● Small minimum bending radii and mounting heights ● Strain relief integrated directly into the mounting bracket ● Uncomplicated installation process - no hanging, laying out, etc, of cables ● Long service life at minimum bending radius ● Service life expectations for your application (short or long travel, hanging, etc.) ● Test data on service life from realistic tests ● Flexible shields for shielded cables ● Abrasion-resistant and non-adhesive outer jackets ● Large selection to avoid expensive custom designs. For bus cables and fiber optic cable, special attention must be paid to how effective transmission rates and shielding remain after millions of cycles at the minimum bending radius.

Installation and strain relief of round electrical cables

1) The cables must be laid straight, without twisting. Cables must not be uncoiled from the top of the spool. igus® chainflex® cables are immediately ready for placement directly into the e-chain®. They need not be disconnected or laid out before installation.

2) The cables must be laid so that each individual cable can move freely from side to side.

3) The cables must be able to move freely along the radius. This must be double-checked if the upper run operates at the cable's maximum bending radius.



Cables must be able to bend freely. chainflex® cables can be strain-relieved directly at the mounting bracket

4) The division of the e-chain's® interior using igus® interior separators or shelves is necessary if several cables and/or hoses with varying diameters are laid out. It is important to prevent cables and hoses from tangling.

5) For cables and hoses with different jacket materials, it is important to prevent them from "sticking" to one another. If necessary, they should be separated. igus® chainflex® cables can be combined with all others.

6) Round electrical cables must be secured with strain relief at both ends. In exceptional cases, the cables may be fixed with strain relief at the moving end of the e-chain® only. A gap of 10-30 x cable diameter between the end of the bending segment and the fixed point is recommended for most cables. chainflex® cables can, on the other hand, be secured directly to the mounting bracket with strain relief (this has been confirmed with testing).

We will be pleased to provide you with recommendations for complete e-chainsystems®: Bending radii of all cables and hoses, interior separation and service life are then optimally intermatched.

Distribution rules | Cable and Hose Packages

Pneumatic hoses

In principle, the same rules apply for pneumatic hoses as for round cables. In practice, it has been demonstrated that pneumatic hoses are less susceptible to wear. After consultation, they can be laid together more closely than the "10% clearance all-around" rule. A double-sided strain relief is required under these conditions. For pneumatic hoses made of rubber, we recommend strictly following the "10% clearance" rule because they tend to adhere to each other and to other cables and hoses.



Fully pre-assembled e-chainsystem® with several pneumatic and hydraulic hoses

Flat cables

Flat cables must be able to move freely along the bending radius. Two flat cables next to one another should be kept apart with separators. If two flat cables are laid on top of one another, we strongly recommend the use of horizontal igus® shelving. Flat and round cables should be laid separately in the e-chain®. Strain relief should be attached at both ends. Flat cables are only conditionally recommended for use in e-chains®.

Hydraulic hoses

When designing hydraulic hoses in e-chains®, special attention should be paid to the expansion of the hoses when pressurized. Sufficient room must be left in the e-chain® for this as well as the possible larger external diameter of the hoses under pressure. It is important for selected hoses to be sufficiently flexible (i.e. meet bending radius specified by the e-chain®). The gliding ability and abrasion-resistant surface of the hoses are also important. All crossbars and shelves in the igus® e-chain® minimize abrasion of hoses through wide, rounded and smooth surfaces. Normally, hoses with textile braiding are more flexible than hoses made of steel wire, while maintaining smaller outer diameters and better fatigue strength under reverse-travel stresses. As lateral movements of the hydraulic hoses within the e-chain® can lead to increased abrasion of the hose material, they should be secured in position with vertical separators, but not forced. Special "locking" separators, which grip the opening crossbars of the e-chain®, as well as the use of "spacers," prevent lateral shifting of the separators - they also ensure the hoses stay put in cases of strong vibration and impact on the e-chain®.

Strain Relief

Hydraulic hoses are most often stretched lengthwise during operation. This must be taken into account when applying strain relief. More hose length is factored in to allow the hose to "breathe", or "floating" strain relief must be implemented. In some cases, one-sided strain relief on the moving end can be tolerated.

Rollclip - In almost all cases, the broad, smooth and rounded surfaces of all igus® e-chains® are sufficient to protect hydraulic hoses from abrasion. In extreme cases, the igus® Rollclip can be installed. The hoses come in contact with a series of polymer cylinders which rotate. "Extreme" cases include particularly soft materials, particularly narrow bending radii or highly dynamic loads. Over 95% of all applications can be solved without Rollclips.

● Pneumatic hoses
The igus® program also offers polymer pneumatic hoses called: "chainflex® Air"

● Flat cables
Outer jackets made of rubber must be specified particularly carefully, because of potentially high static friction.

● Hydraulic hoses
Hydraulic hoses need more space:
20% all-around clearance



igus® Rollclip, detachable

Ideally, the cables/hoses should be strain relieved at both ends of the e-chain®. At the very least, they must be strain relieved at the moving end of the e-chain®.

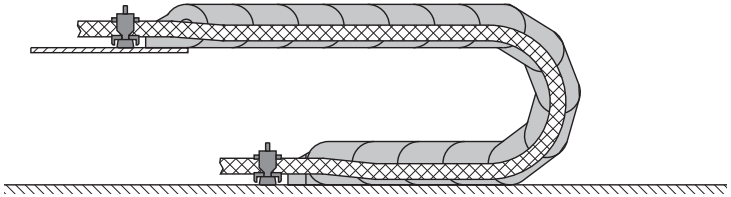


Strain relief for electrical cables

Strain relief can consist of standard elements or can be custom-made. For most applications, our standard program of C-profiles with mounting brackets and space-saving chainfix clamps can be used. We also offer simple strain relief solutions using cable tiewraps and tiewrap plates. In ideal cases, the cables should be secured at both ends of the e-chain® with strain relief (in a few instances, strain relief at the moving end of the e-chain® is sufficient - please consult igus® for these cases).

Minimum gap of the strain relief and the beginning of the bending radius

Tests on our premises and in field applications have shown strain relief located at the last bending point of the e-chain® has no influence over the durability of igus® chainflex® cables. It is possible, therefore, to integrate the strain relief with the mounting bracket. This space-saving option for strain relief is offered by igus® for almost all e-chains®.



Ideal installation of cables in e-chains®. chainflex® cables can be directly strain-relieved in the mounting bracket (minimum gap to the last curved e-chain® link is not necessary)!

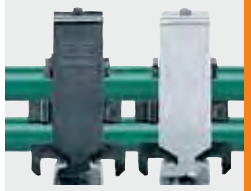


igus® chainfix strain relief in mounting bracket in practice - used here for cables and hoses

Strain Relief Elements | chainfix

Features of chainfix clamps

Optimal igus® chainfix housing with reduced height ● Long service life for dynamic applications thanks to improved clamping elements ● Integration with KMA mounting brackets - saves both time and space during installation and available for complete systems with cables and strain relief ● Improved housing foot clamp for easy fit into C-profile ● Black housing and setscrews for attractive appearance ● Setscrews, tightened with Allen wrench, for easy installation ● Mark of the installation direction ● Now with better fixation due to optimized design



Tiewrap plates as individual parts

Separate parts in switch cabinet construction or machine assembly ● Strain relief accessory for igus® e-chainsystems® ● Attachment to mounting brackets ● Integration into the C-profile of KMA (polymer/metal mounting brackets)



Tiewrap plates with clip-on connection for the C-profile

The plates 3050.ZC and 3075.ZC can be clipped directly into the C-profile without bolts or any extra hardware. Clip-on tiewrap plates can be released and repositioned with just a screwdriver used as a lever.

4 options available: ● Tiewrap plates with clip-on connection for the C-profile ● Integrated strain relief for E2 e-tubes - Series R ● Tiewrap plates for fixed crossbars ● Tiewrap plates for opening crossbars



chainfix clip - modular snap-on strain relief device

chainfix clip is a series of clamps and bottom parts made of plastic for cable diameters ranging from 4 mm to 24 mm. chainfix Clip is available for C-profiles, also suitable for assembly in the KMA mounting brackets and clip-on strain relief for cross bars ● Quick assembly without any tools ● 2 and 3 layers on top of one another possible ● Each layer can be detached and changed later on ● High tensile forces in case of single-layer installation, decreasing with the number of layers



chainfix nugget - for top hat rail and C-profile

● Option 1: Universal cable fixation, for diameter with Ø 20 mm and Ø 30 mm ● Option 2: Fastening through clipping onto standard top hat rail ● The smart helper for electricians in the machine building industry ● Accessory for all KMA with integrated C-profile ● Strain relief for top hat rail ● Easy to assemble, without any screws and tools ● Adjustable to every e-chain® filling ● Very small space requirement ● Easy strain relief due to fixation with pre-harnessed cable strap



Strain relief separator

● Can be integrated in mounting bracket ● Strain-relief separator can be positioned as required ● Double strain relief possible ● Easy installation, cost-effective ● For most Series available from stock



Application examples and more information online ► www.igus.eu

igus® Materials:
- igumid G
- igumid NB
- igumid ESD
- igumid TE
- igumid GE
- igumid DT

Find technical data about igus® materials, temperatures and chemical resistance ► from page 134

Technical environment:
- Fire resistance
- Radiation
- Weathering
- Cold, heat
- Explosion areas
- Vacuum
- Hot chips
- Dirt, dust
- Cleanroom
- Chemicals



igus® factory - automatic compounding and conveyor belt for igumid G

plastics for longer life® - igus® know-how in polymer materials

Each year, igus® engineers develop more than one hundred new plastic compounds and test igus®-products in more than 15.000 experiments per year. That's how in recent years they have built an extensive database of the tribological properties of polymers. This database makes it possible for us to assess better most of the applications in advance and provide our customer with confidence during use. Our calculations and analyses are based on the result of ongoing practical tests in our Technical Center and our experience with gliding applications. The focal points of our tests are push-pull forces, friction values and abrasion under widely varying conditions and speeds, as well as factors such as dirt, weathering or impact and bumps. We test all system components such as cables, hoses, strain relief and other accessories, in addition to the e-chains® or e-tubes and Guide Troughs.

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Technical environment

The igumid G material, from which igus® e-chains® are made, possesses the following wide-ranging features to cope with a variety of environments: the ability to handle pressure and strenuous loads, abrasion resistance, sturdiness, stable behavior at high and low temperatures, and suitability for outdoor use. Numerous application examples, from refrigerator blocks to steel mills, prove this. In extreme cases, we also offer modifications and other igus® compounds as a solution. Please consult igus®.

Magnetically detectable plastic e-chains®

For the food- and tobaccoindustry | New in this catalog

- The material igumid DT is detected to the tiniest fragment all common metal detection systems and can therefore be selected automatically
- Particles as small as 1.0 mm can be recognized for fragments passing at speeds of 20 m/min

More information ►www.igus.eu/eu/detectable-chain



Flammability of igumid G

The flame-retardant characteristics of igumid G can be described using various classifications: Test aprocedure VDE 0304 parts 3-5.70 - classification IIc. Tested according to UL94 "Standard Tests for Flammability of Plastic Materials for Parts in Devices and Appliances" classification 94 HB for 3.2 and 1.6 mm thickness of the body. Tested according to DIN 4102 "Fire Behavior of Building Materials and Parts" classification materials class B-2. For further requirements, please consult igus® for special solutions, such as materials with self-extinguishing properties (UL94-V2 or UL94-V0). All e-chains® (except for the easy chains® and Series 14) are made of from igumid G.

Flammability of igumid NB

All easy e-chains® and Series 14, F17 e-chains® are made from the flame-retardant igumid NB material. These e-chains® have the following flame-retardant classifications:
- UL94 classification - V2
- VDE 0304 Parts 3-5.70 classification - IIb
- DIN 4102 flammability of materials - B2
- Please consult igus® for material availability of V0

Temperature resistance

igumid G is very suitable for outdoor applications. In our experience, the mechanical properties of the e-chain® are not impaired. igumid G is also UV-resistant. igus® e-chains® are used in applications as cold as -40°C (40°F). Installation may be eventually compromised at temperatures below -25°C (-13°F). In such cases, we offer special solutions made from cold-elastic materials. 120°C (248°F) continuous temperatures are possible. However, the mechanical values are reduced and the service life is impaired.



Series 4040R rol e-chain® on a coal unloading system - Travel 190 m, Speed 0.5 m/s, Fill weight 8.05 kg/m



Live broadcast from the Winter Olympics in Lillehammer - 75 m travel at -25°C (-13°F)

Resistance to radiation

igus® offers several solutions for high-radiation areas. igumid G is very resistant to high-energy radiation. Under gamma radiation, in the range of 8 x 10⁴ rd, the mechanical properties of igumid G change very little. Please consult igus®.

Flammability class
- igumid G: UL94-HB (Standard)
- igumid NB: UL94-V2 (Standard) UL94-V0 (upon request)

igumid G:
- UV-resistant!
- Temperature range from: -40°C (40°F) up to +120°C (248°F)

● ESD - Avoidance of static charges in the field of manufacturing processes of electronic components or assemblies
● ATEX - Prevention of explosive static charge in hazardous environment

Product range of ESD e-chains® from stock:

zipper	
07	*Bi* 10 - 50 mm
09	*Bi* 16 - 50 mm
E2/000	
1500	*Bi* 15 - 80 mm
2500	*Bi* 25 - 125 mm
2700	*Bi* 50 - 125 mm
E4.1	
E4.21	*Bi* 30 - 70 mm
E4.28	*Bi* 40 - 125 mm
E4.32	*Bi* 50 - 200 mm
E4.42	*Bi* 50 - 200 mm
E4.56	*Bi* 75 - 300 mm
E4.80	*Bi* 75 - 300 mm
triflex® R TRC	
TRC.40	*Ba* 43 mm
TRC.60	*Ba* 65 mm
TRC.70	*Ba* 81 mm

Available from stock.
Delivery in 24h or today!
Delivery time means time until shipping of goods (after technical release)



100% of the produced ESD e-chains® are checked for their continuous conductivity "from one end to the other"

Measurements of the electrical surface leakage resistance for igus® e-chains® with the special material igumid GC were made already in 1992 by the igus® GmbH together with the PTB (Physikalisch-Technische-Bundesanstalt) in Braunschweig, supplemented by additional certifications in 1998 and 1999 according to DIN 53482 and the guidelines for static electricity "ZH1/200" of the Federation of Trade Associations. In the course of further innovation, the material igumid ESD was certified by the PTB (Physikalisch-Technische-Bundesanstalt) in May 2002. The material igumid ESD combines in its properties the requirements of the ESD as well as ATEX criteria. In some mechanical requirements, the igumid ESD surpasses even the standard material igumid and has been tested with over 10 million cycles in the igus® technology center.

Your benefits with ESD products

- ESD material tested with over 10 million cycles for the highest requirements
- Snap-open e-chains® with mounting brackets and interior separation in ESD and ATEX design available from stock
- Standardized product - igumid ESD with PTB certificate
- Proven over years of use in explosion-proof areas
- Short delivery times: 08.00 - 20.00 h - ordering and delivery service

Conductivity of igus® products from igumid ESD

In contrast to temporarily acting applied conductive surface coatings or volatile incorporated antistatic agents, the used additives grant a long lasting and maintenance-free conductivity. An e-chain® is not sufficient to ensure sufficient conductivity, if only the individual components exhibit conductivity, but the whole e-chain® from one to the other end must have a continuous conductivity. All products in this catalog are optimized in this regard and the continuous conductivity is measured and documented prior to delivery by a 100% test.
Only e-chains® that have passed this test are provided with the test seal and delivered. Color* of igumid ESD products: similar to RAL7015, slate-gray to secure distinguishability with standard materials. (*Exception: Cover zipper e-chains® series 07/09 - here black in color)



More information online ► www.igus.eu/atex

Technical Environment | ESD & ATEX

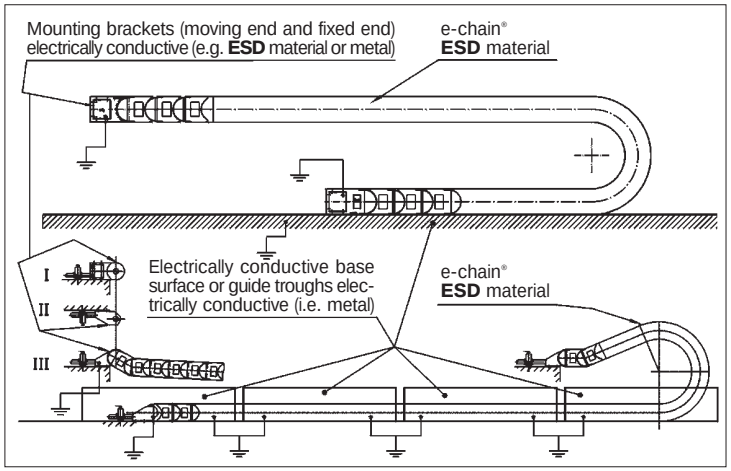
More information on igus® ESD e-chains® - classification: Ex II 2 GD

● **General safety information:** These additional Operating Instructions apply to the explosion-protected versions of our e-chains® of Type "ESD" in color gray (similar to RAL 7015). They supplement the Installation Instructions for the standard e-chains® and the catalog information. The information in these instructions relates only to data impacting on explosion protection. The technical information in the Installation Instructions for the standard e-chains® and the category information still apply unchanged unless these Instructions explicitly exclude or replace the relevant information. Required documentation and other documents are filed with the following institute pursuant to the ATEX Directive:
Physikalisch-Technische Bundesanstalt (PTB) Braunschweig and Berlin
Bundesallee 100 • 38116 Braunschweig/Germany

● **Assembly, removal and installation:** Please follow the information in the Installation Instructions for the standard e-chains® and the catalog information on assembly, removal and installation for trouble-free operation. igus® ESD e-chains® must be grounded with appropriate measures in accordance with drawing number: 18392.2 in order to discharge any electrostatic charges occurring.
Assembly, installation, commissioning and maintenance may be performed only by "personnel trained in explosion protection"!
Please also note the corresponding national safety regulations and the relevant national regulations in respect of explosion protection during assembly and operation.

● **Commissioning:** Before commissioning the system, check that the system has been installed correctly in accordance with the Installation Instructions for the standard e-chains® and the catalog information.Correct grounding must be checked in particular in the case of ESD e-chains®.

● **Maintenance:** igus® e-chains® are maintenance-free. Correct grounding of the e-chains® must be inspected at regular intervals. (*in case of large projects a customized maintenance plans can become an issue and will be created if necessary)



Connection of an e-chain® in accordance with ATEX Directive 94/9/EC

igumid G: Ex II 3 GD
igus® e-chains® made of standard material igumid G correspond to the German federal office of Physics and Technology (PTB) to classification Ex II 3 GD according to ATEX-RL 94/9/EG.

igumid ESD: Ex II 2 GD
igus® e-chains® made of igumid ESD correspond according to the German federal office of Physics and Technology (PTB) to classification Ex II 2 GD according ATEX-RL 94/9/EG

PTB

igus® igumid ESD with PTB certificate
We have received an official certificate from the German National Standards Laboratory (PTB) on material igumid ESD and we are able to provide you with a copy on request.



Order separate catalog for igus® ESD e-chains® or find the full program online ► www.igus.eu/esd

More information online ► www.igus.eu/atex

Safe and clean with e-chains®

Cleanroom qualification of igus® e-chains®

In many applications where cumbersome special solutions are used, a simple standard e-chain® can be used instead. A comprehensive test program was devised and performed for both gliding use and unsupported use. For many applications, the e-chains® in special materials are practically abrasion-free. Detailed test results are available upon request. IPA tests confirm that standard igus® e-chains® meet cleanroom requirements. "Tested and certified as very good!" e-chains® for cleanroom applications in the test stand cleanroom environments demand very high wear resistance of moving parts. e-chains®, for example, must be very wear resistant, in order to meet normal requirements for such a sensitive environment.

IPA Fraunhofer TESTED DEVICE

IPA Fraunhofer Institute has tested the following igus® Series according to DIN EN ISO 14644-1

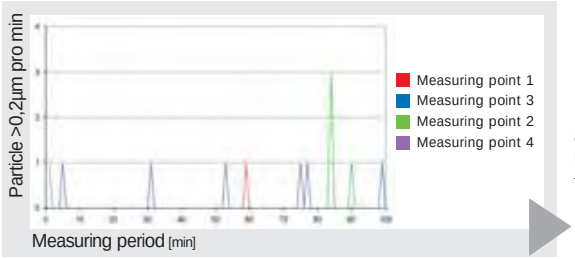
Class per DIN EN ISO 14644-1	Equivalent to VDI 2083	Classification Series	Report Number	Speed [m/s]
ISO Class 1	no comparable classification	E61.29.50.075.0	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 1	no comparable classification	E3.15.040.075.0	IG 0704-400	0,5 / 1,0 / 2,0
ISO Class 1	no comparable classification	E6.29.060.150.0.CR*	IG 0704-400	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	1500.050.038.0	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	E4.32.10.063.0.CR*	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	T3.29.050.038.0	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	E14.3.038.0	IG 0308-295	1,0
ISO Class 3	Class 1	2500.05.055.0	IG 0308-295	2,0
ISO Class 3	Class 1	E6.29.060.150.0	IG 0704-400	0,5 / 1,0 / 2,0
ISO Class 5	Class 3	E4.32.10.063.0	IG 1303-640-1	0,5 / 1,0 / 2,0

*special material "cleanroom"

Particle generation measurement



Result: Particle generation E14.3.038.0



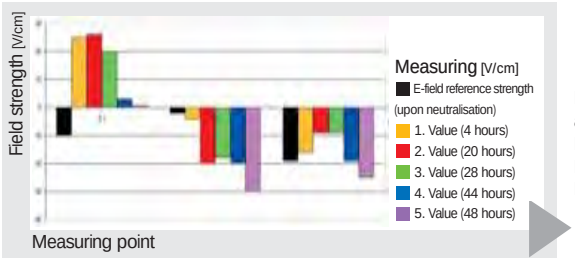
ISO Class 2
acc. DIN EN ISO 14644-1 for E14.3.038.0

Absorption LEVEL 1 confirmed by IPA-Fraunhofer-Institut according to SEMI E78-0998 for the E6 standard material. Continuously constant conductance value as there are no pin-bore connection (no air gaps).

Field strength measurement



Result: Field strength E6.29.050.055.0



Level 1
ESD-compatibility acc. to SEMI E78-0998 for E14.3.038.0 and E6.29.050.055.0

Spatter, hot chips

Laboratory tests and numerous field applications have proved that igus® e-chains® and e-tubes reliably protect cables in welding robots and machine tools since 20 years. e-tubes made from the igus® igumid HT material are resistant against hot chips up to 850°C (1,562°F), no chips stick. This opens new possibilities for replacing more complex and expensive steel tubes. Product range: All standard E2 and E4 e-tube sizes, upon request. Please note: igumid G in direct contact with large amounts of melted aluminum is not recommended.



igus® e-tubes in the chip area of machine tools

Dirt, dust, chips

Materials and design make igus® e-chains® excellent problem-solvers in harsh environments. Experience and application references are available upon request. Please consult igus® with your application.



Also hot asphalt is no problem for igus® e-tubes

Vacuum

igus® e-chains® made of igumid G can be used in vacuum applications. Very little outgassing occurs.

Chemical resistance

igumid G is resistant to fuel, lubricants, oils, fats, alcohol, ester, ketone, and aliphatic and aromatic hydrocarbons. Oxidants and acids are damaging. The table ▶ page 135 shows an excerpt of the precise details concerning resistance to chemicals. Acid-resistant e-chains® are available upon request.



System E4 in an incinerating plant - safe also in abrasive dirt and dust

Coolant resistance

e-chains® and e-tubes have proven resistant to cooling agents. However, we are always willing to perform individual tests if you have particular problems or advanced developments.
Table on resistance to chemicals ▶ page 135



Compost sludge - numerous related references available upon request

igus® - Experience with: Dust, dirt, mud, compost, wood, textile fibers, paper dust, abrasive paste, cooling agents, glass dust, glass splinters, coal dust, sand, corundum and much more.



e-tubes that repel hot chips, up to 850 °C with the igus® "igumid HT" material. ▶ www.igus.eu/eu/HT



igus® tests: e-chains® and chainflex® cables are tested for resistance against chemicals and oils in long-term tests

Material data igumid

Material data table	Units of measure	Values igumid G	Values igumid NB	Values igumid ESD	Values igumid TE	Values igumid GE
Mechanical properties						
Yield stress (dry/wet)	MPa	190/130	78/40	*	*	*
Elongation at break (dry/wet)	%	004/006	20/210	*	*	*
Elasticity module (tensile test)	MPa	9000/7000	2900/1200	*	*	*
Limit of elasticity (bending)	MPa	7.800[1)]	3.000[1)]	9.500[1)]	1.290[1)]	7200[1)]
Bending strength	MPa	240[1)]	120[1)]	230[1)]	55[1)]	200[1)]
Hardness Shore D	–	79[1)]	79[1)]	83[1)]	72[1)]	80[1)]
General properties						
Density	g/m³	1,37	1,14	1,2	1,02	1,46
Absorption of humidity 23/50 RF	% by weight	1,4	3,4	1,9	0,8	0,7
Max. water absorption	% by weight	5,6	7,6	7,3	1,6	4
Electical properties						
Specific transitional resistance	Ω*cm	>10^{11}	>10^{11}	<10^{9}	>10^{11}	>10^{11}
Surface resistance ROA	Ω	>10^{11}	>10^{11}	<10^{9}	>10^{11}	>10^{11}
Thermal properties						
Lower application temperature	°C / °F	-40°C / -40°F	-40°C / -40°F	-40°C / -40°F	-40°C / -40°F	-40°C / -40°F
Upper long-term application temp.	°C / °F	120°C / 248°F	80°C / 176°F	80°C / 176°F	70°C / 158°F	120°C / 248°F
Upper short-term application temp.	°C / °F	180°C / 356°F	170°C / 338°F	150°C / 302°F	140°C / 284°F	200°C / 392°F
Material certificates						
Fire resistance as per UL94	–	HB	V-2	HB	HB	HB
Silicone-free	–	yes	yes	yes	yes	yes
Halogen-free	–	yes	yes	yes	yes	no
2002/95/EG (RoHS)	–	yes	yes	yes	yes	yes
2002/96/EG (WEEE).	–	yes	yes	yes	yes	–
Color						
acc. to RAL, approx.	–	■ ≈RAL9004	■ ≈RAL9004	■ ≈RAL7015	■ ≈RAL9004	■ ≈RAL9004

*Values upon request

Colors and special solutions

Product prices are always based on the color black. e-chains® in any color shown in the color selection chart are subject to a percentage based color surcharge. Any other colors that are not shown in the chart are individually calculated depending on the article and quantity, insofar as this is technically possible. As a rule, colored e-chains® are not available from stock. Delivery lead-time and surcharges for colored e-chains® are available upon request. As a rule, all specifications related to stability (for instance unsupported lengths) and material characteristics apply only to black e-chains®. The characteristics of colored e-chains® may differ. This also applies to all e-chains® from special materials, such as conducting e-chains® made from igumid ESD material or other special materials. For technical reasons HT and ESD materials cannot be supplied in other colors.

e-chain® color variations with RAL-numbers

Black	Standard, from stock!	≈ RAL 9004	**Index .0**	White	special color	≈ RAL 9003	Index .1
Slate grey	ESD material only	≈ RAL 7015	Index .ESD	Gray white	special color	≈ RAL 9002	Index .1S
Gray brown	HT material only	≈ RAL 8019	Index .HT	Orange	special color	≈ RAL 2003	Index .2
Gray	special color, e-chains® only	≈ RAL 7023	Index .3	Yellow	special color	≈ RAL 1018	Index .4
Dusty Gray	special color, e-tubes only	≈ RAL 7037	Index .31	Light grey	special color	≈ RAL 7035	Index .14

Black e-chains® available from stock! Delivery time* for special colors: from 5 work days.

*Delivery time means time until shipping of goods (after technical release)

Chemical Resistance of igumid

Medium	Concentration Weight %	igumid G / NB	igumid TE
Acetone	100	+	+
Formic acid (aqueous)	2	○	+
Ammonia (aqueous)	10	+	+
Gasoline	100	+	+
Benzole	100	+	+
Bitumen	100	○	–
Boric acid (aqueous)	10	+	○
Butyric acid	100	○	–
Calcium chloride (aqueous)	Sat. aq. sol.	+	+
Chlorinated hydrocarbons		+	○
Chlorine water	Sat. aq. sol.	–	–
Chromic acid (aqueous)	1	○	–
Diesel oil	100	+	+
Acetic acid	2	+	○
Color		+	+
Fats, cooking		+	+
Fluorinated hydrocarbons		+	+
Formaldehyde (aqueous)	30	○	○
Hydraulic oils		+	○
Caustic potash	10	+	+
Potassium carbonate (aqueous)	60	+	+
Potassium sulphate (aqueous)	100	+	+
Methyl acetate	100	+	+
Milk		+	+
Mineral oil		+	+
Sodium carbonate (aqueous)	50	+	+
Oil, cooking		+	+
Oil, lubricating oil		+	+
Oleic acid	100	+	+
Paraffin oil		+	+
Perchlorethylene	100	+	–
Polyester resins (with styrene)		+	+
Propane gas		+	+
Mercury		+	+
Hydrochloric acid	pH2	○	–
Hydrochloric acid	2	–	–
Hydrochloric acid	10	–	–
Ink, printing ink		+	+
Vaseline		+	+
Tartaric acid		○	+
Zinc sulfate (aqueous)	10	+	–

The values specified are values determined by laboratory tests and are material-specific. All specifications apply to black e-chains®.

Resistance classes
+ = resistant
○ = conditionally resistant
– = non-resistant
Sat. aq. sol. = saturated aqueous solution



Quality inspection of every e-chain® production



Test location for ESD-e-chains®



chainflex® cables with many certificates for e.g. DESINA



Noise level tests in igus® own acoustic laboratory

DIN EN ISO 9001:2008 and ISO/TS 16949:2009

igus® is certified in accordance with DIN EN ISO 9001:2008 and ISO/TS 16949:2009 in the field of energy chains® with cables and harnessing, as well as plastic plain bearings.

TÜV construction test

igus® e-chains® and e-tubes are construction-tested by TÜV Rheinland. igus® e-chains® were tested and passed by TÜV Rheinland in accordance with the valid machine guidelines. As a result, the user of igus® e-chains® need not worry about meeting CE requirements through testing for this portion of the machinery. The construction test 2PFG 1036 / 10/97 for protective equipment includes the following: ● Application and safety ● Assembly ● Fatigue strength ● Resistance to external influences ● Sharp corners and edges

ESD/ATEX

igus® e-chains® made of standard material igumid G correspond to the German federal office of Physics and Technology (PTB) to classification Ex II 3 GD according to ATEX-RL 94/9/EG. igus® e-chains® made of igumid ESD correspond according to the German federal office of Physics and Technology (PTB) to classification Ex II 2 GD according ATEX-RL 94/9/EG.

IPA Cleanroom

A lot of e-chains® are suitable for the use in cleanrooms according to DIN EN ISO 14644-1. Confirmed by the IPA Fraunhofer Institute.

UL, CSA, CEI, CE and VDE

All igumid-materials for e-chains® and e-tubes have got the UL-material approval. The material igumid NB has got the fire protection class approval IIb according to the test VDE 0304 Part 3/5.70, the approval V2 according UL94 and the construction material class B2 according DIN 4102.

Interbus, CC-Link and DESINA

chainflex®- cables are produced according to a lot of international standards: Interbus certification: For Interbus certification of certain CF11 bus cables. CC-Link: CC Link is a Fieldbus established by Mitsubishi Electric Automation. igus® chainflex® CF.BUS035 is CC Link certified. DESINA: Many chainflex® cables are Desina-compliant.

Clearly quieter

igus® e-chainsystems® are clearly quieter. In the acoustic laboratory of the TÜV and the igus® GmbH different e-chains® were compared (see also noise-optimized e-chains® ▶ page 99).

igumid

The material igumid is free from toxins, according 2002/95/EC (RoHS).

iF Design Award

26 iF Design-Awards since 1987 ▶ www.igus.eu/eu/iF

More information and certificates online ▶ www.igus.eu

igus®
readychain®

Ready-to-install assembled e-chainsystems®



Assembled energy supply systems, connectors and cables from igus®
Everything from one source - directly from the manufacturer



Ready to install systems, from connectors through assembled cables up to complex energy supply modules, delivered in 1-10 days



Customer-related production



From one off to mass production

readychains® - Quickly raise capacities and cash flow with igus®

- Lower the overhead costs
- Cut your throughput times from days to hours
- Respond flexibly to order variations
- Utilize igus® manufacturing capacities and our know-how in cable assembly

Reduce the number of suppliers and orders by 75%

- One order, one invoice, one delivery
- A partner for minimal machine downtimes
- All readychain® components are subject to an extensive quality control and function testing

You determine the degree of harnessing



Any degree of harnessing is possible

We harness from simple e-chainsystems® with inserted chainflex® cables to complex systems. These systems may include all cables and hoses (pneumatic, hydraulic), patch plugs, inner partitions, connecting elements and connecting parts as requested.



From easy ..... to project

You determine the size



Any size is possible

Because of our up-todate production processes we can deliver fast and cheap custom-build or serial production products.



From batch size 1 ..... to serial production

You determine the travel



Choosing the travel

readychains® offers the whole spectrum of possible travels of the igus® e-chains®. We harness anything from extremely short to long travels. Safe transportation guarantees damage-free delivery of all lengths.



From short ..... to long travel

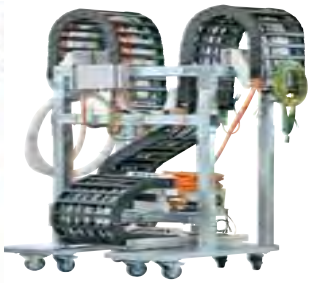
Standardized readychain® packages facilitate your entry



readychain® "Basic"



readychain® "Standard"



readychain® "Premium"

3 shifts, 127 employees only for assembling, 13 project engineers,
500 orders/week, over 3,000 m² floor space



In the igus® readychain® factory, we assemble customized e-chainsystems®. All under one roof. All from one source



Modern production processes, one-off or mass production



Customized cable assembling



11 readychain® factories worldwide



100% tested

1 Everything from one source

The readychain® system includes pre-assembled, customized energy chain systems®.The "plug in and ready" solutions are configured, manufactured and delivered according to individual customer specifications. The use of the mounting rack can yield benefits even at low volumes.



2 Flexible components

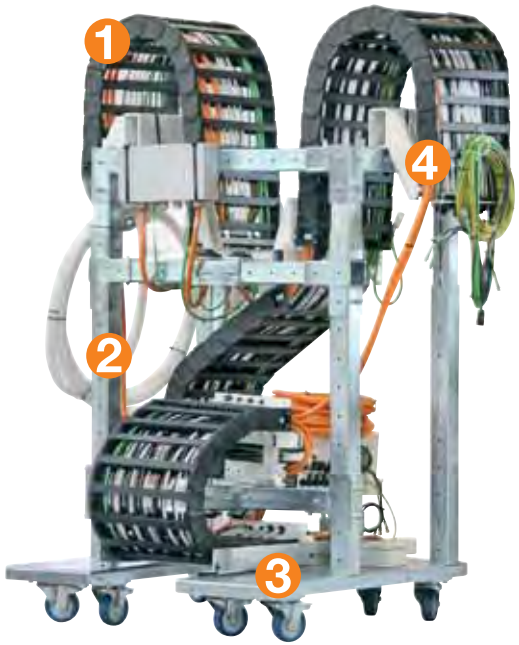
The telescoping supports and braces of the readychain® rack allow flexible adaptation to the installation situation on site. Changes in mass production can be undertaken easily. By the latching mechanism, additional components can also be easily attached to the rack subsequently.

3 Sustainable use

The components of the readychain® rack are galvanized and thus designed for a long life. Each rack is constructed within a few hours. The individual elements can be reused at any time removing the need to dispose of custom made parts, as with conventional welded transport racks.

4 Precise fitting "Plug & Play"

All interfaces and attachments are designed in such a way that the installation of the e-chain® can be managed quickly and easily. The complete package includes the matching plugs and connectors, plates, sensor actuator boxes, linear bearings, links to the central lubrication, etc., all reducing the installation time considerably.



Save 80% at prototyping. Assembly transport rack for ready-to-install energy supply systems.

Your guide to reduced processing costs - Achieve your target in hours instead of days with the new modular transport rack from igus® ► igus.eu/readychain-rack



Capacity for 600,000 assembled cables a year.
more than 18,000 test programs, 1,800 test adapters



Process reliability ... Crimp force monitored ... automated ... time-optimized



Harnessing and final inspection of all harnessed cables



Twist-free cable handling and fully automated crimping machines

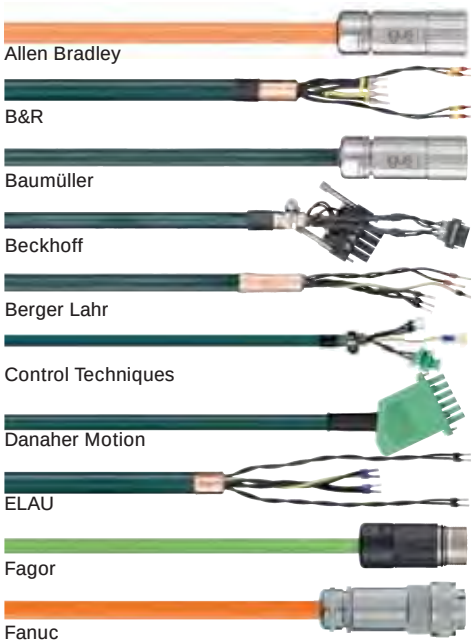


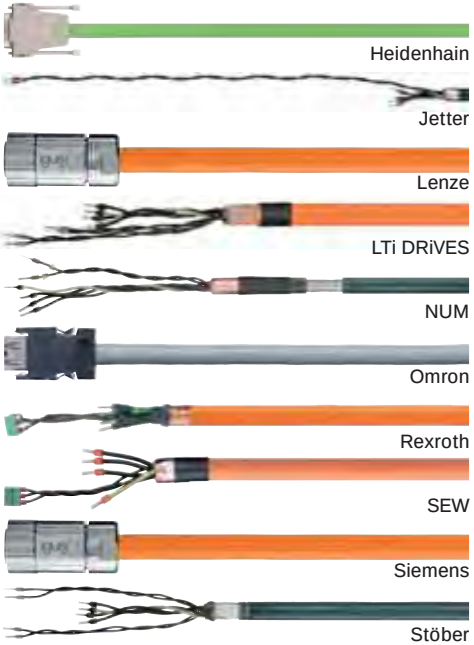
Computer supported high-voltage testing stations



Drive cables in accordance with 20 manufacturer standards

readycable® - harnessed cables in 24h-48h or today

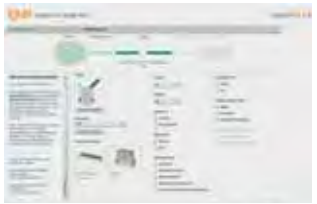




- igus® offers over 2.830 defined drive cables according to 20 different manufacturers standards
- Servo, power and signal/encoder cables
- No cutting costs and no surcharges for small quantities and packaging
- Cable length up to the centimeter to customer
- Smallest bending radii from 7,5 x d
- Reduce storage costs and increase cash flow

Hoses and electrical cables to your needs using QuickPin 2.0









QuickPin 2.0
Connector-Cable-Configurator
with integrated EPLAN P8.
► **www.igus.eu/eu/quickpin**

The igus® assembly service



Your complete system solution from a single source, including final assembly on-site. Including guarantee* and at a predictable fixed price!

igus® assembly service

We undertake the acceptance, design, harnessing, delivery, including the completed assembly of your energy supply system, on-site on your installation. More information online ► www.igus.eu/eu/assemblyservice



New installation

- Assessment of local conditions by an igus® specialist
- Quotations provided at predictable fixed prices
- Plannable assembly schedules and flexible assembly dates
- Assembly also at night, on weekends or holidays
- Fast and accurate installation by qualified personnel
- Everything up to the installation from a single source, including guarantee*



Retrofits/upgrades

- Upgrade and retrofit concepts from igus® for reconfiguring existing energy supply systems to e-chainsystems®
- To expand the range of applications
- Reducing costs and energy consumption
- Increasing service-life



Maintenance

- Preventive maintenance of complex e-chainsystems®, in order to promptly recognize and remedy any damage or obstruction, therefore extending the service-life of your system

Inspection

- Assessing the technical condition of e-chains®, guide troughs, cables and strain reliefs
- Determining repair and maintenance needs
- Reporting of deficiencies and risks, improvement proposals
- Documentation of the system condition in the test report



Supervisor service

- Support by the igus® specialist for the in-house assembly of your energy supply system
- Briefing and training of your assembly, service and maintenance staff during the assembly of your e-chainsystem®
- Final inspection of your assembly



igus® e-chainsystems® quickly assembled on-site

- Steelmill cranes
- Bunker cranes
- Handling operations
- Ship's cranes
- Sewage treatment plants
- Conveyor plants
- Composters
- Coal firing
- Storage and retrieval systems
- Power plants
- Processing gantries
- Robots

*Guarantee applies to wear-related failures of igus® components based on yet to be agreed technical parameters

igus® assembly service not entirely available in all countries. Please ask you local igus® sales-people for further details!

igus®
easy chain®

Easy to fill and
very cost-effective



easy to fill and very cost-effective - easy chain®

easy chains® are available with exterior (version E) press fit access, as well as interior (version Z) access. The assembly time reductions are a primary reason to choose easy chains®. Their material, igumid NB, presents more application opportunities with: Optimal elasticity, UL94-V2 classification and excellent cleanroom qualities. Their one-piece design keeps the easy chain® very cost-effective

Typical industries and applications

- General machinery
- Cleanroom applications
- Electronic apparatus
- Office equipment
- Vending machines
- Packaging machines
- Machine tools



Fraunhofer IPA TESTED® DEVICE

IPA Qualification Certificate - Report IG 0308-295: ISO Class 2, according to DIN EN ISO 14644-1 for easy chain®, Series E14.3.038 at v = 1,0 m/s

Electrically conductive
ESD/ATEX versions upon request

42 dB(A) - Value dertermined at the igus® test-lab: v= 1,0 m/s unsupported, Series E06.10.038.0

UL94-V2 classification

With easy chain® rotatory and torsional motions are possible



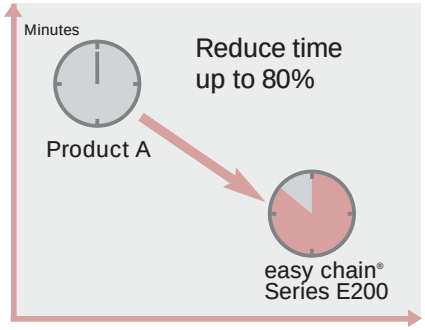
Machinery of all kinds feature igus® easy chains® - reduces assembly times



Series E14 on server unit, removable for maintenance purposes Cleanroom Class 2 ISO is standard



easy chain® on adjustable office furniture with UL94 - V2 Classification

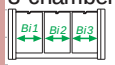


Assembly time: Insert of 2 cables Ø 6 and 10 mm. We can present you with more details about this and other tests



Just push the cables into the e-chain® with your thumb - and it's ready. Pull out cable by hand.

Contents, selection table and assembly instructions ► next page

Series		Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	Page
								
				easy chain® - Version "E"				
				Split crossbar along outer radius				
				1 / 2 / 3 / 4- chamber system				
1-chamber 	E03	5	5 - 10	8,7 - 13,7	8	10 - 28	0,40	156
	E04	7	7	13	10	15 - 48	0,55	160
	E045	9,4	10 - 16	16 - 23	12,5	18 - 38	0,40	164
	E06	10,7	10 - 20	16,5 - 26,5	15	18 - 38	0,55	168
	E065	11,3	16	24,8	15	18 - 38	0,60	172
	E08	14,6	10 - 50	18,2 - 58,2	19,3	28 - 48	1,00	176
	E14	19	15 - 50	27 - 62	25	28 - 125	0,65	180
	E200	24,3	57	74,4	35	55 - 200	1,75	184
	E16	32	23 - 100	37,5 - 115,3	39	60 - 100	1,00	190
	E26	36,5	75	92	50	63 - 250	2,00	194
	E300	48,5	75	95	64	75 - 300	2,25	200
2-chamber 	E045.2	9,4	7 - 9	23 - 27	12,5	18 - 38	0,40	164
	E065.2	11,3	9	29,3	15	18 - 38	0,60	172
	E200.2	24,3	37 - 50	94,4 - 120,4	35	55 - 200	1,75	184
	E26.2	37,1	48	117	50	63 - 250	2,00	194
	E300.2	48,5	48	120	64	75 - 300	2,25	200
3-chamber 	E045.3	9,4	9	37	12,5	18 - 38	0,40	164
	E065.3	11,3	9	39,3	15	18 - 38	0,60	172
	E26.3	37,1	47	167	50	63 - 250	2,00	194
	E300.3	48,5	46	170	64	75 - 300	2,25	200
4-chamber 	E065.4	11,3	9	49,3	15	18 - 38	0,60	172
								
				easy chain® - Version "Z"				
				Split crossbar along inner radius				
				1 / 2 / 3-chamber system				
1-chamber 	Z045	9,4	16	23	12,5	18 - 38	0,40	164
	Z06	10,5	10 - 20	16,5 - 26,5	15	18 - 38	0,55	168
	Z08	14,6	10 - 50	18,2 - 58,2	19,3	28 - 48	1,00	176
	Z14	19	15 - 50	27 - 62	25	28 - 125	0,65	180
	Z200	24,3	57	74,4	35	55 - 200	1,75	184
	Z16	32	23 - 100	37,5 - 115,3	39	40 - 100	1,00	190
	Z26	36,5	75	92	50	63 - 250	2,00	194
	Z300	48,5	75	95	64	75 - 300	2,25	200
2-chamber 	Z045.2	9,4	16	23	12,5	18 - 38	0,40	164
	Z200.2	24,3	37 - 50	94,4 - 120,4	35	55 - 200	1,75	184
	Z26.2	37,1	48	117	50	63 - 250	2,00	194
	Z300.2	48,5	48	120	64	75 - 300	2,25	200
3-chamber 	Z045.3	9,4	9	37	12,5	18 - 38	0,40	164
	Z065.3	11,3	9	39,3	15	18 - 38	0,60	172
	Z26.3	37,1	47	167	50	63 - 250	2,00	194
	Z300.3	48,5	46	170	64	75 - 300	2,25	200



Push and click, snap in pin



Release side link, twist and pull apart



Press in cable



Pull out cable

Technical data, overview ▶ page 152

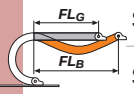
e-chain® links as single parts, overview ▶ page 153

Configuration options and order keys, overview ▶ page 154

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

You can find an assembly video on the web ▶ www.igus.eu/eu/video

Technical Data - easy chain®



Gliding speed / acceleration (maximum)	max. 3 [m/s] / max. 10 [m/s²]
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
e-chain® material - permitted temperature °C, igumid NB	-40° up to +80° C
Mounting brackets* material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class:	igumid NB = VDE 0304 IIC UL94-V2 / igumid G = VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

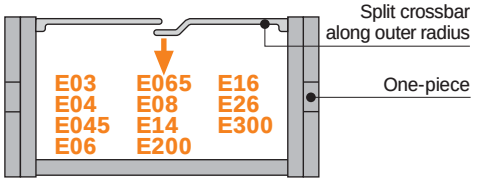
*Also available in igumid NB. Delivery time upon request!

Installation methods overview, maximum travels - easy chain®

e-chain® Series	Unsupported application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application
E03	≤ 0,40 m	upon request	upon request	upon request	with rework	upon request
E04	≤ 0,55 m	upon request	upon request	upon request	with rework	upon request
E045/Z045	≤ 0,40 m	upon request	upon request	upon request	with rework	upon request
E06/Z06	≤ 0,55 m	upon request	upon request	upon request	with rework	upon request
E065/Z065	≤ 0,60 m	upon request	upon request	upon request	with rework	upon request
E08/Z08	≤ 1,00 m	upon request	upon request	upon request	with rework	upon request
E14/Z14	≤ 0,65 m	upon request	upon request	upon request	with rework	upon request
E200/Z200	≤ 1,75 m	≤ 10,00 m	≤ 1,50 m	≤ 0,50 m	with rework	upon request
E16/Z16	≤ 2,00 m	≤ 10,00 m	≤ 1,50 m	≤ 0,50 m	with rework	upon request
E26/Z26	≤ 2,00 m	≤ 10,00 m	≤ 1,50 m	≤ 0,50 m	with rework	upon request
E300/Z300	≤ 2,25 m	≤ 10,00 m	≤ 1,50 m	≤ 0,50 m	with rework	upon request

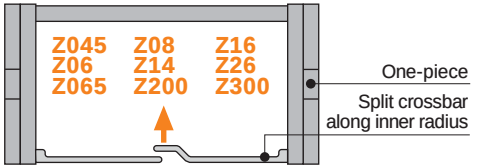
Part No. one- and two-piece e-chain® links as single parts - easy chain®

Version "E" - one-piece,
split crossbar along outer radius



Supplement Part No. with required width index *(Bi)* and radius *(R)* e.g. E045.16.18.0

Version "Z" - one-piece,
split crossbar along outer radius



Supplement Part No. with required width index *(Bi)* and radius *(R)* e.g. Z045.16.18.0

e-chain® Series	One-piece e-chain® link	Part No. e-chain® link
E03	Split crossbar along outer radius	E03.*Bi*.*R*
E04	Split crossbar along outer radius	E04.*Bi*.*R*
E045	Split crossbar along outer radius	E045.*Bi*.*R*
E06	Split crossbar along outer radius	E06.*Bi*.*R*
E065	Split crossbar along outer radius	E065.*Bi*.*R*
E08	Split crossbar along outer radius	E08.*Bi*.*R*
E14	Split crossbar along outer radius	E14.*Bi*.*R*
E200	Split crossbar along outer radius	E200.*Bi*.*R*
E16	Split crossbar along outer radius	E16.*Bi*.*R*
E26	Split crossbar along outer radius	E26.*Bi*.*R*
E300	Split crossbar along outer radius	E300.*Bi*.*R*

e-chain® Series	One-piece e-chain® link	Part No. e-chain® link
–		
–		
Z045	Split crossbar along inner radius	Z045.*Bi*.*R*
Z06	Split crossbar along inner radius	Z06.*Bi*.*R*
Z065	Split crossbar along inner radius	Z065.*Bi*.*R*
Z08	Split crossbar along inner radius	Z08.*Bi*.*R*
Z14	Split crossbar along inner radius	Z14.*Bi*.*R*
Z200	Split crossbar along inner radius	Z200.*Bi*.*R*
Z16	Split crossbar along inner radius	Z16.*Bi*.*R*
Z26	Split crossbar along inner radius	Z26.*Bi*.*R*
Z300	Split crossbar along inner radius	Z300.*Bi*.*R*

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

easy chain® | Options with order keys (based on Series E200)

Standard	*NC-Version - (no camber) without pretension*	*Reverse bending radius for circular movements*	*ESD / ATEX classified e-chains® Ⅱ 2 GD*
Part No. **Standard** e-chains®	Part No. **NC-Version** e-chains®	Part No. **RBR** e-chains®	Part No. **ESD-Material** e-chains®
E200.05.*R*.0	E200.05.*R*.0.**NC**	E200.05.*R1/R2*.0	E200.05.*R*.0.**ESD**
Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* 5-10 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

(2-5 work days with express surcharge)

Order example | Order key and color options

Order example for complete e-chain® Series E200 (1,0 m), color black, with mounting brackets:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 22 links	E200.05.150.0
+ Mounting brackets	1 set (+ tiewrap plates)	2050.34PZ

Order text: 1,0 m E200.05.150.0 + 2050.34PZ

Order key
E200.05.150.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

General igus® color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

easy chain® | Application

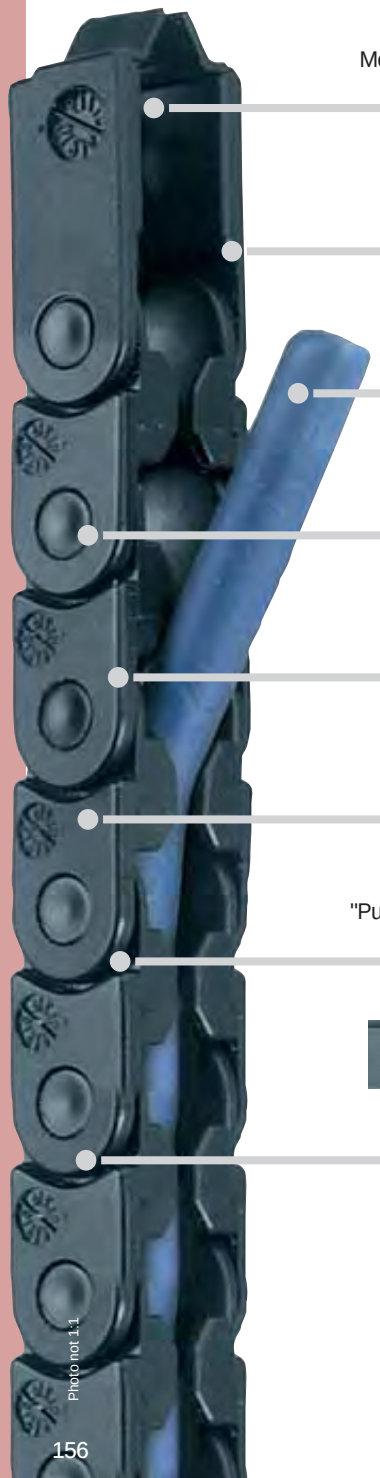


Data glove with easy chain® Series E03 - Protect the sensors which makes it easier to take off an put on the gloves. Inner height of only 5 mm

Quick assembly with ESD!

easy chain® also available as ESD version ● Easy to fill on the outer-/inner radius ● Access to the cables without opening and closing of lids ● Cost-effective one piece design e-chain® ● Interior separation available ● Mounting brackets with integrated strain relief. More information ►www.igus.eu/eu/esd





Simply press cables in, for smallest spaces

When to use Series E03:

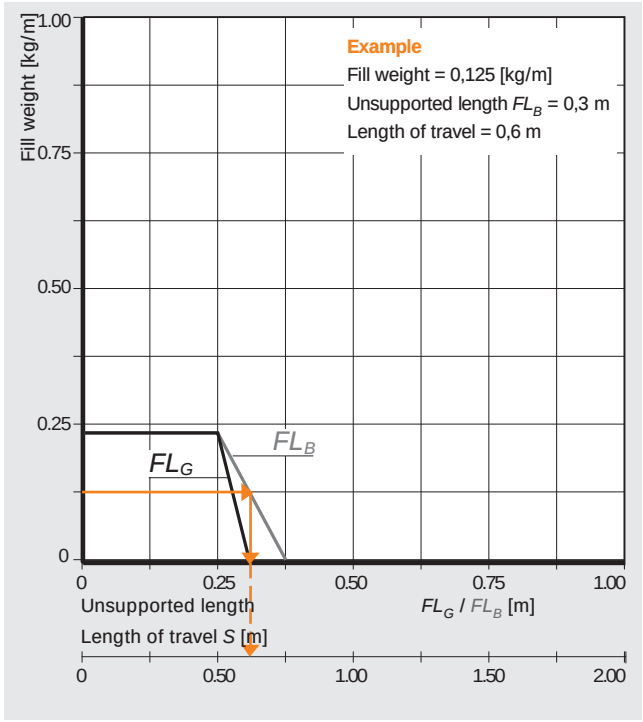
- igus® smallest e-chain® - inner dimensions: 5 x 5 mm
- If a very small e-chain® with an inner height of 5 mm and smallest bending radii are required
- For inner widths up to 10 mm
- For unsupported lengths up to 0,40 m and fill weights up to 0,24 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

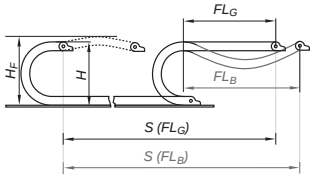
When to use a different igus® Series:

- If very high loads and long unsupported travels occur
- ▶ Series 04 E2 micro, page 306
- If a non-opening e-chain® is required
- ▶ Series 03 E2 micro, page 302

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

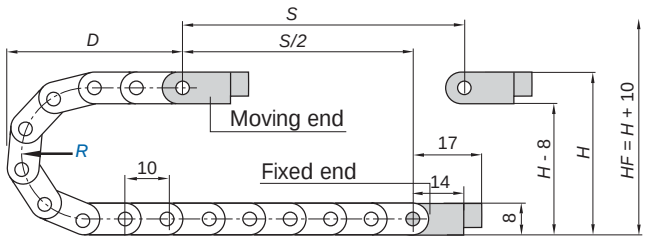
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E03





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 10 mm/link
Links/m = 100 (1000 mm)
Chain length = $S/2 + K$

R	010	012	015	018	028
H	28	32	38	44	64
D	29	31	34	37	47
K	55	60	70	80	110

The required clearance height: $H_F = H + 10$ mm (with 0,1 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series E03 | Split crossbar along outer radius

Split crossbar along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
E03.05.R.0 1)	5	8,7	| 010 | 012 | 015 | 018 | 028 |	≈ 0,03
E03.07.R.0 2)	7	10,7	| 010 | 012 | 015 | 018 | 028 |	≈ 0,04
E03.10.R.0 2)	10	13,7	| 010 | 012 | 015 | 018 | 028 |	≈ 0,05

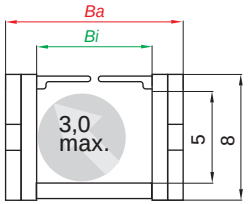
1) **Crossbars do not overlap!** Gap = 1 mm 2) **Crossbars do not overlap!** Gap = 2 mm

Ba: pin dimension approx. 0,1 - 0,3 mm wider!

Supplement Part No. with required radius *(R)* Example: E03.05.028.0

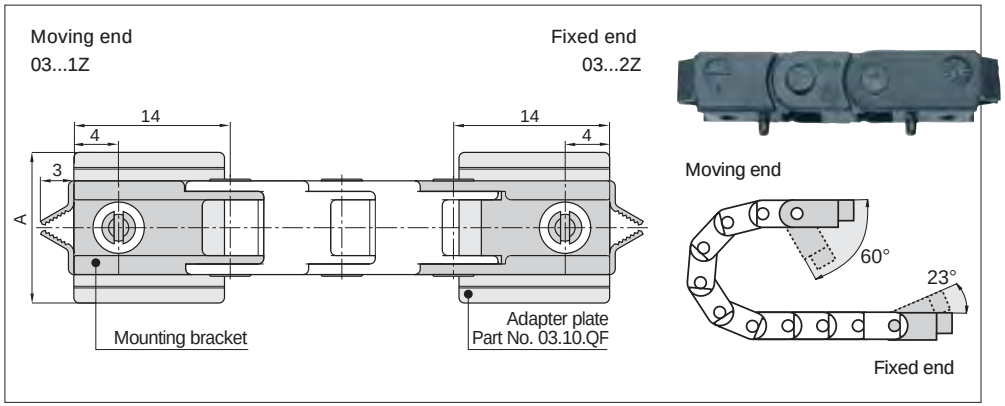
Order key
E03. 05. 028. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

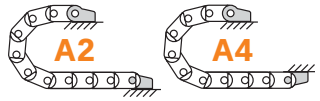


Polymer pivoting, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set	Dim. A [mm]
.05. ►	03.05. 12Z	8,7
.07. ►	03.07. 12Z	10,7
.10. ►	03.10. 12Z	13,7

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

- One-piece mounting bracket
- With integrated strain relief
- Corrosion-resistant
- Adapter plate for rapid installation

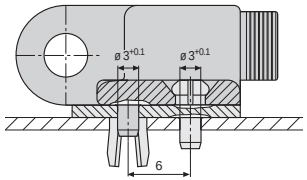


Possible installation conditions:
For the preassembled mode please add index A2 or A4
►e.g. 03.05.1ZA2

Part No. structure
03.05. 12Z A2
- A...must be indicated on preassembled configurations
- Full set = 12Z
- Mounting brackets for selected width index

Additional Features





Adapter plate for rapid installation: for all sizes of Part No. 03.10.QF
The adapter has broken edges so that it can be adapted to the respective chain width. It is not absolutely necessary when attaching the mounting brackets. The mounting brackets can also be screwed on without the adapter plate.

Single-part order
Mounting bracket Moving end
03.05. 1Z A2 (preassembled)
Mounting bracket Fixed end
03.05. 2Z A2 (preassembled)



Universal:
Mounting bracket with strain relief option

Cleanroom:
Suitable for clean-room applications

Save time:
Simply press cables in

Cost-effective:
Low price with one-piece design

Flexible:
Torsional motions possible

Clean:
Dirt-repellent exterior

Secure:
"Push-button principle" for better stability



Original size 1:1
Outer height 10 mm



Special solution with opening gap 0,8 mm:
Part No. E04.07.015.0.S

Simply press cables in, low weight

When to use Series E04:

- Small igus® e-chain® - Inner dimensions: 7 x 7 mm
- If a small e-chain® with an inner height of 7,0 mm and small bending radii is required
- For unsupported lengths up to 0,55 m and fill weights up to 0,35 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required
- For high accelerations

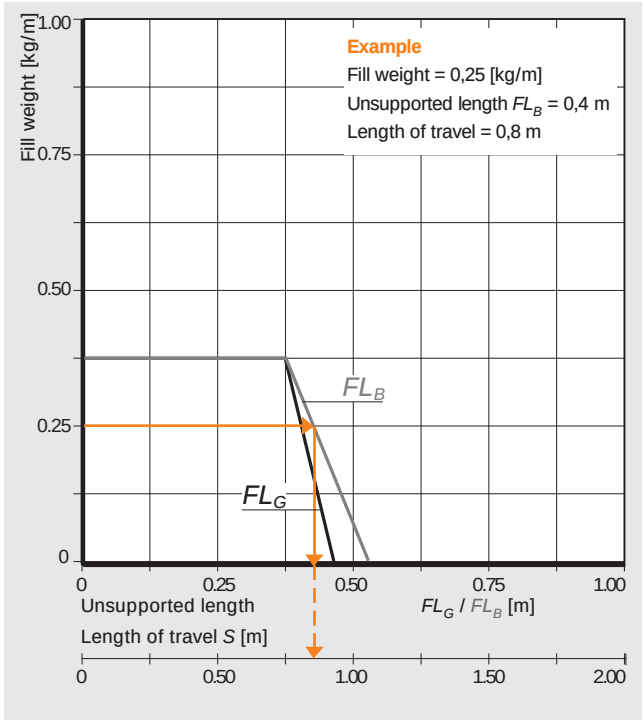
When to use a different igus® Series:

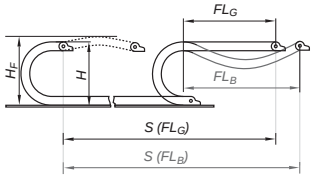
- If very high loads and long unsupported travels occur
- ▶ Series 06 E2 micro, page 318
- If a non-opening e-chain® is required
- ▶ Series 04 E2 micro, page 306

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E04

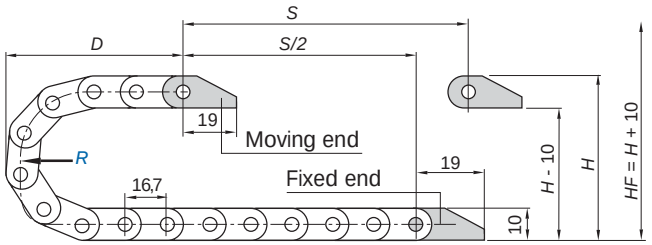
Photo not 1:1





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 16,7 mm/link
Links/m = 60 (1002 mm)
Chain length = $S/2 + K$

R	015	018	028	038	048
H	40	46	66	86	106
D	45	48	58	68	78
K	85	90	125	155	185

The required clearance height: $H_F = H + 10$ mm (with 0,1 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series E04 | Split crossbar along outer radius

Split crossbar along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
E04.07.*R*.0 1)	7	13	| 015 | 018 | 028 | 038 | 048 |	≈ 0,08

1) **Crossbars do not overlap!** Gap = 2,5 mm

Special solution with opening gap 0,8 mm: Part No. E04.07.015.0.S available

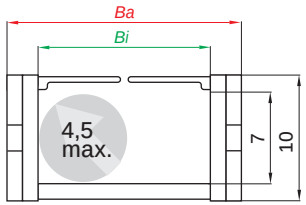
Ba: pin dimension approx. 0,1 - 0,3 mm wider!

Supplement Part No. with required radius *(R)* Example: E04.07.038.0

Order key

E04. 07. 038. 0

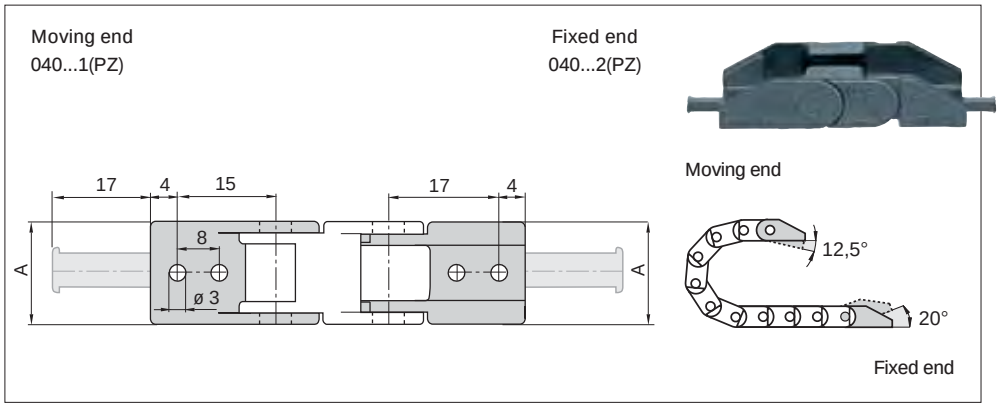
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ▶page 154

Available from stock. Delivery time* in 24h or today!

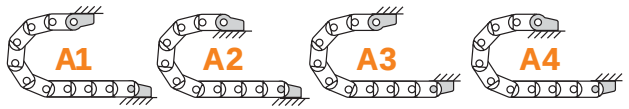
*Delivery time means time until shipping of goods (after technical release)



Polymer pivoting, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Number of teeth
.07. ▶	040.07.12PZ	040.07.12	12	1

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ▶e.g. 040.07.12 PZ**A2**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

Part No. structure

040.07.12 PZ **A2**

- A…must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 040.07.QS available from stock



Quickfix - mounting bracket with dowel, available from stock

Single-part order

Mounting bracket Moving end

040.07.1 PZ **A2** (preass. + tiewrap plate)

Mounting bracket Fixed end

040.07.2PZ **A2** (preass. + tiewrap plate)



Universal:
Mounting bracket with strain relief option

Save time:
Simply press cables in

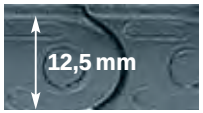
Cleanroom:
Suitable for clean-room applications

Cost-effective:
Low price with one-piece design

Flexible:
Torsional motions possible

Clean:
Dirt-repellent exterior

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")



Original size 1:1
Outer height 12,5 mm



1-, 2- or 3- moulded-in chamber system available

Simply press cables in, small pitch, smooth running

When to use Series E045·Z045:

- If a small e-chain® with an inner height of 9,4 mm and small pitch is required
- For inner widths up to 27 mm
- For unsupported lengths up to 0,4 m and fill weights up to 0,25 kg/m
- If easy filling without opening and closing of lids is required
- Small pitch for low-noise, smooth running
- If a lightweight and cost-effective e-chain® is required

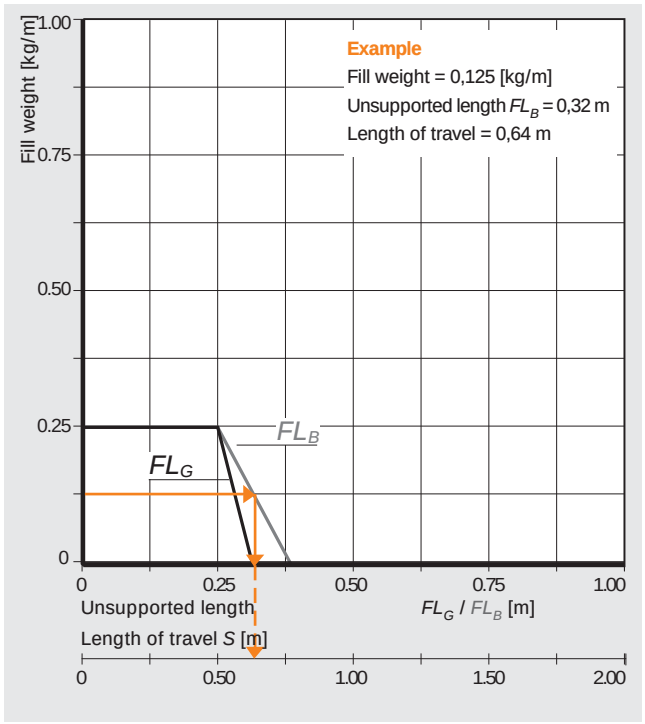
When to use a different igus® Series:

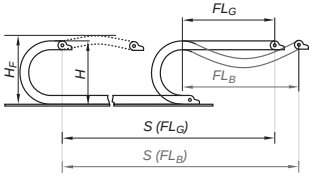
- If very high loads and long unsupported travels occur
- ▶ Series 06 E2 micro, page 318
- If high stability is required
- ▶ Series 06 E2 micro, page 318

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E045

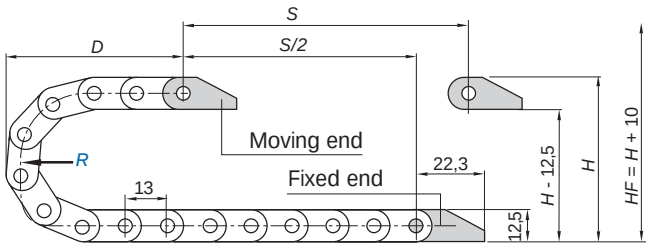
Photo not 1:1





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 13 mm/link
Links/m = 77 (1001 mm)
Chain length = $S/2 + K$

R	018	028	038
H	48,5	68,5	88,5
D	44	54	64
K	85	115	150

The required clearance height: $H_F = H + 10$ mm (with 0,1 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series E045 | Split crossbar along outer radius | 1 / 2 / 3- chamber system
Series Z045 | Split crossbar along inner radius | 1 / 2- chamber system

Chamber system	Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
1-chamber	E045.10.R.0 1)	Z045.10.R.0 1) *	10	16	| 018 | 028 | 038 |	≈ 0,09
	E045.16.R.0	Z045.16.R.0	16	23	| 018 | 028 | 038 |	≈ 0,11
	1) **Crossbars do not overlap!** Gap = 2 mm					
2-chamber	E045.2/7.R.0 2)	Z045.2/7.R.0 2)	7 / 7	23	| 018 | 028 | 038 |	≈ 0,13
	E045.2/9.R.0 2)	Z045.2/9.R.0 2) *	9 / 9	27	| 018 | 028 | 038 |	≈ 0,14
	2) **Crossbars do not overlap!** Gap = 2,25 mm					
3-chamber	E045.3/9.R.0 3)	Z045.3/9.R.0 3) *	9 / 9 / 9	37	| 018 | 028 | 038 |	≈ 0,17
	3) **Crossbars do not overlap!** Gap = 2,25 mm					

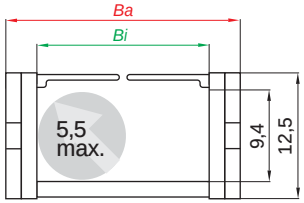
Ba: pin dimension approx. 0,1 - 0,3 mm wider! *Width available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (*R*) Example: E045.16.038.0

Order key

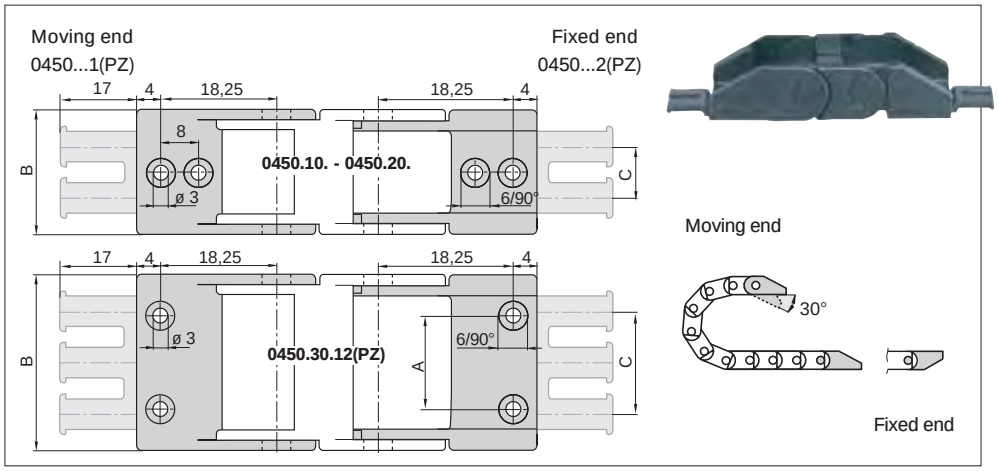
E045. 16. 038. 0 Version "E"- Split crossbar along outer radius
Z045. 16. 038. 0 Version "Z" - Split crossbar along inner radius

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer one-piece, one side pivoting | Universal for e-chains®
Recommended for unsupported applications

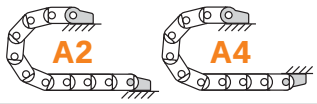
Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Number of teeth
.10. ▶	0450.10.12PZ	0450.10.12	–	16	–	1
.16. ▶	0450.16.12PZ	0450.16.12	–	22	10	2
.2/7. ▶	0450.16.12PZ	0450.16.12	–	22	10	2
.2/9. ▶	0450.20.12PZ	0450.20.12	–	26	10	2
.3/7. ▶	0450.30.12PZ	0450.30.12	22	36	20	3

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

0450.10. - 0450.20. center bores only / 0450.30. outer bores only

Mounting bracket with strain relief tiewrap plate has reductions of ø 3 mm / ø 6 mm, 90°.

Mounting bracket without strain relief tiewrap plate only has holes of ø 3 mm.



Possible installation conditions:
For the preassembled mode please add index A2 or A4
►e.g. 045.10.1ZA2

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

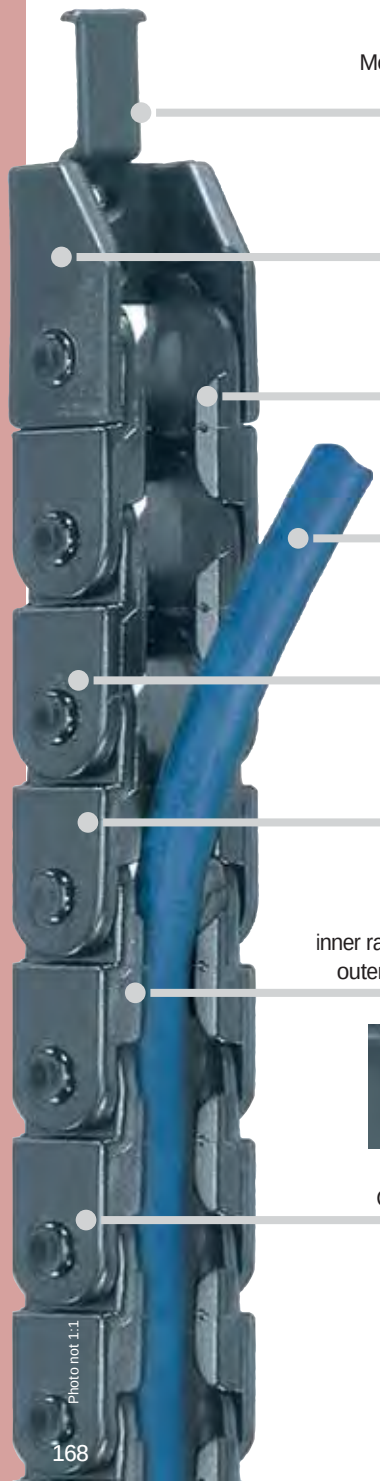
Part No. structure
0450.10.12 PZ A2

- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
0450.10.1 PZ A2 (preass. + tiewrap plate)
Mounting bracket Fixed end
0450.10.2PZ A2 (preass. + tiewrap plate)



Version E Version Z



Universal:
Mounting bracket with strain relief option

Cleanroom:
Suitable for clean-room applications

Cost-effective:
Low price with one-piece design

Save time:
Simply press cables in

Flexible:
Torsional motions possible

Clean:
Dirt-repellent exterior

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")

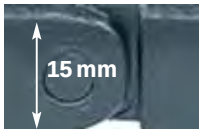
Simply press cables in, low weight

When to use Series E06·Z06:

- If a small e-chain® with an inner height of 10,7 mm (Version E) or 10,5 mm (Version Z) and small bending radii is required
- For inner widths up to 20 mm
- For unsupported lengths up to 0,55 m and fill weights up to 0,45 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

When to use a different igus® Series:

- If very high loads and long unsupported travels occur
- ▶ Series 06 E2 micro, page 318
- If a non-opening e-chain® is required
- ▶ Series 04 E2 micro, page 306
- Version Z not suitable for gliding applications
- ▶ Series 07 zipper, page 242



Original size 1:1
Outer height 15 mm

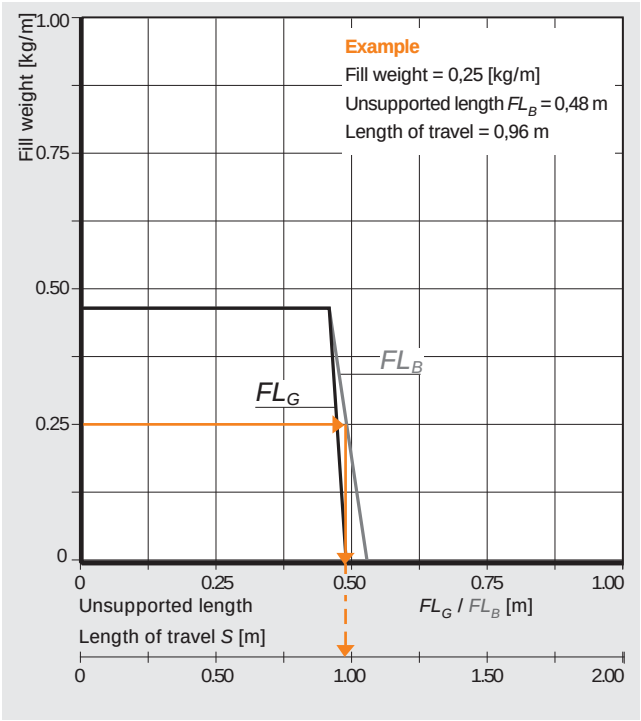


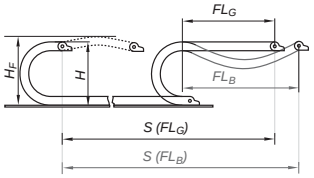
Special solution with opening gap 3,5 mm
Part No. E06.10.018.0.S3

Photo not 1:1

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

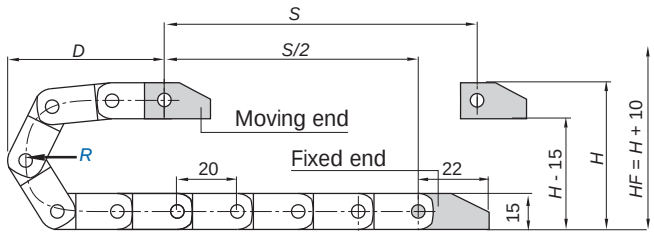
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E06





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	018	028	038
H	51	71	91
D	56	66	76
K	100	130	160

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series E06 | Split crossbar along outer radius
Series Z06 | Split crossbar along inner radius

Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
E06. 10 .R.0 1)	Z06. 10 .R.0 1)	10	16,5	| 018 | 028 | 038 |	≈ 0,14
E06. 16 .R.0 1)	Z06. 16 .R.0 1)	16	22,5	| 018 | 028 | 038 |	≈ 0,16
E06. 20 .R.0	Z06. 20 .R.0	20	26,5	| 018 | 028 | 038 |	≈ 0,18

1) **Crossbars do not overlap!** Gap = 5,5 mm

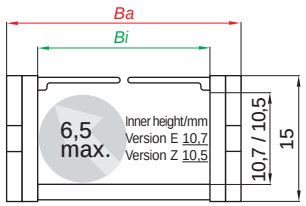
Special solution with opening gap 3,5 mm Part No. E06.10.018.0.S3

Ba: pin dimension approx. 0,2 - 0,4 mm wider!

Supplement Part No. with required radius (*R*) Example: E06.10.018.0

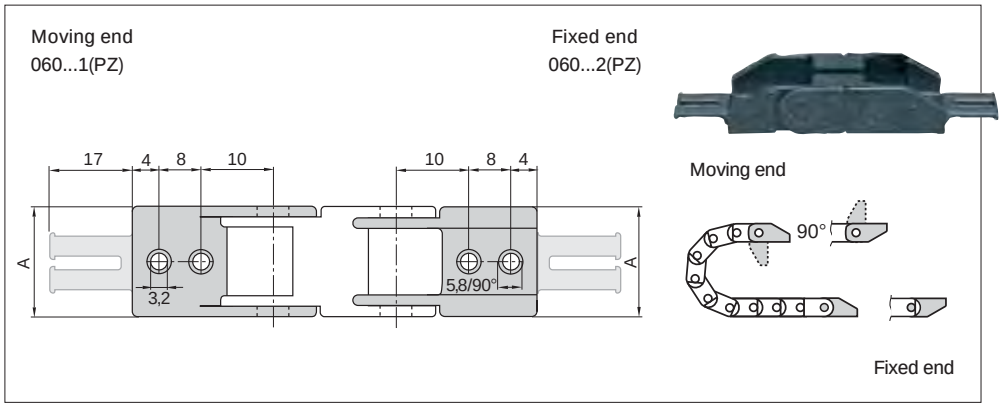
Order key
E06. 10. 018. 0 Version "E" Split crossbar along outer radius
Z06. 10. 018. 0 Version "Z" Split crossbar along inner radius

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

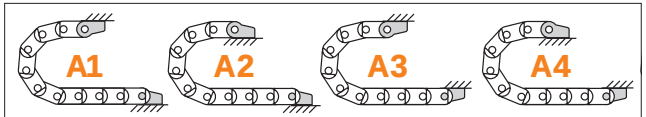


Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Number of teeth
.10. ▶	060.10.12PZ	060.10.12	16,5	1
.16. ▶	060.16.12PZ	060.16.12	22,5	2
.20. ▶	060.20.12PZ	060.20.12	27,0	2

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ►e.g. 060.10.12PZ**A1**

Part No. structure
060.10.12 PZ **A1**

- A...must be indicated on preassembled configurations With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Additional Features

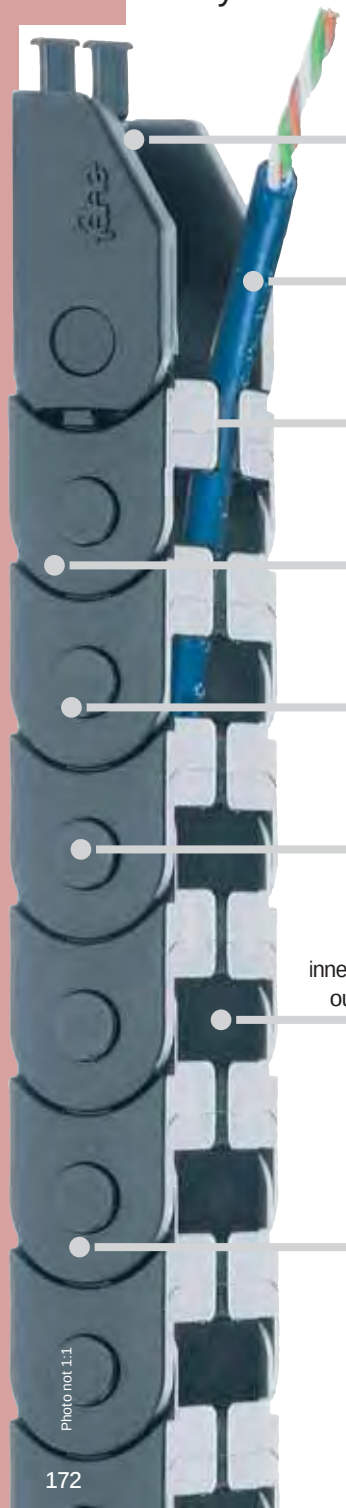


Quicksnap - the complete, detachable mounting unit. Part No. 060.10.QS, Part No. 060.16.QS, Part No. 060.20.QS, Part No. 060.40.QS available from stock



Quickfix - mounting bracket with dowel, available from stock

Single-part order
Mounting bracket Moving end
060.10.1 PZ **A1** (preass. + tiewrap plate)
Mounting bracket Fixed end
060.10.2 PZ **A1** (preass. + tiewrap plate)



Universal:
Mounting bracket with strain relief option

Save time:
Simply press cables in

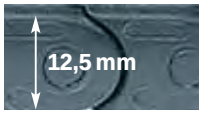
Cost-effective:
Low price with one-piece design

Cleanroom:
Suitable for clean-room applications

Flexible:
Torsional motions possible

Clean:
Dirt-repellent exterior

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")



Original size 1:1
Outer height 12,5 mm



1-, 2-, 3- or 4- moulded-in chamber system available

Simply press cables in, very small pitch, smooth running

When to use Series E065·Z065:

- If a small e-chain® with an inner height of 11,3 mm and small pitch is required
- For inner widths up to 36 mm
- For unsupported lengths up to 0,6 m and fill weights up to 0,45 kg/m
- If easy filling without opening and closing of lids is required
- Small pitch for low-noise, smooth running
- If a lightweight and cost-effective e-chain® is required

When to use a different igus® Series:

- If very high loads and long unsupported travels occur

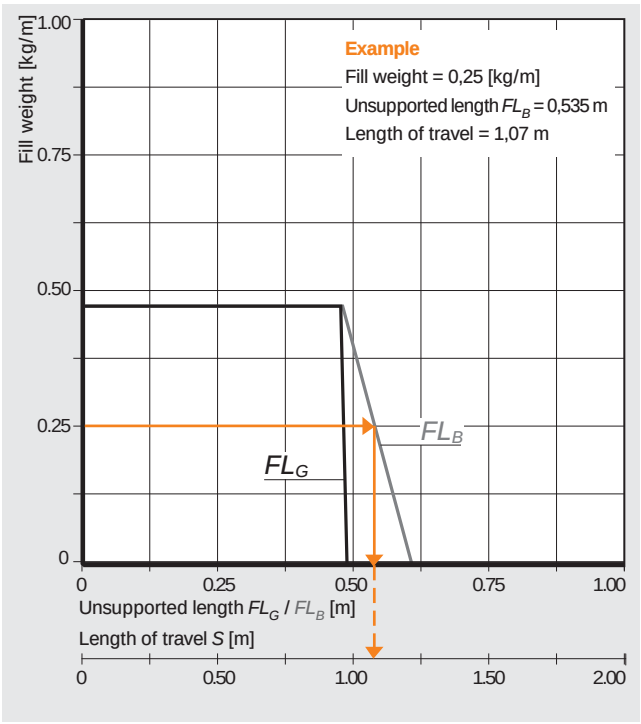
► Series 06 E2 micro, page 318

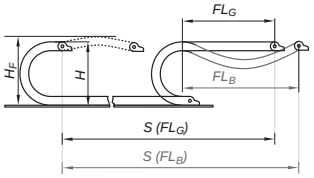
- If high stability is required

► Series 06 E2 micro, page 318

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

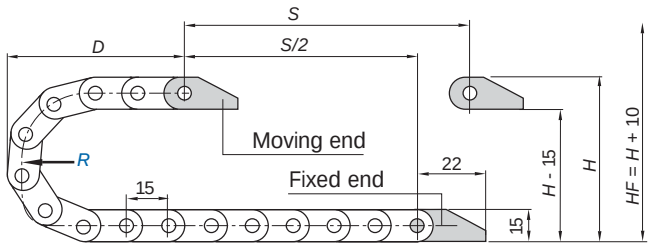
3D-CAD files, configurators, PDF ►www.igus.eu/eu/E065





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

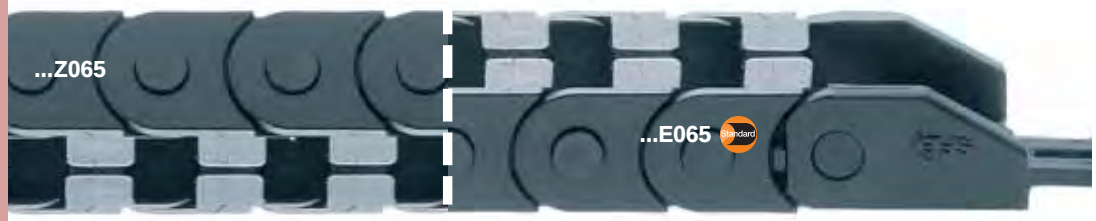
Speed, material, temperature and flammability class ► page 152

Pitch = 15 mm/link
Links/m = 67 (1005 mm)
Chain length = $S/2 + K$

R	018	028	038
H	51	71	91
D	48	58	68
K	90	120	150

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series E065 | Split crossbar along outer radius | 1 / 2 / 3 / 4- chamber system
Series Z065 | Split crossbar along inner radius | 3-chamber system

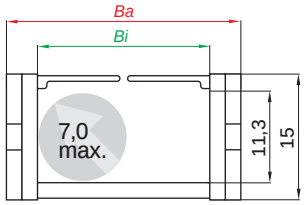
Chamber system	Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
1-chamber	E065.16.R.0 1)	Z065.16.R.0 1) *	16	24,8	| 018 | 028 | 038 |	≈ 0,17
2-chamber	E065.2/9.R.0 2)	Z065.2/9.R.0 2) *	9 / 9	29,3	| 018 | 028 | 038 |	≈ 0,19
3-chamber	E065.3/9.R.0 3)	Z065.3/9.R.0 3)	9 / 9 / 9	39,3	| 018 | 028 | 038 |	≈ 0,22
4-chamber	E065.4/9.R.0 4)	Z065.4/9.R.0 4) *	9 / 9 / 9 / 9	49,3	| 018 | 028 | 038 |	≈ 0,25

1) **Crossbars do not overlap!** Gap = 2,5 mm
2) **Crossbars do not overlap!** Gap = 2,5 mm
3) **Crossbars do not overlap!** Gap = 2,5 mm
4) **Crossbars do not overlap!** Gap = 2,5 mm

Ba: pin dimension approx. 0,2 - 0,4 mm wider! *Width available upon request, please consult igus® for delivery time.

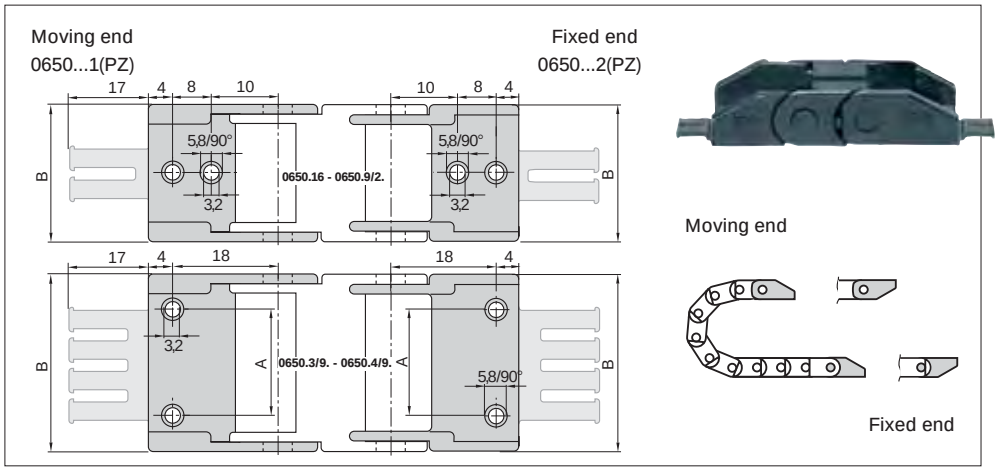
Supplement Part No. with required radius (*R*) Example: E065.16.038.0

Order key
E065. 16. 038. 0 Version "E" Split crossbar along outer radius
Z065. 16. 038. 0 Version "Z" Split crossbar along inner radius
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ▶page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



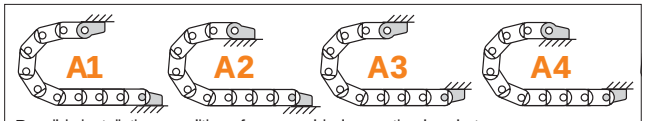
Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
.16. ▶	0650.16.12PZ	0650.16.12	–	22,5	2
.2/9. ▶	0650.2/9.12PZ	0650.2/9.12	–	27	2
.3/9. ▶	0650.3/9.12PZ	0650.3/9.12	22	37	3
.4/9. ▶	0650.4/9.12PZ	0650.4/9.12	32	47	4

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

0650.16 - 0650.9/2. center bores only / 0650.3/9. - 0650.4/9. outer bores only

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶e.g. 065.16.12PZA1

Part No. structure
0650.16.12 PZ A2
- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
0650.16.1 PZ A2 (preass. + tiewrap plate)
Mounting bracket Fixed end
0650.16.2PZ A2 (preass. + tiewrap plate)

Additional Features



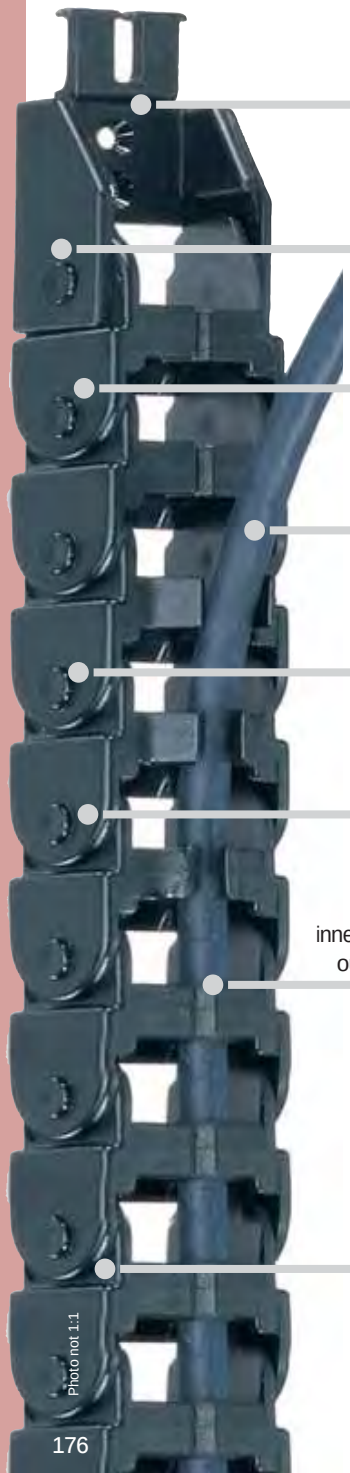
Quicksnap - the complete, detachable mounting unit, available from stock



Quickfix - mounting bracket with dowel, available from stock



Version E Version Z



Universal:
Mounting bracket with strain relief option

Cleanroom:
Suitable for clean-room applications

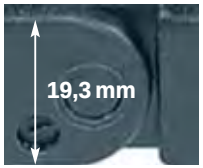
Cost-effective:
Low price with one-piece design

Save time:
Simply press cables in

Flexible:
Torsional motions possible

Clean:
Dirt-repellent exterior

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")



Original size 1:1
Outer height 19,3 mm

Photo not 1:1

Simply press cables in, small pitch

When to use Series E08·Z08:

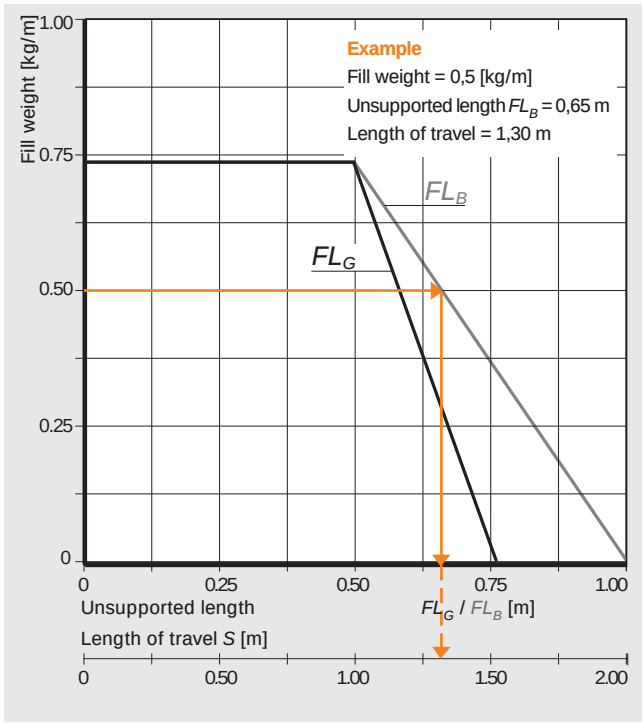
- If a small e-chain® with an inner height of 14,6 mm (Version E) or 14,7 mm (Version Z) and small bending radii is required
- For inner widths up to 50 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

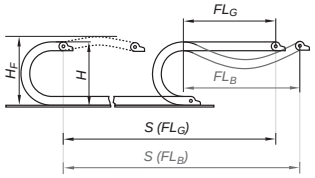
When to use a different igus® Series:

- If very high loads and long unsupported travels occur
- ▶ Series 09 zipper, page 250
- Version Z not suitable for gliding applications
- ▶ Series 09 zipper, page 250

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

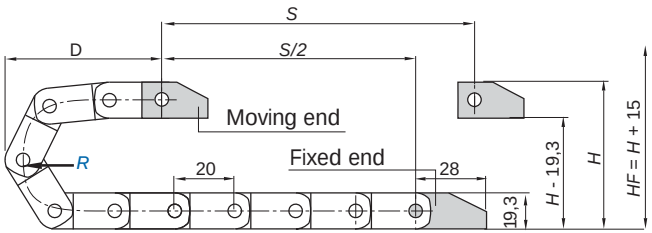
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E08





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

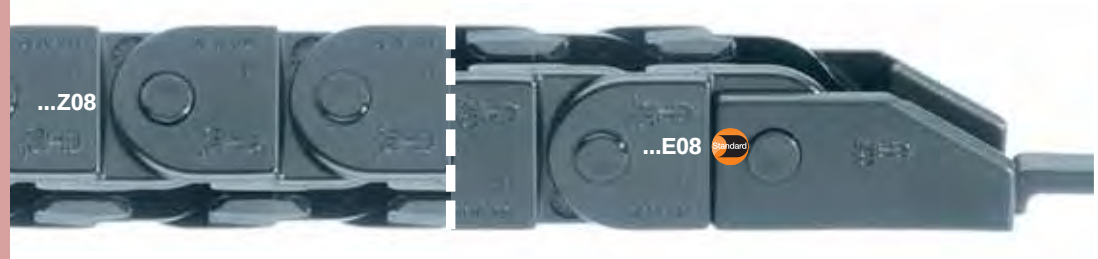
Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	025*	028	038	048
H	69	75	95	115
D	65	68	78	88
K	120	130	160	195

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time.

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series E08 | Split crossbar along outer radius
Series Z08 | Split crossbar along inner radius

Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
E08.10.R.0 1)	Z08.10.R.0 1)	10	18,2	| 025* | 028 | 038 | 048 |	≈ 0,21
E08.16.R.0 2)	Z08.16.R.0 2)	16	24,2	| 025* | 028 | 038 | 048 |	≈ 0,24
E08.20.R.0	Z08.20.R.0	20	28,2	| 025* | 028 | 038 | 048 |	≈ 0,25
E08.30.R.0	Z08.30.R.0	30	38,2	| 025* | 028 | 038 | 048 |	≈ 0,28
E08.40.R.0	Z08.40.R.0	40	48,2	| 025* | 028 | 038 | 048 |	≈ 0,31
E08.50.R.0	Z08.50.R.0	50	58,2	| 025* | 028 | 038 | 048 |	≈ 0,37

1) **Crossbars do not overlap!** Gap = 5,5 mm 2) **Crossbars do not overlap!** Gap = 4 mm

Ba: pin dimension approx. 0,3 - 0,5 mm wider!

*Radius available upon request, please consult igus® for delivery time.

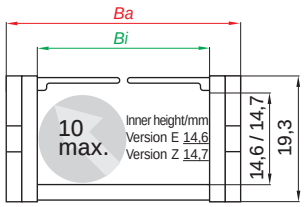
Supplement Part No. with required radius *(R)* Example: E08.10.028.0

Order key

E08. 10. 028. 0 Version "E" Split crossbar along outer radius

Z08. 10. 028. 0 Version "Z" Split crossbar along inner radius

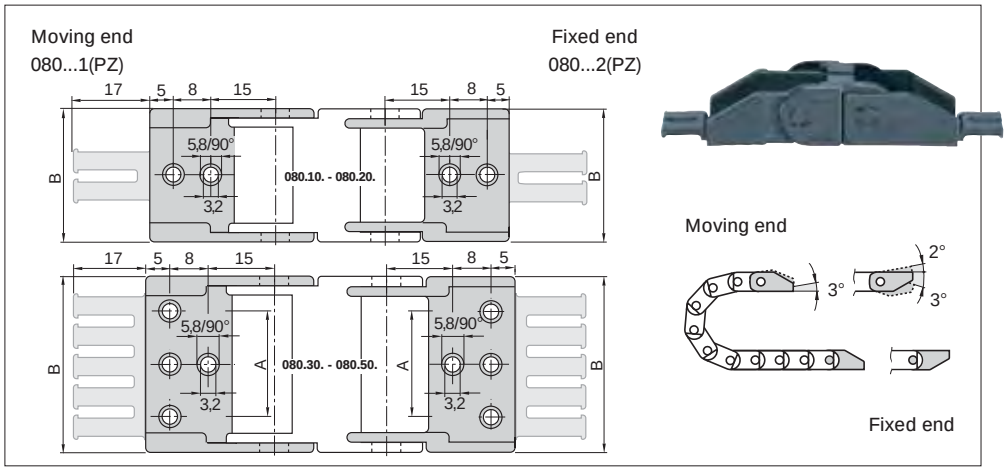
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ▶page 154

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

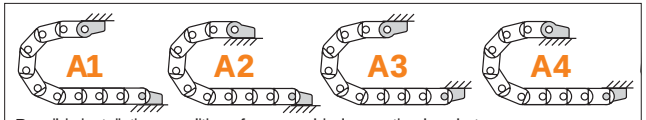


Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
.10. ▶	080.10. 12PZ	080.10. 12	–	18,2	1
.16. ▶	080.16. 12PZ	080.16. 12	–	24,2	2
.20. ▶	080.20. 12PZ	080.20. 12	–	28,2	2
.30. ▶	080.30. 12PZ	080.30. 12	22	38,2	3
.40. ▶	080.40. 12PZ	080.40. 12	32	48,2	4
.50. ▶	080.50. 12PZ	080.50. 12	42	58,2	5

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

080.10. - 080.20. center bores only / 080.30. - 080.50. all bores



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶e.g. 080.10.12PZA1

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

Part No. structure

080.10.12 PZ A2

- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

080.10.1 PZ A2 (preass. + tiewrap plate)

Mounting bracket Fixed end

080.10.2PZ A2 (preass. + tiewrap plate)

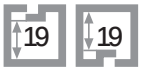
Additional Features



Quicksnap - the complete, detachable mounting unit, available from stock



Quickfix - mounting bracket with dowel, available from stock





Universal:
Mounting bracket with strain relief option

Cleanroom ISO Class 2[1]:
Suitable for clean-room applications

Cost-effective:
Low price with one-piece design

Save time:
Simply press cables in

Flexible:
Torsional motions possible

Clean:
Dirt-repellent exterior

Cable-friendly:
Cable conserving interior

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")

Simply press cables in, cost-effective

When to use Series E14·Z14:

- If an e-chain® with an inner height of 19 mm and small bending radii is required
- For inner widths up to 50 mm
- For unsupported lengths up to 0,65 m and fill weights up to 0,5 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

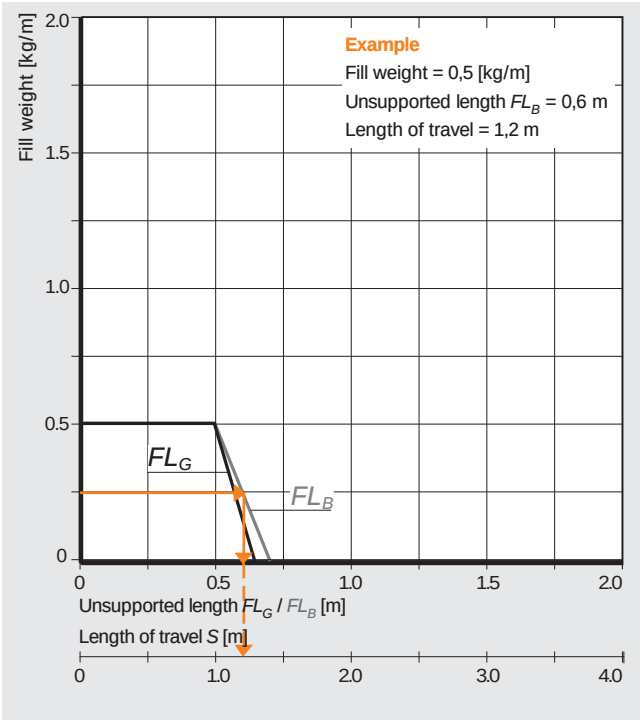
1) Cleanroom - Series E14.3.038.0, more details ▶ page 132

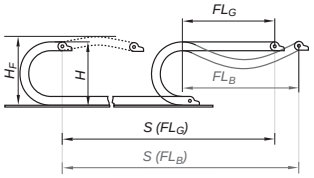
When to use a different igus® Series:

- If very high loads and long unsupported travels occur
- ▶ Series B15 E2 mini, page 380
- Version Z not suitable for gliding applications
- ▶ Series B15 E2 mini, page 380

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E14

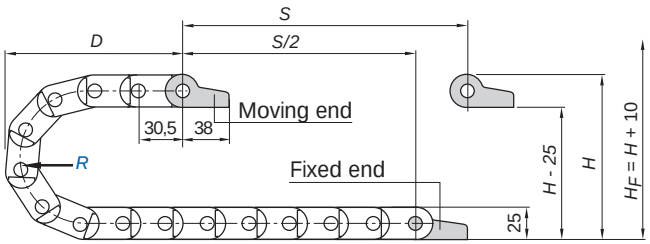




Standard

Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 30,5 mm/link
Links/m = 33 (1.006,5 mm)
Chain length = $S/2 + K$

R	028	038	048	075	100	125
H	81	101	121	175	225	275
D	86	96	106	133	158	183
K	150	185	215	300	380	455

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series E14 | Split crossbar along outer radius
Series Z14 | Split crossbar along inner radius

Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
E14.1.R.0	Z14.1.R.0	15	27	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,31
E14.2.R.0	Z14.2.R.0	25	37	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,32
E14.3.R.0	Z14.3.R.0	38	50	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,40
E14.4.R.0	Z14.4.R.0	50	62	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,44

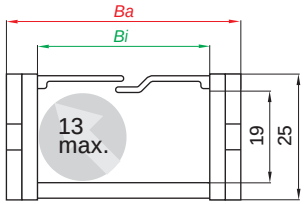
Ba: pin dimension approx. 0,3 - 0,5 mm wider!

Supplement Part No. with required radius (*R*) Example: E14.1.028.0

Order key

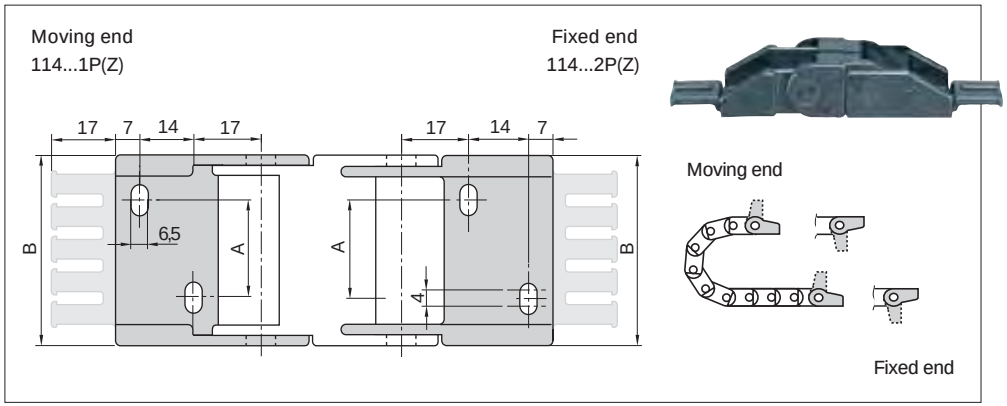
E14. 1. 028. 0 Version "E" Split crossbar along outer radius
Z14. 1. 028. 0 Version "Z" Split crossbar along inner radius

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

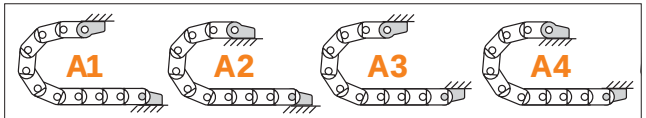


Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
1. ▶	114.1.12PZ	114.1.12P	–	26,3	2
2. ▶	114.2.12PZ	114.2.12P	10	36,3	3
3. ▶	114.3.12PZ	114.3.12P	23	49,3	4
4. ▶	114.4.12PZ	114.4.12P	35	61,3	5

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ►e.g. 114.2.12PZA1

Additional Features



Quicksnap - the complete, detachable mounting unit, available from stock



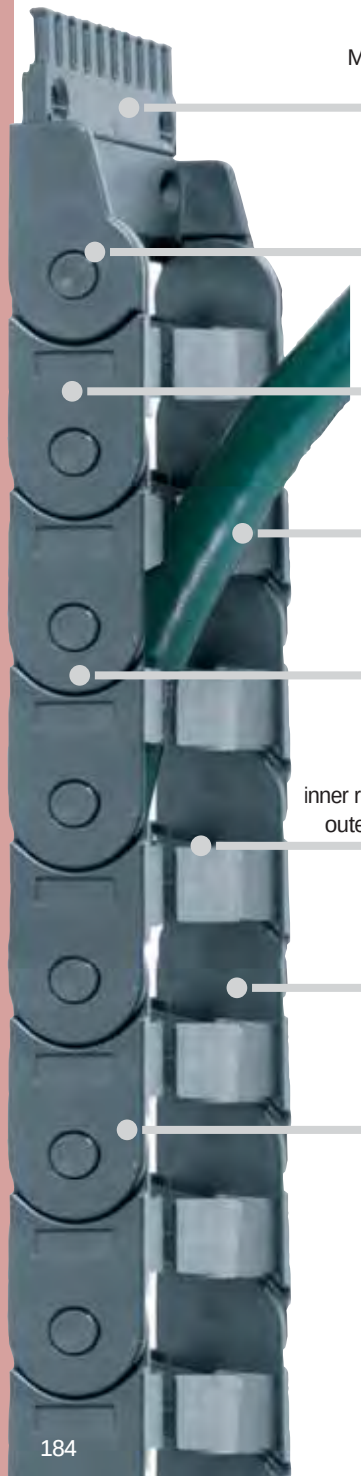
Quickfix - mounting bracket with dowel, available from stock

Part No. structure

114.2.12PZA1

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
114.2.1PZA1 (preass. + tiewrap plate)
Mounting bracket Fixed end
114.2.2PZA1 (preass. + tiewrap plate)



Universal:
Mounting bracket with strain relief option

Cleanroom:
Suitable for clean-room applications

Cost-effective:
Low price with one-piece design

Save time:
Simply press cables in

Flexible:
Torsional motions possible

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")

Cable-friendly:
Cable conserving interior

Clean:
Dirt-repellent exterior

Simply press cables in, medium size

When to use Series E200·Z200:

- If a medium-sized e-chain® with an inner height of 24,3 mm is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,75 m and fill weights up to 2,0 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

When to use a different igus® Series:

- If very high loads and long unsupported travels occur

► E2/000 Series 2400/2450/2480/2500, page 426

- If single-extrusion crossbars are required

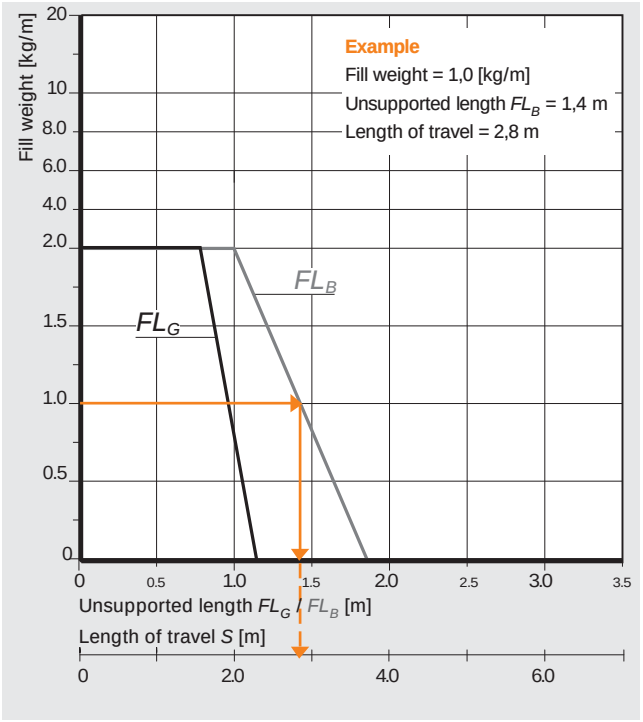
► E2/000 Series 2400/2450/2480/2500, page 426

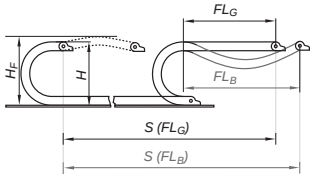


1- or 2- moulded-in chamber system available

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

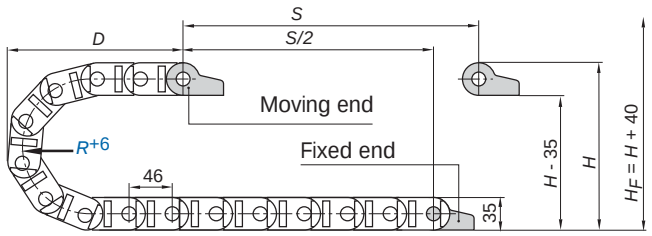
3D-CAD files, configurators, PDF ►www.igus.eu/eu/E200





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95



Technical Data

Speed, material, temperature and flammability class ►page 152

Pitch = 46 mm/link
Links/m = 22 (1012 mm)
Chain length = $S/2 + K$

R	055	075	100	150	200
H^{+4}	145	185	235	335	435
D	142	162	187	237	287
K	265	330	410	565	725

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series E200 | Split crossbar along outer radius | 1 / 2 - chamber system
Series Z200 | Split crossbar along inner radius | 1 / 2 - chamber system

Chamber system	Split crossbar along outer radius	Split crossbar along inner radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
1-chamber	E200.05.*R*.0	Z200.05.*R*.0	57	74,4	| 055 | 075 | 100 | 150 | 200 |	≈ 0,70
						
2-chamber	E200.2/35.*R*.0	Z200.2/35.*R*.0	37/37	94,4	| 055 | 075 | 100 | 150 | 200 |	≈ 0,79
	E200.2/50.*R*.0	Z200.2/50.*R*.0	50/50	120,4	| 055 | 075 | 100 | 150 | 200 |	≈ 0,82
						

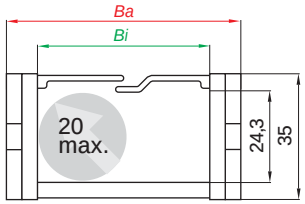
Ba: pin dimension approx. 0,1 - 0,3 mm wider!

Supplement Part No. with required radius *(R)* Example: E200.05.150.0

Order key

E200. 05. 150. 0 Version "E" Split crossbar along outer radius
Z200. 05. 150. 0 Version "Z" Split crossbar along inner radius

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



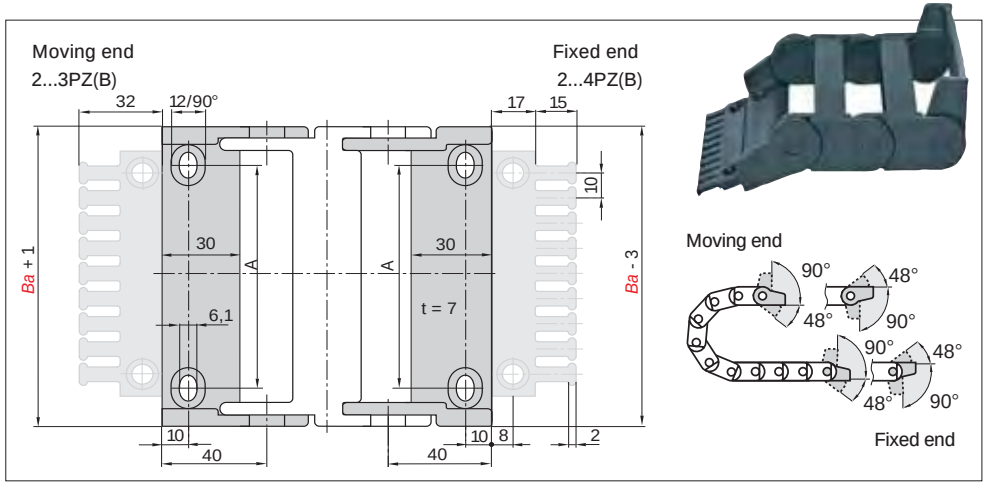
Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Machinery of all kinds feature igus® easy chains® - reduces assembly times

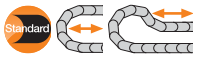
easy chain® | E200·Z200 | Mounting brackets pivoting



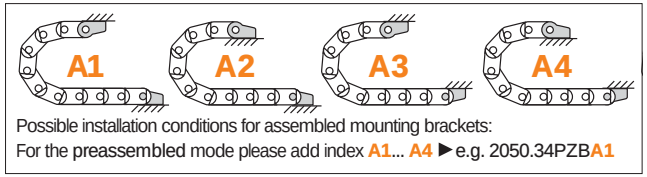
Polymer pivoting, one-piece | Standard | Universal for e-chains®
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Part No. full set **with** tiewrap plate + **10 cable tiewraps**	Dim. A [mm]	Number of teeth
.05. ▶	2050.34PZB	2050.34PZ	2050.34PZK1	44	6
.2/35. ▶	2070.34PZB	2070.34PZ	2070.34PZK1	64	8
.2/50. ▶	2100.34PZB	2100.34PZ	2100.34PZK1	90	10

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB



- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Corrosion-resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end



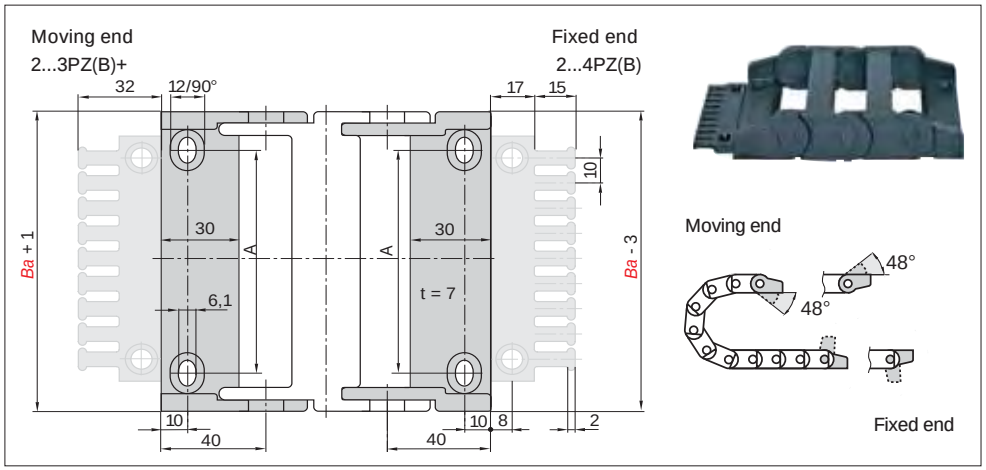
Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 2050.34PZBA1

Part No. structure
2050. 34 PZB A1
A...must be indicated on preassembled configurations
Strain relief with chainfix tiewrap plates
Full set pivoting = 34
Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
2050. 3 PZB+ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
2050. 4 PZB A1 (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

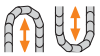
easy chain® | E200·Z200 | Mounting brackets locking



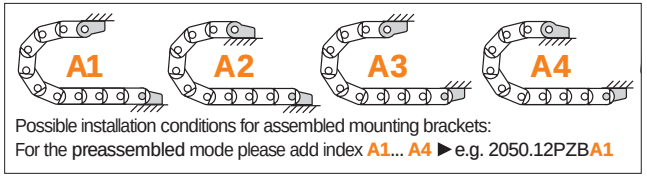
Polymer locking| Universal for e-chains®
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Part No. full set **with** tiewrap plate + **10 cable tiewraps**	Dim. A [mm]	Number of teeth
.05. ▶	2050.12PZB	2050.12PZ	2050.12PZK1	44	6
.2/35. ▶	2070.12PZB	2070.12PZ	2070.12PZK1	64	8
.2/50. ▶	2100.12PZB	2100.12PZ	2100.12PZK1	90	10

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end



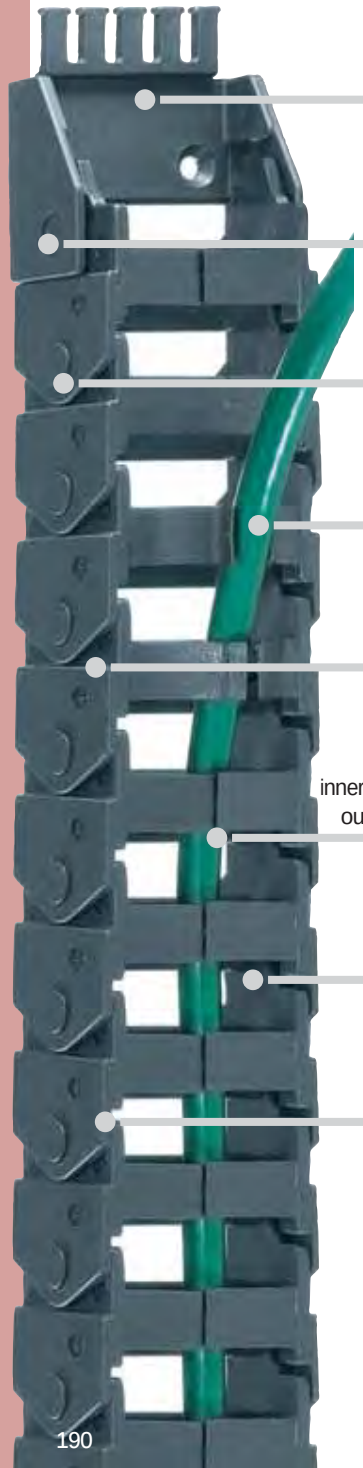
Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 2050.12PZBA1

Part No. structure
2050. 12 PZB A1
A...must be indicated on preassembled configurations
Strain relief with chainfix tiewrap plates
Full set pivoting = 12
Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
2050. 1 PZB A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
2050. 2 PZB A1 (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148





Universal:
Mounting bracket with strain relief option

Cleanroom:
Suitable for clean-room applications

Cost-effective:
Low price with one-piece design

Save time:
Simply press cables in

Flexible:
Torsional motions possible

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")

Cable-friendly:
Cable conserving interior

Clean:
Dirt-repellent exterior

Simply press cables in, medium size

When to use Series E16·Z16:

- If a medium-sized e-chain® with an inner height of 32 mm is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

When to use a different igus® Series:

- If very high loads and long unsupported travels occur
  ▶ E2/000 Series 2600/2650/2680/2700, page 444
- If single-extrusion crossbars are required
  ▶ E2/000 Series 2600/2650/2680/2700, page 444



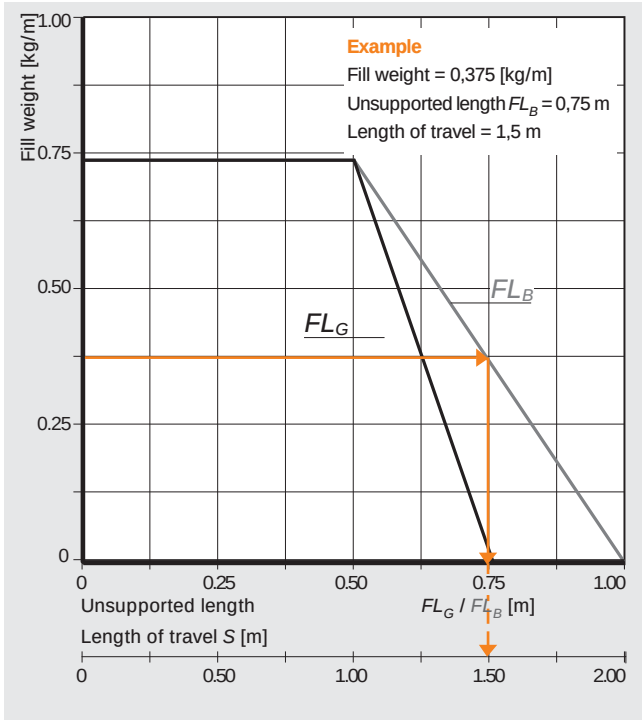
Special solution with opening gap 3 mm
Part No. E16.2.100.0N3 .0

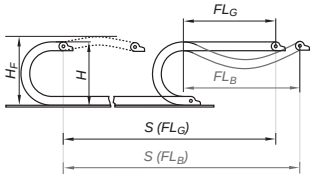


Special solution with opening gap 3 mm
Part No. Z16.2.075.0N3 .0

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

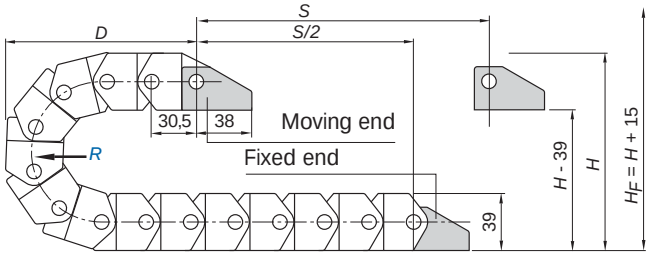
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E16





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 30,5 mm/link
Links/m = 33 (1006,5mm)
Chain length = $S/2 + K$

R	040[1)]	060	075	100	125*
H	119	159	189	239	289
D	105	125	140	165	190
K	190	250	300	380	455

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

1) Radius 040 available only for E16.2. / Z16.3 / Z16.4 *Radius available upon request, please consult igus® for delivery time.

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series E16| Split crossbar along outer radius
Series Z16 | Split crossbar along inner radius

Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
E16.2.R.0 1)	Z16.2.R.0	23	37,5	|040 1)| 060 | 075 | 100 | 125*|	≈ 0,51
E16.3.R.0	Z16.3.R.0 1)	36	50,5	|040 1)| 060 | 075 | 100 | 125*|	≈ 0,57
E16.4.R.0	Z16.4.R.0 1)	48	62,5	|040 1)| 060 | 075 | 100 | 125*|	≈ 0,62
E16.5.R.0	Z16.5.R.0	63	78,5	|040*| 060 | 075 | 100 | 125*|	≈ 0,75
E16.6.R.0	Z16.6.R.0	80	95,5	|040*| 060 | 075 | 100 | 125*|	≈ 0,83
E16.7.R.0	Z16.7.R.0	100	115,3	|040*| 060 | 075 | 100 | 125*|	≈ 0,91

Special solution with opening gap 3 mm Part No. E16.2.100.0.N3, with opening gap 3 mm Part No. Z16.2.075.0.N3

Ba: pin dimension approx. 0,3 - 0,7 mm wider! 1) Radius 040 available only for E16.2. / Z16.3 / Z16.4

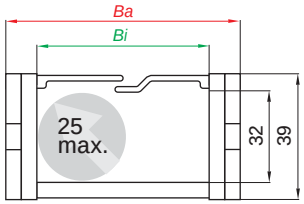
*Radius available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius *(R)* Example: E16.3.060.0

Order key

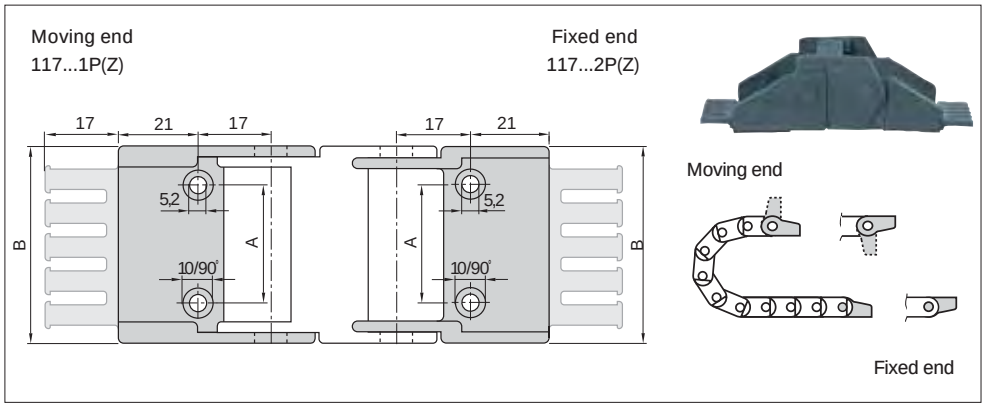
E16. 3. 060. 0 Version "E" Split crossbar along outer radius
Z16. 3. 060. 0 Version "Z" Split crossbar along inner radius

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

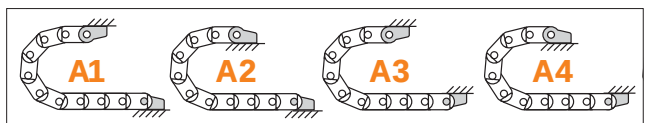


Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim. A [mm]	Dim. B [mm]	Number of teeth
.2. ▶	117.2.12PZ	117.2.12P	12	35,5	3
.3. ▶	117.3.12PZ	117.3.12P	25	48,5	4
.4. ▶	117.4.12PZ	117.4.12P	37	60,5	5
.5. ▶	117.5.12PZ	117.5.12P	48	76,0	6
.6. ▶	117.6.12PZ	117.6.12P	65	93,0	8
.7. ▶	117.7.12PZ	117.7.12P	85	113,0	10

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ►e.g. 117.2.12PZA1

Part No. structure

117.2.12PZA1

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Additional Features



Quicksnap - the complete, detachable mounting unit, available from stock



Quickfix - mounting bracket with dowel, available from stock

Single-part order
Mounting bracket Moving end
117.2.1PZA1 (preass. + tiewrap plate)
Mounting bracket Fixed end
117.2.2PZA1 (preass. + tiewrap plate)

easy chain® | Series E26·Z26 | Introduction



2- and 3-chamber system, inner height: 37,1



Universal: Mounting bracket with strain relief option

Cleanroom: Suitable for clean-room applications

Cost-effective: Low price with one-piece design

Save time: Simply press cables in

Flexible: Torsional motions possible

Rapid installation: easy to fill from the inner radius (Version "Z") or outer radius (Version "E")

Cable-friendly: Cable conserving interior

Clean: Dirt-repellent exterior

Simply press cables in, medium size

When to use Series E200·Z200:

- If a medium-sized e-chain® with an inner height of 36,5 mm is required
- For inner widths up to 75 mm
- For unsupported lengths up to 2,0 m and fill weights up to 4,0 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

When to use a different igus® Series:

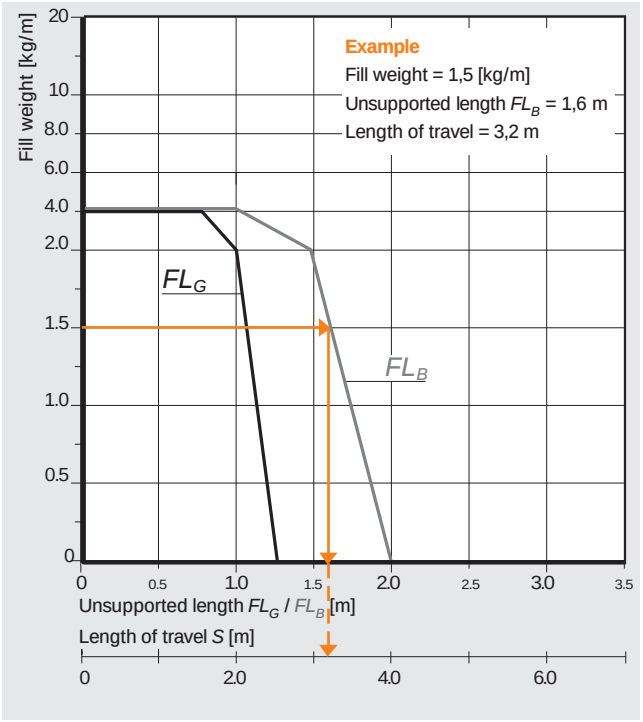
- If very high loads and long unsupported travels occur
- ▶ E2/000 Series 2600/2650/2680/2700, page 444
- If single-extrusion crossbars are required
- ▶ E2/000 Series 2600/2650/2680/2700, page 444

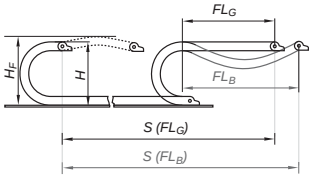

1-, 2-, or 3- moulded-in chamber system available

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E26

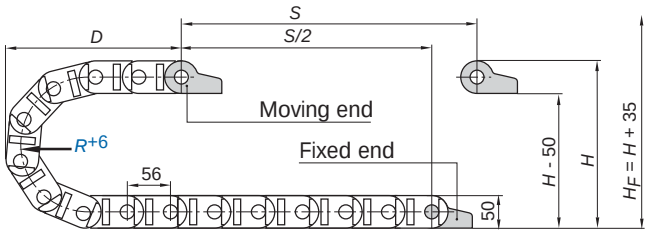
easy chain® | Series E26·Z26 | Dimensions | Unsupported





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 56 mm/link
Links/m = 18 (1.008 mm)
Chain length = $S/2 + K$

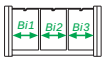
R	063	075	100	125	150	175	200	250
H^{+5}	176	200	250	300	350	400	450	550
D	172	184	209	234	259	284	309	359
K	310	350	430	505	585	665	745	900

The required clearance height: $H_F = H + 35$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series E26 | Split crossbar along outer radius | 1 / 2 / 3- chamber system
Series Z26 | Split crossbar along inner radius | 1 / 2 / 3- chamber system

Chamber system	Standard	Split crossbar along outer radius	Split crossbar along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
1-chamber		E26.07.R.0	Z26.07.R.0	75	92	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 0,96
							
2-chamber		E26.2/45.R.0	Z26.2/45.R.0	48/48	117	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,14
							
3-chamber		E26.3/45.R.0	Z26.3/45.R.0	47/48/47	167	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,30
							

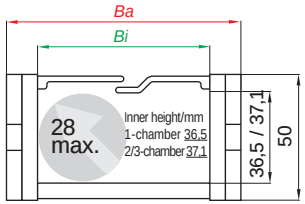
Ba: pin dimension approx. 0,3 - 0,5 mm wider!

Supplement Part No. with required radius (*R*) Example: E26.07.150.0

Order key

E26. 07. 150. 0 Version "E" Split crossbar along outer radius
Z26. 07. 150. 0 Version "Z" Split crossbar along inner radius

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



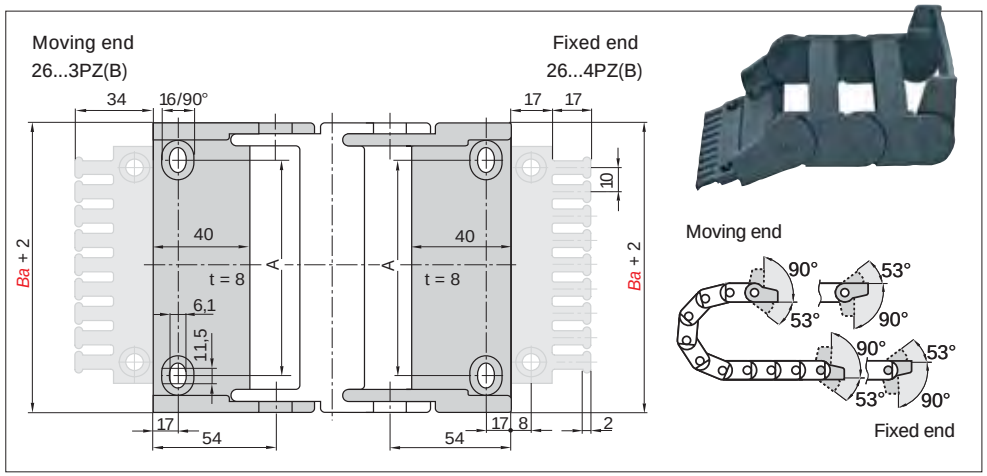
Configuration options and order keys, overview ►page 154

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



easy chain® on a 2 stage telescopic work platform

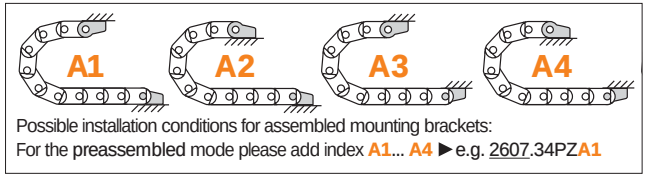
easy chain® | E26·Z26 | Mounting brackets pivoting



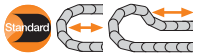
Polymer pivoting, one-piece | Standard | Universal for e-chains®
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Full set **with** tiewrap plate + **10 cable tiewraps**	Dim. A [mm]	Number of teeth
07. ▶	2607.34PZB	2607.34PZ	2607.34PZK1	55	7
2/45. ▶	2610.34PZB	2610.34PZ	2610.34PZK1	80	10
3/45. ▶	2615.34PZB	2615.34PZ	2615.34PZK1	130	15

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 2607.34PZA1



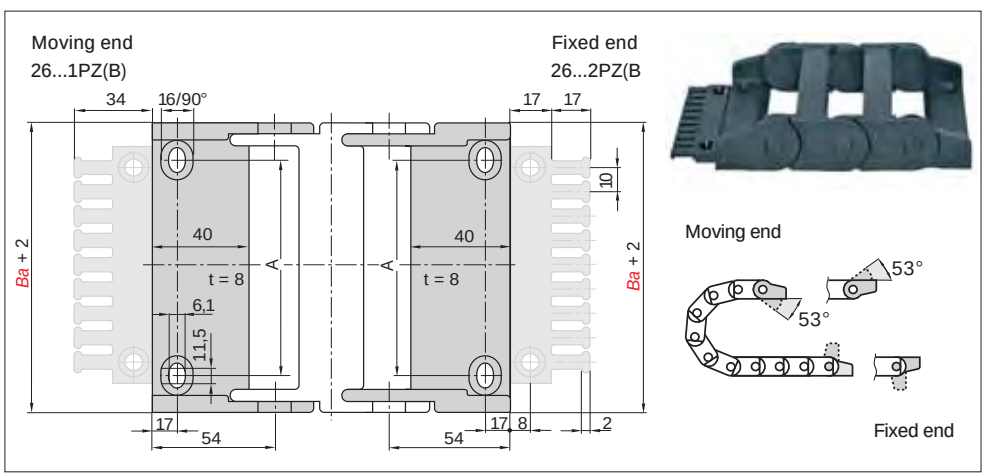
- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Corrosion-resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end

Part No. structure
2607.34 PZ A2
A...must be indicated on preassembled configurations
With integrated strain relief tiewrap plates
Full set = 34
Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
2607.3 PZ A2 (preass. + tiewrap plate)
Mounting bracket Fixed end
2607.4PZ A2 (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

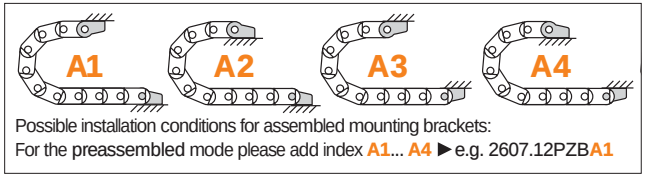
easy chain® | E26·Z26 | Mounting brackets locking



Polymer locking | Universal for e-chains®
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Full set **with** tiewrap plate + **10 cable tiewraps**	Dim. A [mm]	Number of teeth
07. ▶	2607.12PZB	2607.12PZ	2607.12PZK1	55	7
2/45. ▶	2610.12PZB	2610.12PZ	2610.12PZK1	80	10
3/45. ▶	2615.12PZB	2615.12PZ	2615.12PZK1	130	15

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 2607.12PZBA1

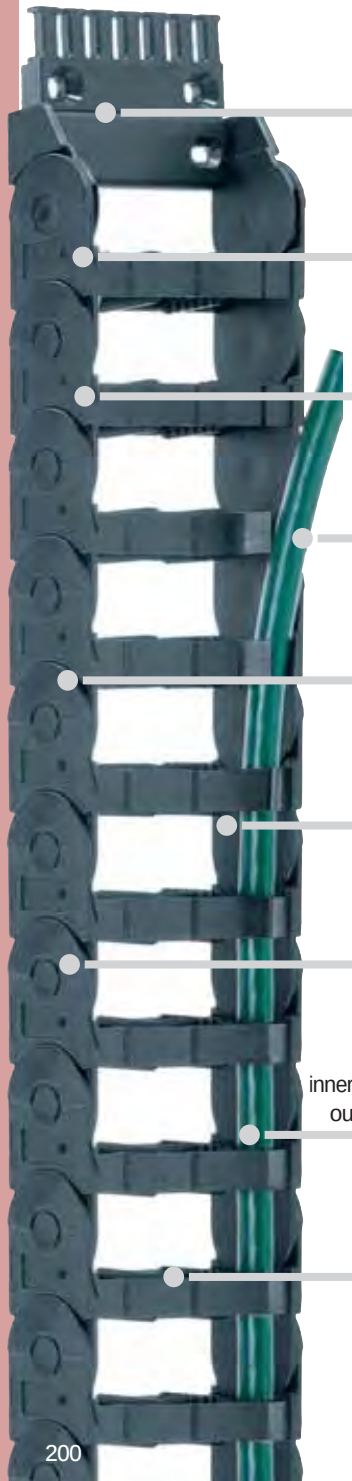


- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure
2607.12 PZB A1
A...must be indicated on preassembled configurations
Strain relief with chainfix tiewrap plates
Full set pivoting = 12
Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
2607. 1 PZB A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
2607. 2 PZB A1 (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148



Universal:
Mounting bracket with strain relief option

Cleanroom:
Suitable for clean-room applications

Cost-effective:
Low price with one-piece design

Save time:
Simply press cables in

Flexible:
Torsional motions possible

Cable-friendly:
Cable conserving interior

Clean:
Dirt-repellent exterior

Rapid installation:
easy to fill from the inner radius (Version "Z") or outer radius (Version "E")

Secure:
Interior separation with shelves possible

Simply press cables in, large inner height

When to use Series E300·Z300:

- If a medium-sized e-chain® with an inner height of 48,5 mm is required
- For inner widths up to 75 mm
- For unsupported lengths up to 2,25 m and fill weights up to 8,0 kg/m
- If easy filling without opening and closing of lids is required
- If smooth running is required
- If a lightweight and cost-effective e-chain® is required

When to use a different igus® Series:

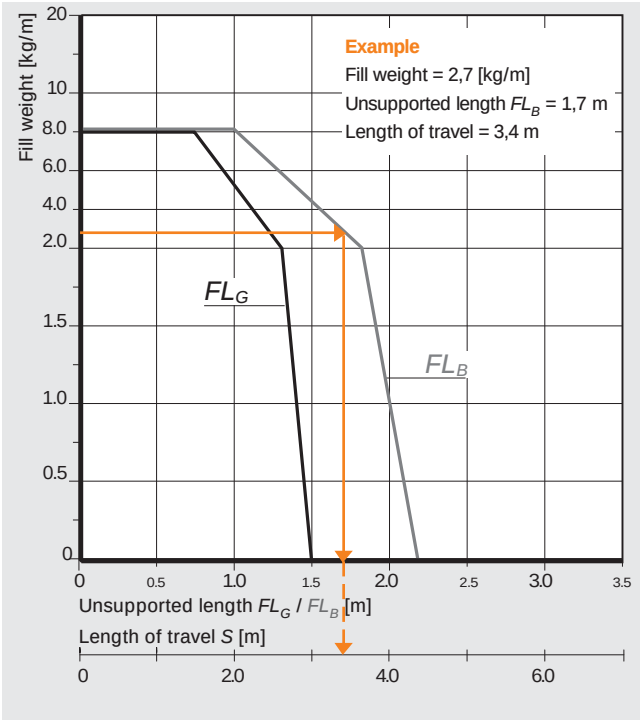
- If very high loads and long unsupported travels occur
- ▶ E2/000 Series 3400/3450/3480/3500, page 462
- If single-extrusion crossbars are required
- ▶ E2/000 Series 3400/3450/3480/3500, page 462

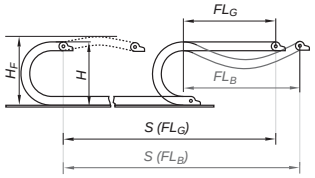


1-, 2- or 3- moulded-in chamber system available

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

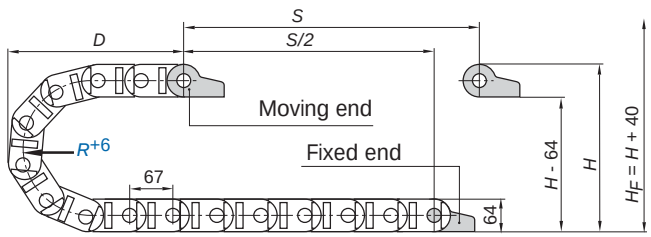
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E300





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 152

Pitch = 67 mm/link
Links/m = 15 (1.005 mm)
Chain length = $S/2 + K$

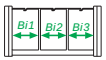
R	075	100	125	150	200	250	300
H^{+5}	214	264	314	364	464	564	664
D	208	233	258	283	333	383	433
K	370	450	530	610	765	920	1080

The required clearance height: $H_F = H + 40$ mm (with 2,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series E300 | Split crossbar along outer radius | 1 / 2 / 3- chamber system
Series Z300 | Split crossbar along inner radius | 1 / 2 / 3- chamber system

Chamber system	Standard	Split crossbar along outer radius	Split crossbar along inner radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
1-chamber		E300.075.*R*.0	Z300.075.*R*.0	75	95	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,60
							
2-chamber		E300.2/45.*R*.0	Z300.2/45.*R*.0	48/48	120	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,78
							
3-chamber		E300.3/45.*R*.0	Z300.3/45.*R*.0	47/46/47	170	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,92
							

Ba: pin dimension approx. 0,3 - 0,5 mm wider!

Supplement Part No. with required radius (*R*) Example: E300.075.150.0

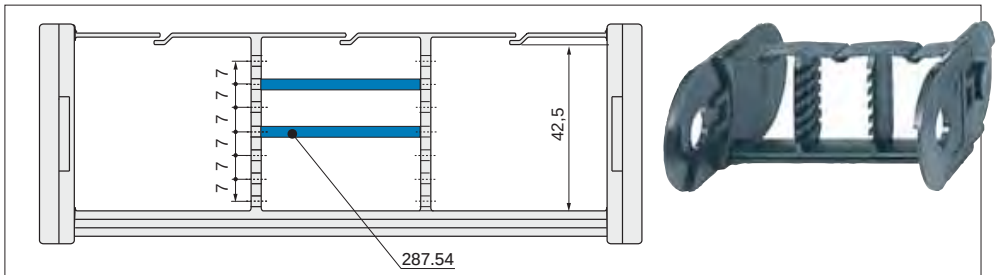
Order key

E300. 075. 150. 0 Version "E" Split crossbar along outer radius
Z300. 075. 150. 0 Version "Z" Split crossbar along inner radius

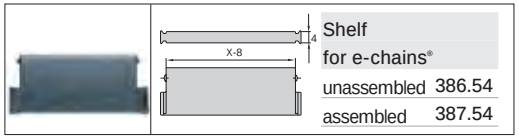
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Configuration options and order keys, overview ►page 154

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



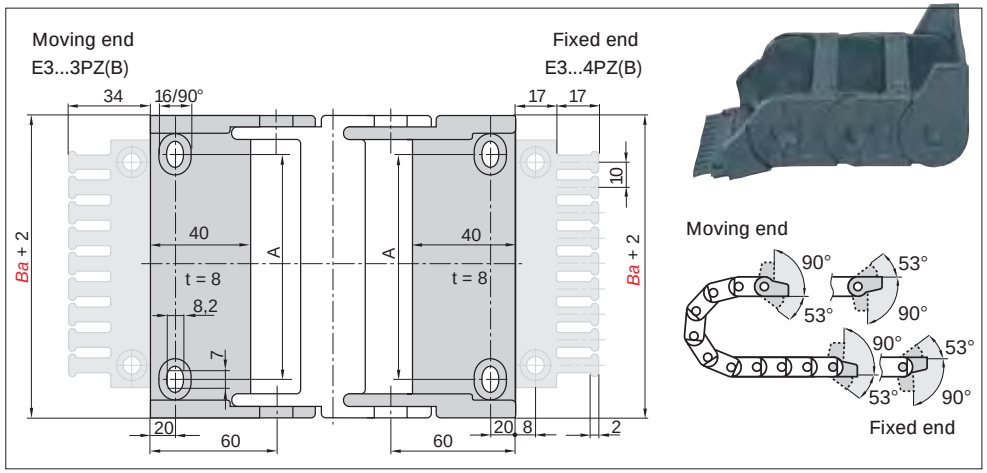
Shelves - in the standard configuration separators are assembled every 2nd e-chain® link



Shelf for e-chains®	
unassembled	386.54
assembled	387.54

Optional shelving for Series E300.3/45 · Z300.3/45

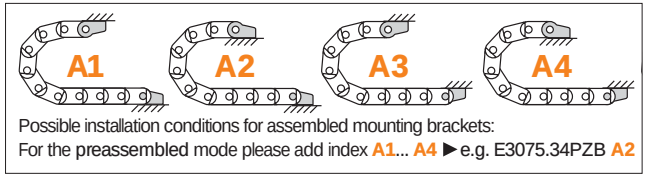
Shelving enables subdivision of the inner space of the e-chain® Series E300.3/45 and Z300.3/45. This option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 7 different heights (in 7 mm increments).



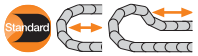
Polymer pivoting, one-piece | Standard | Universal for e-chains®
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Full set **with** tiewrap plate + **10 cable tiewraps**	Dim. A [mm]	Number of teeth
.075. ▶	E3075.34PZB	E3075.34PZ	E3075.34PZK1	53	7
.2/45. ▶	E3100.34PZB	E3100.34PZ	E3100.34PZK1	78	10
.3/45. ▶	E3150.34PZB	E3150.34PZ	E3150.34PZK1	128	15

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

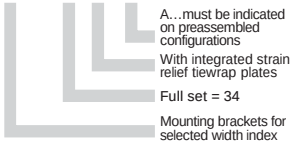


Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. E3075.34PZB A2



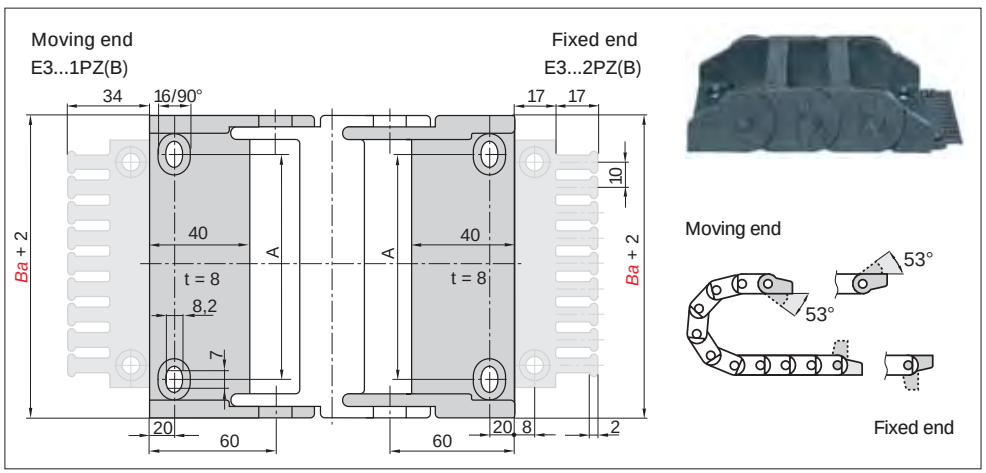
- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Corrosion-resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end

Part No. structure
E3075.34 PZB A2



Single-part order
Mounting bracket Moving end
E3075.3 PZB A2 (preass. + tiewrap plate)
Mounting bracket Fixed end
E3075.4PZB A2 (preass. + tiewrap plate)

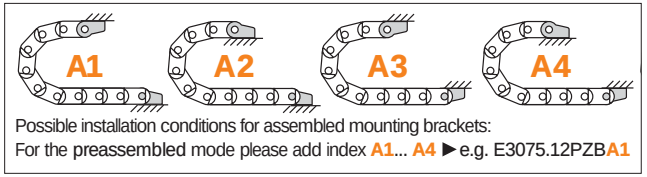
Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148



Polymer locking | Universal for e-chains®
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Full set **with** tiewrap plate + **10 cable tiewraps**	Dim. A [mm]	Number of teeth
.075. ▶	E3075.12PZB	E3075.12PZ	E3075.12PZK1	53	7
.2/45. ▶	E3100.12PZB	E3100.12PZ	E3100.12PZK1	78	10
.3/45. ▶	E3150.12PZB	E3150.12PZ	E3150.12PZK1	128	15

Material mounting bracket- igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

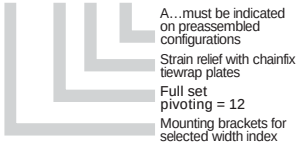


Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. E3075.12PZB A1



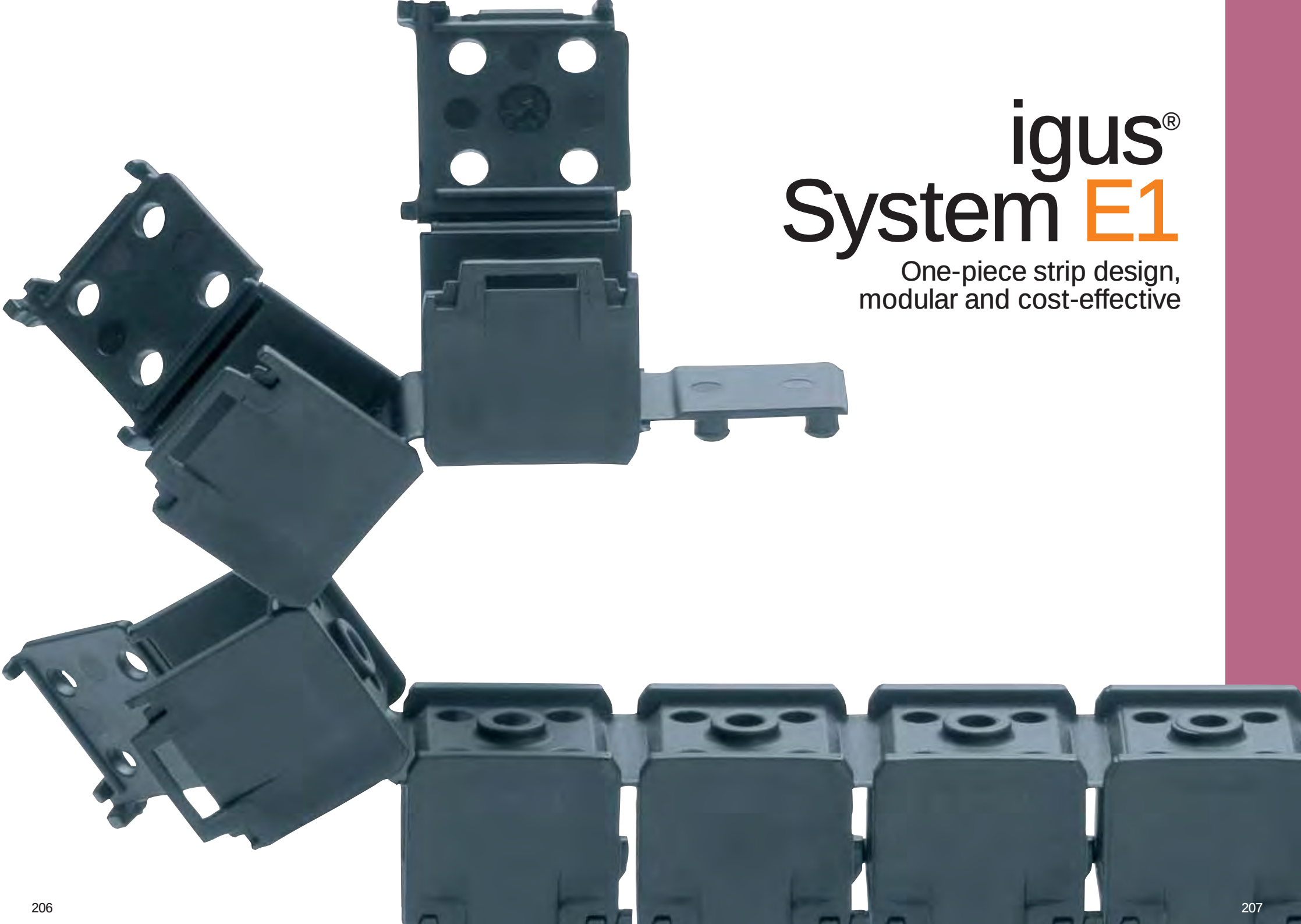
- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure
E3075.12 PZB A1



Single-part order
Mounting bracket Moving end
E3075. 1 PZB A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
E3075. 2 PZB A1 (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148



igus® System E1

One-piece strip design, modular and cost-effective

Modular, one-piece strip design for simple applications - E1

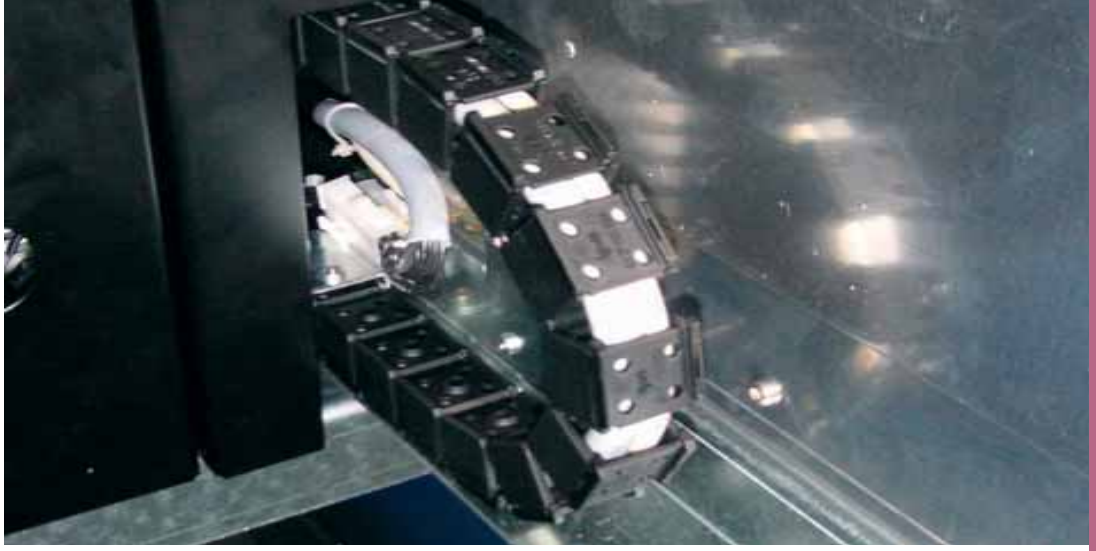
E1: e-chain® modular, 1-piece strip designed for simple applications - The E1 design brings the benefits of an e-chain® to applications, where this solution previously was too expensive. E1 is more economic for higher volumes, quicker to assemble and still offers great control and protection for moving cables. The igus®-System E1 is very cost effective for high volumes and is especially ideal for automotive applications

Typical industries and applications

- Automotive
- Office solutions and technology
- Automation
- Electric equipment
- Machine-building

UL94-V2 classification





Harnessed igus® System E1 in a bottle deposit machine



Series E1.17.021.028 in an electric wheelchair - cably supply on the scissors lifting system



The igus®-System E1 is very cost-effective at high quantities and ideal for automotive applications

Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Segment length [mm]	Page
 e-chain® on one strip - snap-open along outer radius							
E1.10.013.	10	13	16,5	15,5	18	200	212
E1.17.021.	17	21	26	25	28	255	214
E1.17.031.	17	31	36	25	28	204	214
E1.17.044.	17	44	49	25	28	255	214
E1.18.015.	18	15	20	26	28	127,5	216
E1.20.015.	20	15	22	27	28	250	218

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



System E1 e-chain® on one strip - snap-open along outer radius

1


System E1 - e-chain® on one strip - easy to shorten…

2


.. and to lengthen

Technical Data

Material - permitted temperature °C, igumid NB	Application-oriented, upon request
Flammability class igumid NB	VDE 0304 IIC UL94-V2

You can find an assembly video on the web ▶www.igus.eu/eu/video



Economical: lightweight and cost-effective

Easy to lengthen: strips can simply be snapped together

Easy to shorten: separation at each segment

Save time: snap-open lids for easy filling

Save space: compact design with smooth outer contour

Variable: different materials and colors available upon request



Practical: easy fastening through strip bore each link

e-chain® on one strip, mimimum size

When to use Series E1.10:

- If a very small e-chain® with an inner height of 5 mm is required
- If simple filling is required
- If an economical e-chain® is required
- If small assembly cost is required
- If a simple solution is required
- For lower duty or cycle life

When to use a different igus® Series:

- High load applications
- ▶ Series E045 easy chain®, page 164
- ▶ Series 07 zipper, page 242
- High cycle applications
- ▶ Series E045 easy chain®, page 164
- ▶ Series 07 zipper, page 242

UL94-V2 classification

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶www.igus.eu/eu/E1.10

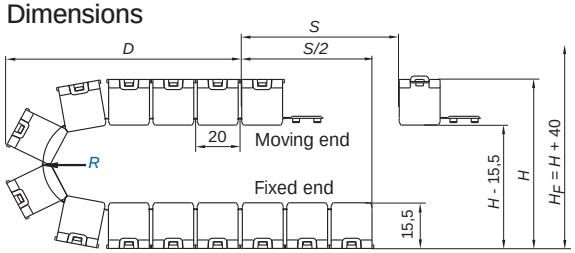


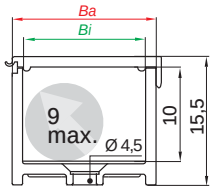
Series E1.10 | snap-open along outer radius

snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/segment]
E1.10.013.R.0	13	16,5	| 018 |	≈ 0,0164

Supplement Part No. with required radius (R) Example: E1.10.13.018.0

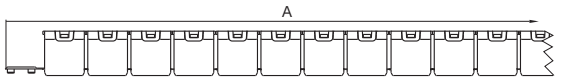
Dimensions





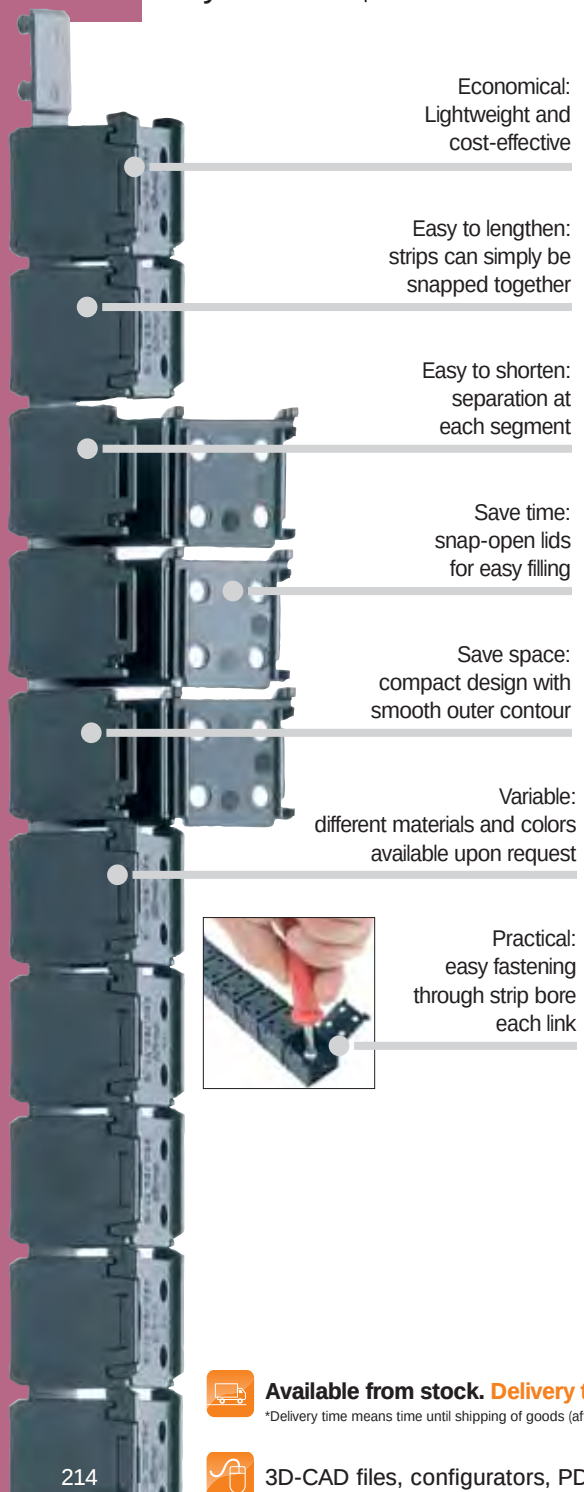
Inner height 10 mm
Pitch 20 mm/link
Chain length $S/2 + K$

Series	Segment length Dim. A [mm]	No. of links per segment	Number of segments/m
E1.10.013.R.0	200	10	5 (1000 mm)



R	018
H	62
D	66
K	100

Required clearance height: $H_F = H + 40$ mm
More radii upon request,
please consult igus® for delivery time!



Economical:
Lightweight and cost-effective

Easy to lengthen:
strips can simply be snapped together

Easy to shorten:
separation at each segment

Save time:
snap-open lids for easy filling

Save space:
compact design with smooth outer contour

Variable:
different materials and colors available upon request

Practical:
easy fastening through strip bore each link

e-chain® on one strip, small size

When to use Series E1.17:

- If a very small e-chain® with an inner height of 17 mm is required
- If simple filling is required
- If an economical e-chain® is required
- If small assembly cost is required
- If a simple solution is required
- For lower duty or cycle life

When to use a different igus® Series:

- High load applications
- ► Series E08 easy chain®, page 176
- ► Series 15 zipper, page 260
- High cycle applications
- ► Series E08 easy chain®, page 176
- ► Series 15 zipper, page 260

UL94-V2 classification

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ►www.igus.eu/eu/E1.17

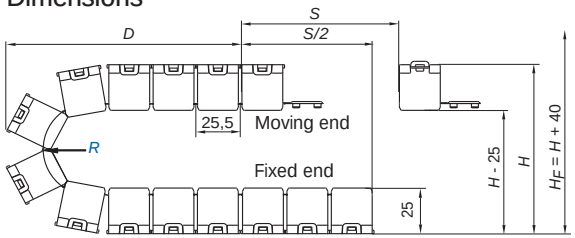


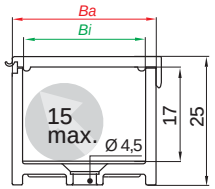
Series E1.17 | snap-open along outer radius

snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/segment]
E1.17.021.R.0	21	26	| 028 |	≈ 0,0478
E1.17.031.R.0	31	36	| 028 |	≈ 0,0460
E1.17.044.R.0	44	49	| 028 |	≈ 0,0695

Supplement Part No. with required radius (R) Example: E1.17.021.028.0

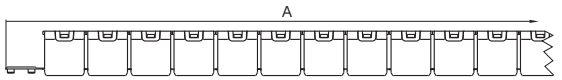
Dimensions





Inner height 17 mm
Pitch 25,5 mm/link
Chain length $S/2 + K$

Series	Segment length Dim. A [mm]	No. of links per segment	Number of segments/m
E1.17.021.R.0	255	10	4 (1020 mm)
E1.17.031.R.0	204	8	5 (1020 mm)
E1.17.044.R.0	255	10	4 (1020 mm)



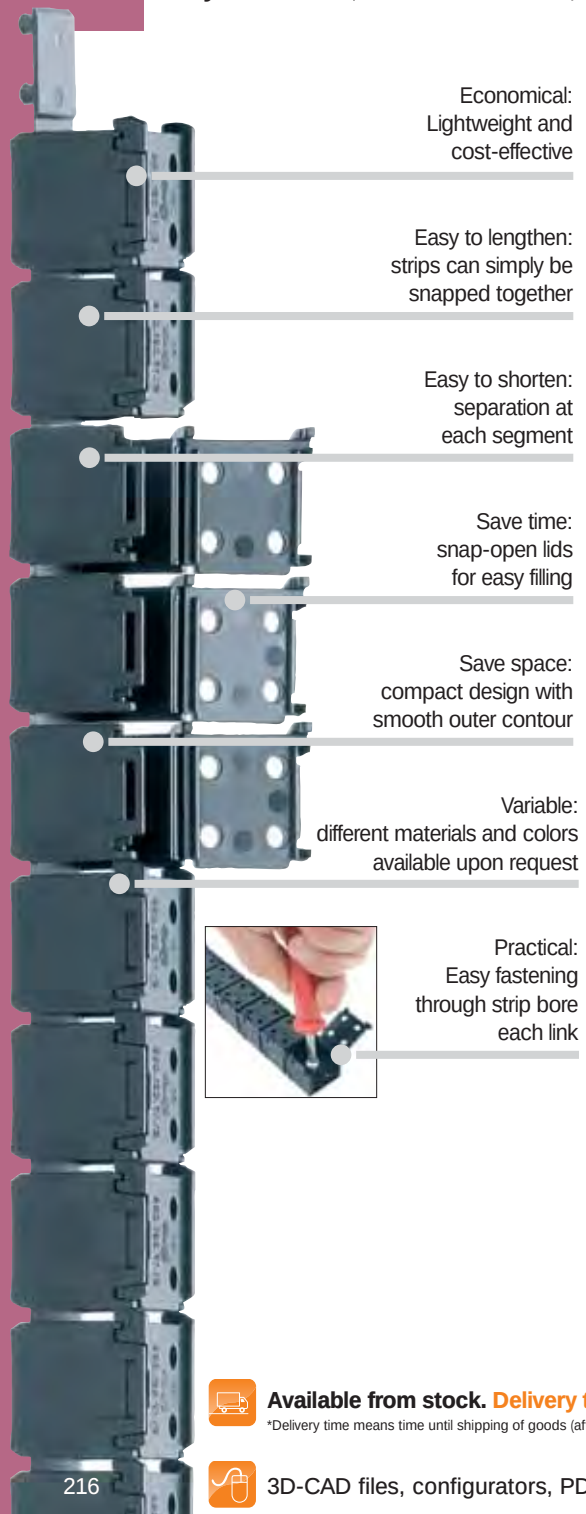
R	028
H	92
D	76
K	120

Required clearance height: $H_F = H + 40$ mm
More radii upon request,
please consult igus® for delivery time!

Mounting brackets for Series E1.17.021



Compact, universal mounting bracket for E1.17.021: Part No. E1.170.021.TS - easy attachment



Economical:
Lightweight and cost-effective

Easy to lengthen:
strips can simply be snapped together

Easy to shorten:
separation at each segment

Save time:
snap-open lids for easy filling

Save space:
compact design with smooth outer contour

Variable:
different materials and colors available upon request

Practical:
Easy fastening through strip bore each link

e-chain® on one strip, small size

When to use Series E1.18:

- If a very small e-chain® with an inner height of 18 mm is required
- If simple filling is required
- If an economical e-chain® is required
- If small assembly cost is required
- If a simple solution is required
- For lower duty or cycle life

When to use a different igus® Series:

- High load applications
- ▶ Series E14 easy chain®, page 180
- ▶ Series 15 zipper, page 260
- High cycle applications
- ▶ Series E14 easy chain®, page 180
- ▶ Series 15 zipper, page 260

UL94-V2 classification

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶www.igus.eu/eu/E1.18

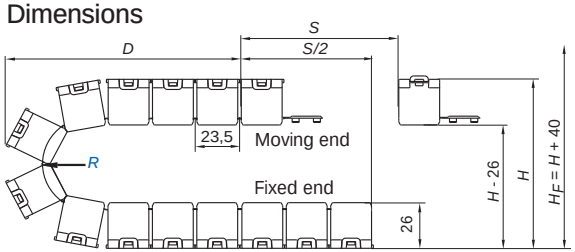


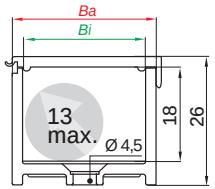
Series E1.18 | snap-open along outer radius

snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight kg/Segment
E1.18.015.R.0	15	20	028	≈ 0,0169

Supplement Part No. with required radius (R) Example: E1.18.15.028.0

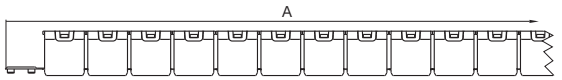
Dimensions





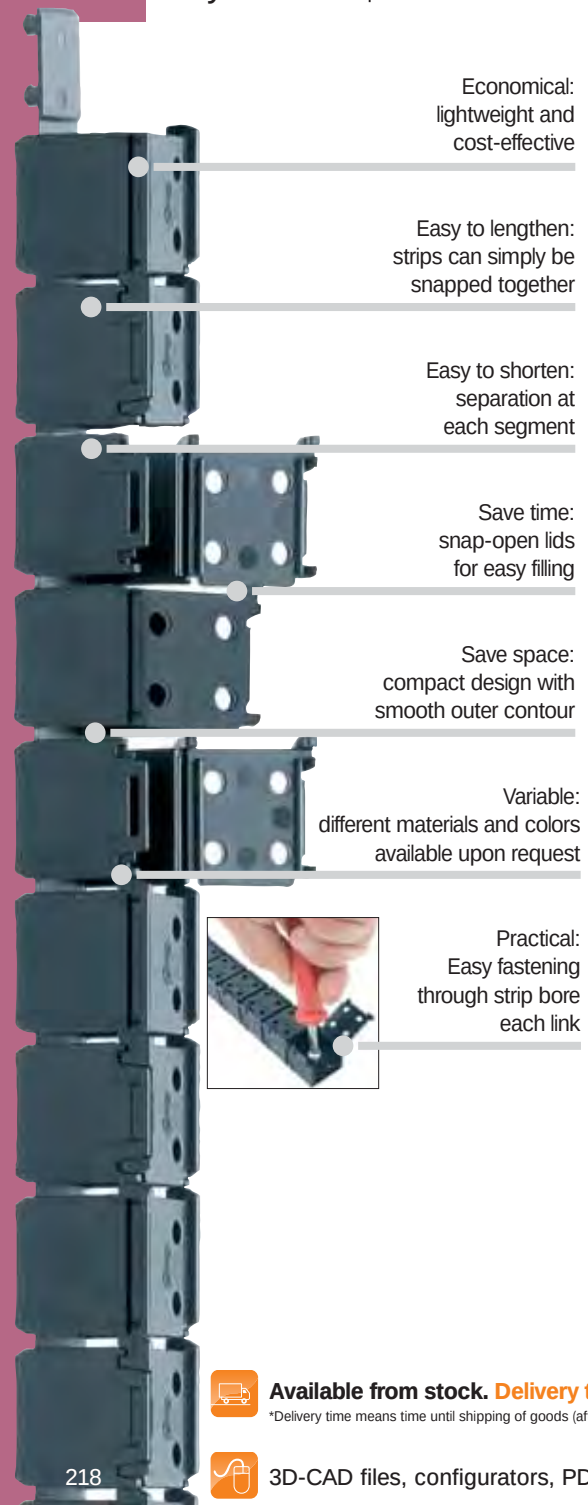
Inner height 18 mm
Pitch 25,25 mm/link
Chain length $S/2 + K$

Series	Segment length Dim. A [mm]	No. of links per segment	Number of segments/m
E1.18.015.R.0	101	4	10 (1010 mm)



R	028
H	92
D	76
K	120

Required clearance height: $H_F = H + 40$ mm
More radii upon request,
please consult igus® for delivery time!



Economical: lightweight and cost-effective

Easy to lengthen: strips can simply be snapped together

Easy to shorten: separation at each segment

Save time: snap-open lids for easy filling

Save space: compact design with smooth outer contour

Variable: different materials and colors available upon request

Practical: Easy fastening through strip bore each link

e-chain® on one strip, small size

When to use Series E1.20:

- If a very small e-chain® with an inner height of 20 mm is required
- If simple filling is required
- If an economical e-chain® is required
- If small assembly cost is required
- If a simple solution is required
- For lower duty or cycle life

When to use a different igus® Series:

- High load applications
- ▶ Series E14 easy chain®, page 180
- ▶ Series 15 zipper, page 260
- High cycle applications
- ▶ Series E14 easy chain®, page 180
- ▶ Series 15 zipper, page 260

UL94-V2 classification

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶www.igus.eu/eu/E1.20

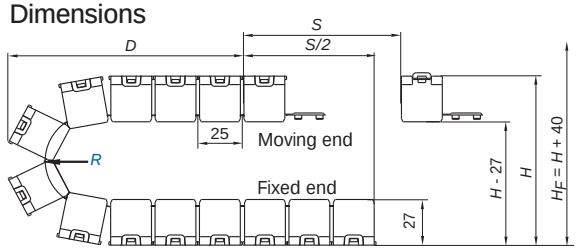


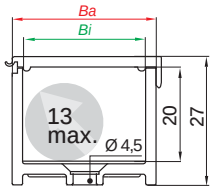
Series E1.20 | snap-open along outer radius | Lids to open reciprocally

snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/Segment]
E1.20.015.R.0	15	22	| 028 |	≈ 0,0443

Supplement Part No. with required radius (R) Example: E1.18.15.028.0

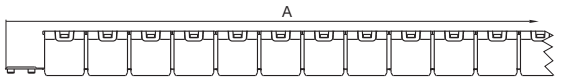
Dimensions





Inner height 20 mm
Pitch 25 mm/link
Chain length $S/2 + K$

Series	Segment length Dim. A [mm]	No. of links per segment	Number of segments/m
E1.20.015.R.0	250	10	4 (1000 mm)



R	028
H	92
D	76
K	120

Required clearance height: $H_F = H + 40$ mm
More radii upon request,
please consult igus® for delivery time!



igus®
snapchain

Fit cable assemblies quickly in bunches

fit cable assemblies quickly in bunches - snapchain

igus® snapchain economical e-chains® for simple fillings. snapchains are easy to assemble and cost-effective. If an easy solution for minor number of travels is required.

Typical industries and applications
- Switch cubicle construction
- Electrical equipment
- Computer cubicles
- Office furniture
- Wherever cables are moved infrequently

iF product design award
2002 igus® snapchain





Series	Length loops [mm]	Pitch [mm]	Bending radius R [mm]	Page
				
TE14.50	50	30,5	028 - 125	224
TE26.120	120	56	063 - 200	224
TZ14.50	50	30,5	028 - 125	226
TZ26.120	120	56	063 - 200	226

Version TE -
Loops to be opened along the outer radius

Version TZ -
Loops to be opened along the inner radius

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Technical Data

Material - permitted temperature °C, igumid NB	-40° up to +80° C
Flammability class, igumid NB	VDE 0304 IIC UL94-V2



Save time:
Fit cable assemblies quickly in bunches

Flexible:
Adjust and change loops at any time

Opening principle:
Version TE14 can be opened along the outer and TZ14 can be opened along the inner radius

Economical:
Favorable alternative to complex hinged cable trays

Simple:
Well-suited to short lengths, ideally 5 - 10 links

Flexible:
Can be bent in 1 or 2 directions (RBR)

Fit cable assemblies quickly in bunches

When to use Series TE14·TZ14:

- If simple filling is required
- If an economical e-chain® is required
- If small assembly cost is required
- If a simple solution is required
- For lower duty or cycle life

When to use a different igus® Series:

- High load applications
  - ▶ easy chain®
  - ▶ zipper
- High cycle applications
  - ▶ easy chain®
  - ▶ zipper

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



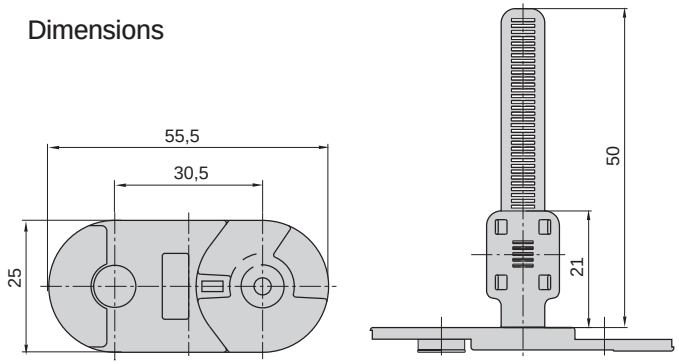
Series TE14 | Loops to be opened along the outer radius
Series TZ14 | Loops to be opened along the inner radius

to be opened along the outer radius	to be opened along the inner radius	*R* Bending radii [mm]	Weight [kg/m]
TE14.050.*R*.0*	TZ14 050.*R*.0	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,15

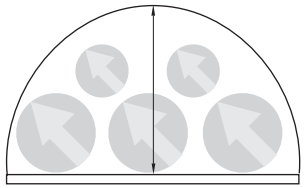
*Available as RBR (Reverse bending radius) Part No. TE26.120.Radius/Radius

Supplement Part No. with required radius (*R*) Example: TE26.120.100.0

Dimensions



Pitch	30,5 mm/link
Links/m	33 (1006,5 mm)
Chain length	$^{S}/_{2} + K$



Cable package max.: 18 mm



Save time:
Fit cable assemblies quickly in bunches

Flexible:
Adjust and change loops at any time

Opening principle:
Version TE26 can be opened along the outer and TZ26 can be opened along the inner radius

Economical:
Favorable alternative to complex hinged cable trays

Simple:
Well-suited to short lengths, ideally 5 - 10 links

Flexible:
Can be bent in 1 or 2 directions (RBR)

Fit cable assemblies quickly in bunches

When to use Series TE26·TZ26:

- If simple filling is required
- If an economical e-chain® is required
- If small assembly cost is required
- If a simple solution is required
- For lower duty or cycle life

When to use a different igus® Series:

- High load applications
  - ▶ easy chain®
  - ▶ zipper
- High cycle applications
  - ▶ easy chain®
  - ▶ zipper

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



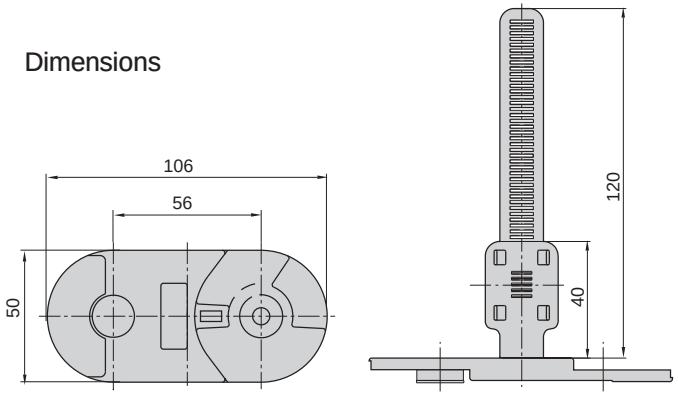
Series TE26 | Loops to be opened along the outer radius
Series TZ26 | Loops to be opened along the inner radius

to be opened along the outer radius	to be opened along the inner radius	*R* Bending radii [mm]	Weight [kg/m]
TE26.120.*R*.0*	TZ26.120.*R*.0	| 063 | 075 | 100 | 125 | 150 | 200 |	≈ 0,43

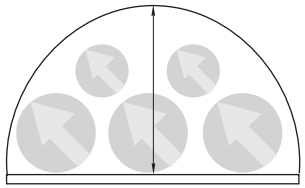
*Available as RBR (Reverse bending radius) Part No. TE26.120.Radius/Radius

Supplement Part No. with required radius (*R*) Example: TE26.120.100.0

Dimensions



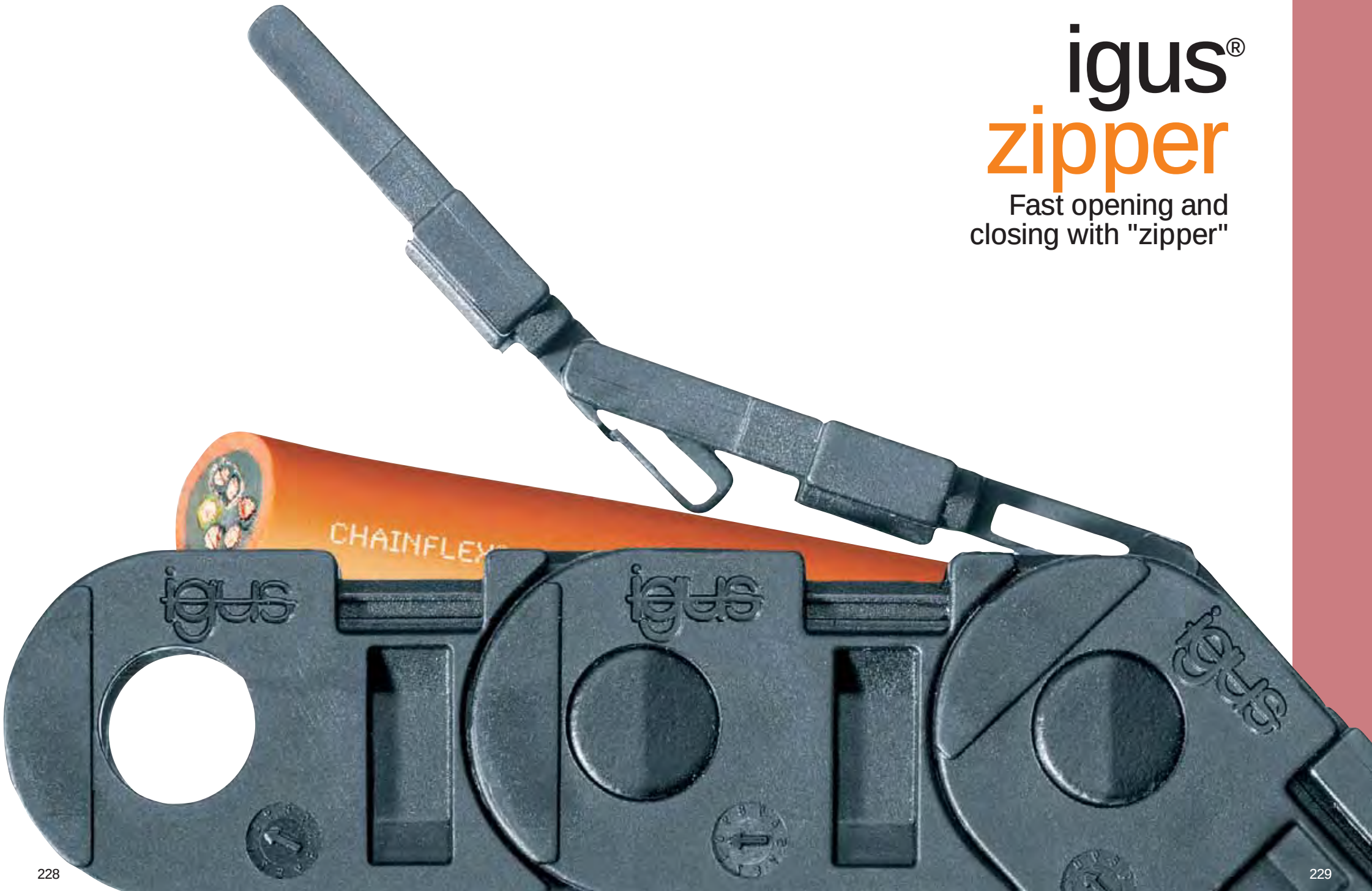
Pitch	56 mm/link
Links/m	18 (1008 mm)
Chain length	$^{S}/_{2} + K$



Cable package max.: 47 mm

igus®
zipper

Fast opening and
closing with "zipper"



Zip fastening e-chains® e-tubes - zipper

zipper e-chains® convince in practicality and performance. The "zipper" function makes them a very useful product to reduce assembly time. The small pitch, the tough-elastic zipper-band, and the sturdy link work well in high-acceleration environments. The zipper Series is one of the most popular e-chain® Series in demanding applications.

- zipper-like design for quick opening and closing of lids
- zipper lids can be separated and joined at each chain link
- Small pitch for low noise and smooth operation
- High accelerations: 100 m/s² and more are possible
- Interior separation possible for larger versions (Series 09,15, 17)

Typical industries and applications

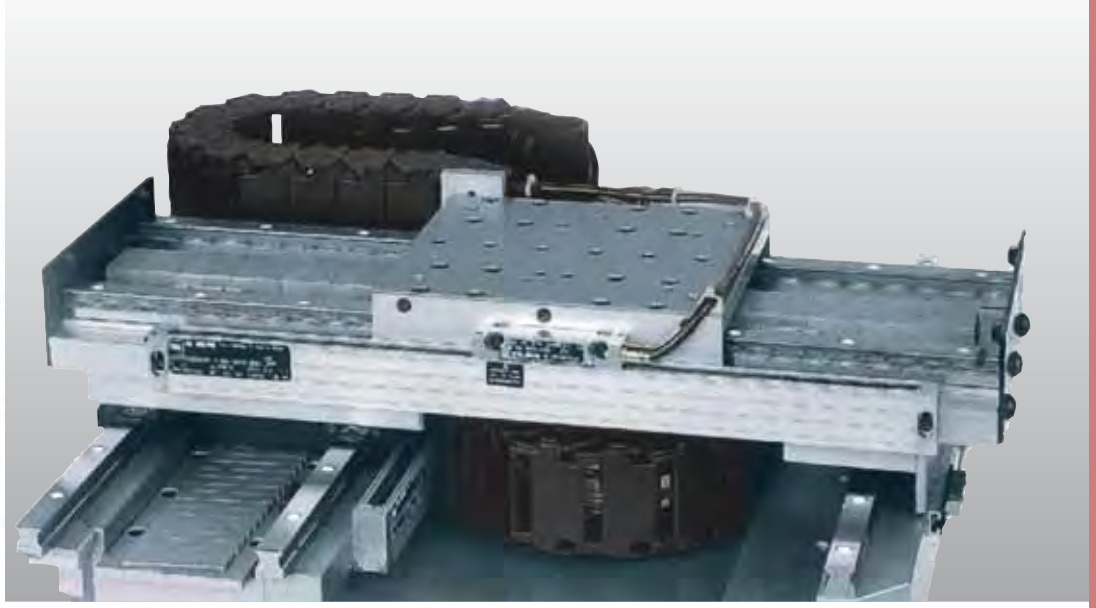
- Pick & place robots
- Semi-conductor machines
- Linear motors, actuators
- Measuring equipment
- Machine tools (zipper e-tube)

Clean-Room — Cleanroom Class 1 (ISO class 3) for zipper Series 15, tested by the Dryden Engineering Company, California

58 dB(A) tested in igus® lab, v = 1,0 m/s unsupported, Series 09.50.028.0

UL94-V0 classifications upon request

EX — Electrically conductive ESD/ATEX versions several Series available from stock



igus® e-chain® Series 17 on an X-Y table. Acceleration: 100 m/s²



igus® e-chains® zipper Series 15 in automatic equipment - reduce assembly time



Series 15 with acceleration of 100 m/s² on pick-and-place robots, low noise

iF product design award
2002 igus® Series R09
1989 igus® Series 15

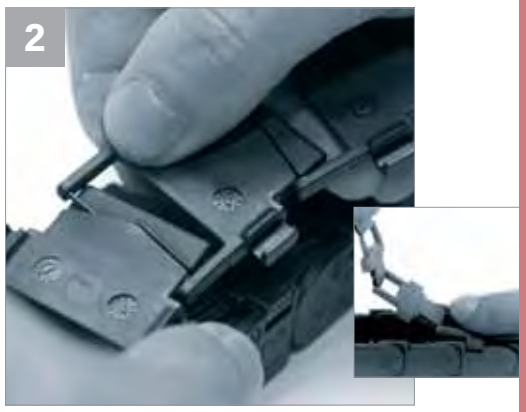
Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	Page
 **zipper - two-piece e-chains®** zip-open along outer radius							
047	9,0	10 - 16	16,0 - 22,0	12,5	18 - 38	0,40	238
07	10,3	6 - 64	12,5 - 71,0	15,0	18 - 48	0,55	242
09	15,0	10 - 50	18,2 - 58,2	19,3	28 - 48	1,00	250
15	17,0	15 - 100	26,0 - 113,0	24,0	38 - 180	1,20	260
17	32,0	15 - 100	25,5 - 113,0	39,0	63 - 125	1,00	276
 **zipper - two-piece e-tubes** Protection against dirt and chips, zip-open along outer radius							
R07	10,3	10 - 50	16,5 - 57,0	15,0	38 - 48	0,55	246
R09	15,0	10 - 50	18,2 - 58,2	19,3	48 - 100	1,00	256
R15	17,0	25 - 80	36,0 - 94,0	24,0	63 - 180	1,20	268
R17	32,0	15 - 63	26,0 - 74	39,0	63 - 125	1,20	282

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Push and click



Snap lids together, position, push and snap



Simple opening and closing - all lids fit like a "zipper"



For separating release side link, then twist and pull apart

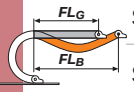
Technical Data, overview ►page 234

e-chain® links as single parts, overview ►page 235

Configuration options and order keys, overview ►page 236

Assembly video available online at ►www.igus.eu/eu/zipper_assembly

Technical Data - zipper



Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material lower part - permitted temperature °C, igumid G	-40° up to +120° C
Material lid - permitted temperature °C, igumid TE	-40° up to +70° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

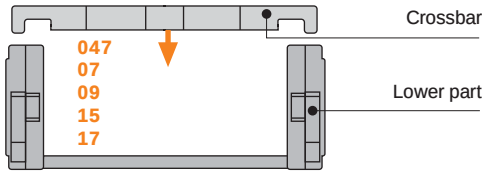
FL_G = with straight upper run FL_B = with permitted sag

Installation methods overview, maximum travels - zipper

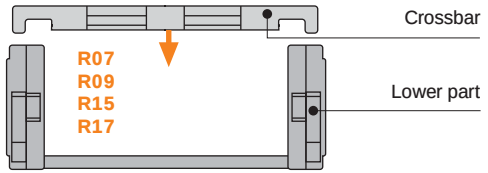
Series e-chain® / e-tube	Unsupported application	Vertical hanging	Vertical standing	Side mounted unsupported
047	≤ 0,40 m	upon request	upon request	upon request
07	≤ 0,55 m	upon request	upon request	upon request
09	≤ 1,0 m	upon request	upon request	upon request
15	≤ 1,2 m	upon request	upon request	upon request
17	≤ 1,0 m	upon request	upon request	upon request
R07	≤ 0,55 m	upon request	upon request	upon request
R09	≤ 1,0 m	upon request	upon request	upon request
R15	≤ 1,2 m	upon request	upon request	upon request
R17	≤ 1,0 m	upon request	upon request	upon request

Part No. two-piece e-chain® links as single parts - zipper

e-chains® - zip-open along outer radius



e-tubes - zip-open along outer radius



e-chain® Series	e-chain® lid	e-chain® lower parts**	e-tube Series	e-tube lid	e-tube lower parts**
047	0471.*Bi*	047.*Bi*00.*R*	–	–	–
07	071.*Bi*	07.*Bi*00.*R*	R07	095.*Bi*	R07.*Bi*00.*R*
09	071.*Bi*	09.*Bi*00.*R*	R09	095.*Bi*	R09.*Bi*00.*R*
15	150.*Bi*	15.*Bi*00.*R*	R15	155.*Bi*	R15.*Bi*00.*R*
17	150.*Bi*	17.*Bi*00.*R*	R17	155.*Bi*	R17.*Bi*00.*R*

* Lids: supplement Part No. with required width index (*Bi*) Example: 071.40

** Lower parts: supplement Part No. with required width index *(Bi)* + **00** and radius *(R)* Example: 07.4000.038

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Standard	*NC-Version - (no camber) without pretension*	*ATEX / ESD classified e-chains® Ex II 2 GD*
Part No. **Standard** e-chains®	Part No. **NC-Version** e-chains®	Part No. **ESD-Material** e-chains®
15.025.*R*.0	15.025.*R*.0.**NC**	15.025.*R*.0.**ESD**
Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® Series 15 (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 33 links	15.025.038.0
+ Mounting brackets	1 set (with integrated strain relief)	1025.34PZ
+ Interior separation	with 2 separators assembled every 2nd link	2 x 154

Order text: 1,0 m 15.025.038.0 + 1025.34PZ + 2 x 154

Order key
15.025.038.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



zipper e-chains® e.g. in automatic equipment - reduce assembly time

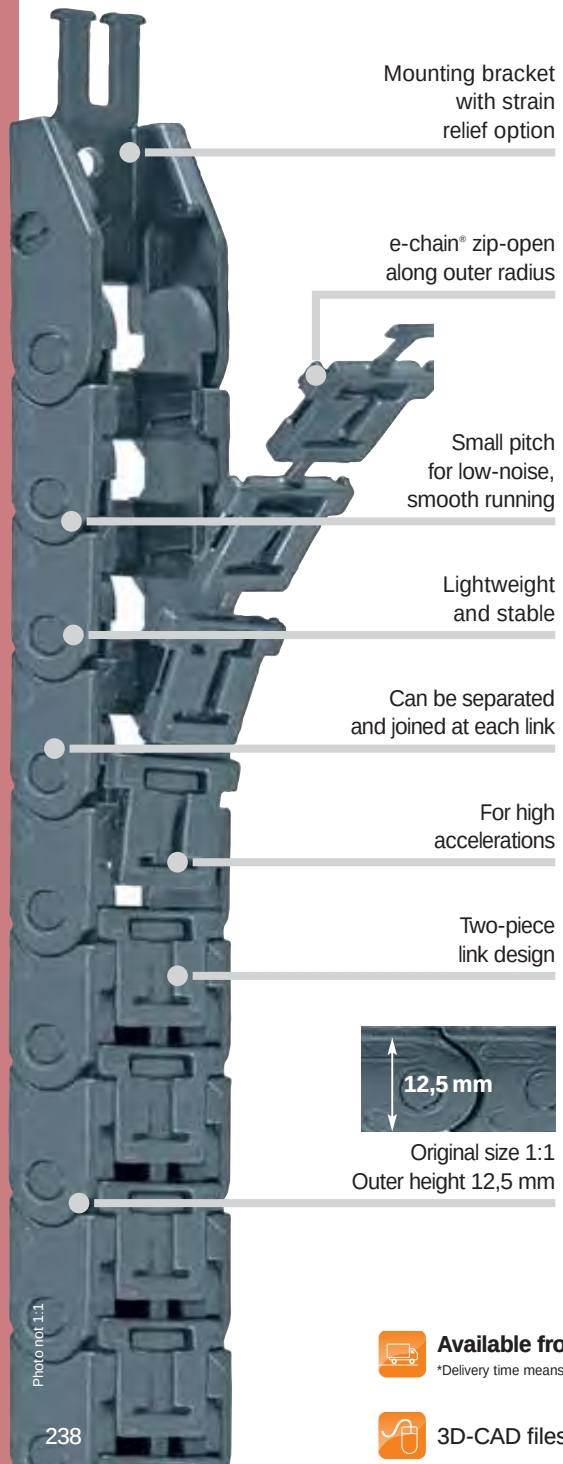


Photo not 1:1

Fast opening, small pitch, smooth running

When to use Series 047:

- If a very small e-chain® with an inner height of 9 mm and smallest bending radii are required
- For inner widths up to 16 mm
- For unsupported lengths up to 0,40 m and fill weights up to 0,25 kg/m
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

When to use a different igus® Series:

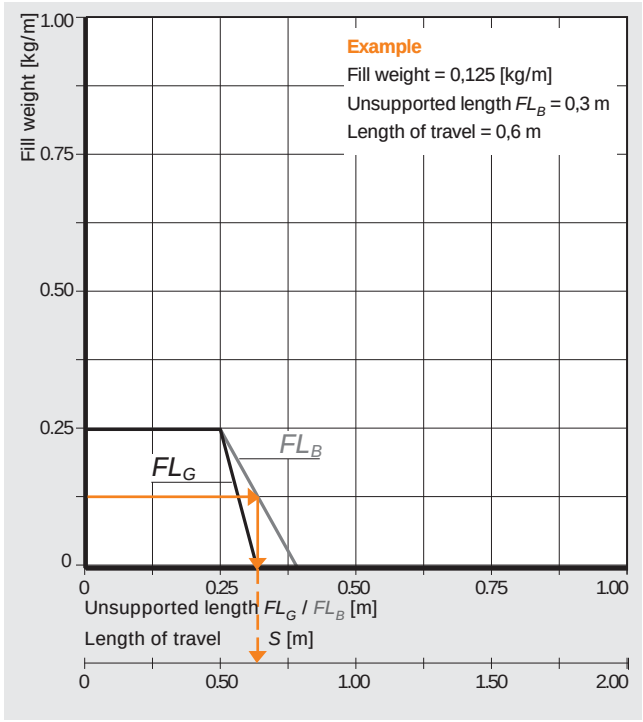
- If easy filling without opening and closing is required

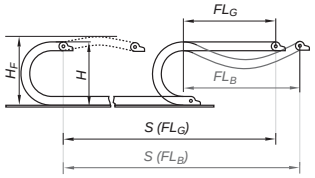
► Series E04 easy chain®, page 160

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

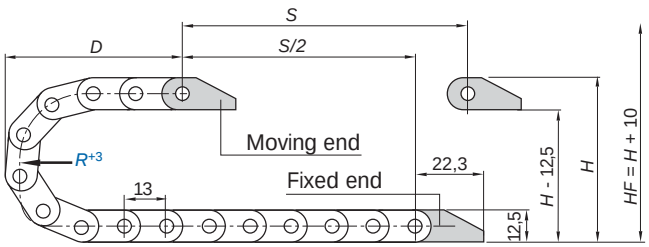
3D-CAD files, configurators, PDF ► www.igus.eu/eu/047





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 234

Pitch = 13 mm/link
Links/m = 77 (1001 mm)
Chain length = $S/2 + K$

R	018	028	038
H	48,5	68,5	88,5
D	44	54	64
K	85	115	150

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"

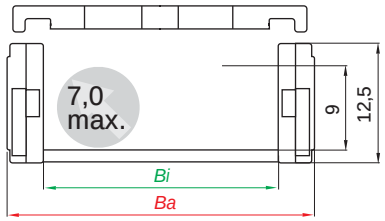


e-chain® | Series 047 | zip-open along outer radius

e-chain® zip-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
047. 10 .R.0	10	16	| 018 | 028 | 038 |	≈ 0,10
047. 16 .R.0	16	22	| 018 | 028 | 038 |	≈ 0,11

Supplement Part No. with required radius (*R*) Example: 047.10.038.0

Order key
047. 10. 038. 0 e-chain®
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



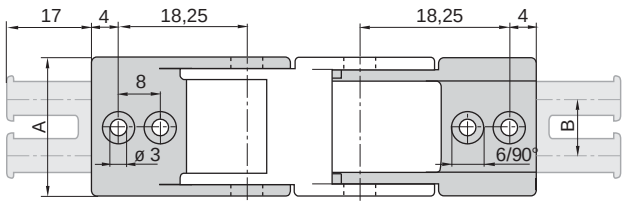
e-chain® links as single parts, overview ▶page 235

Configuration options and order keys, overview ▶page 236

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

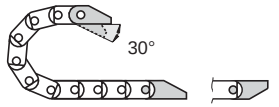
Moving end
0450...1(PZ)

Fixed end
0450...2(PZ)





Moving end

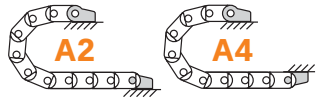


Mounting bracket with strain relief tiewrap plate has reductions of ø 3 mm / ø 6 mm 90°
Mounting bracket without strain relief tiewrap plate only has holes of ø 3 mm

Fixed end

Polymer one-piece, one side pivoting | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
10. ▶	0450.10.12PZ	0450.10.12	16	–	1
16. ▶	0450.16.12PZ	0450.16.12	22	10	2

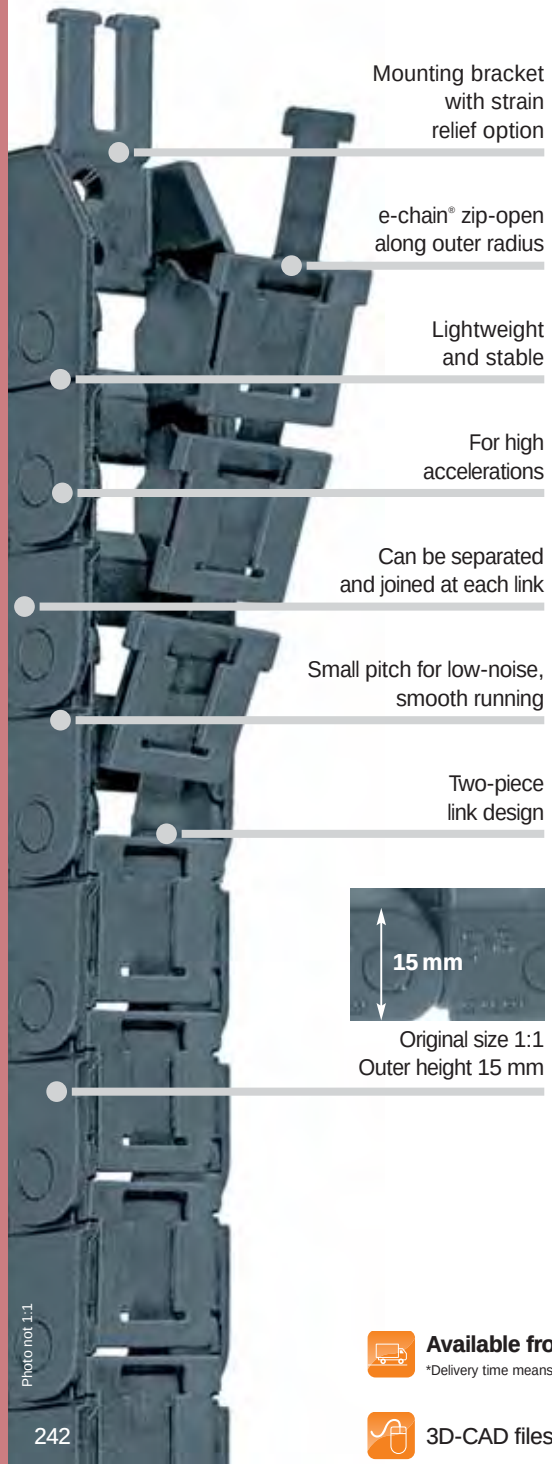


Possible installation conditions:
For the preassembled mode please add index **A2** or **A4**
▶e.g. 0450.10.12PZ**A2**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

Part No. structure
0450.10.12 PZ **A2**
- A…must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
0450.10.1 PZ **A2** (preass. + tiewrap plate)
Mounting bracket Fixed end
0450.10.2PZ **A2** (preass. + tiewrap plate)



Original size 1:1
Outer height 15 mm

Photo not 1:1

Fast opening, for smallest spaces

When to use Series 07:

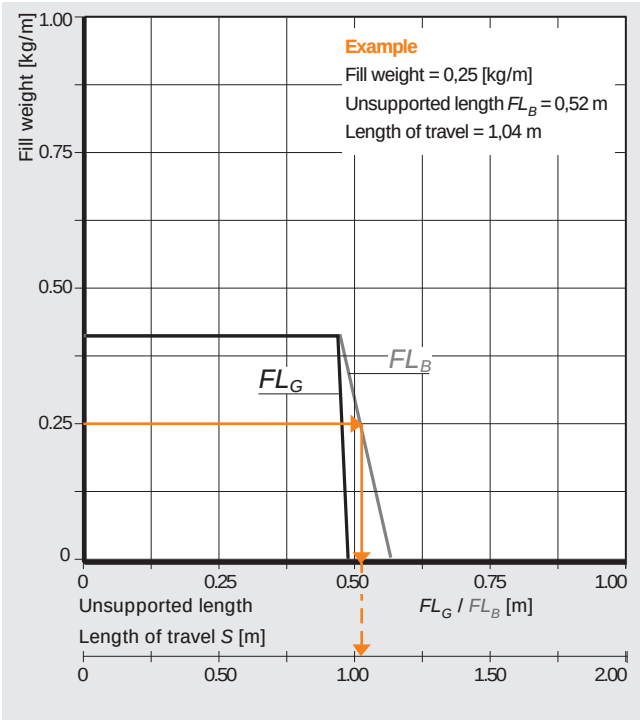
- If a very small e-chain® with an inner height of 10,3 mm and smallest bending radii are required
- For inner widths up to 64 mm
- For unsupported lengths up to 0,55 m and fill weights up to 0,4 kg/m
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

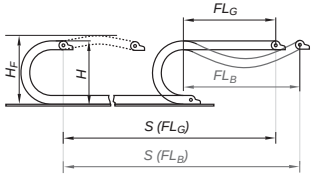
When to use a different igus® Series:

- If a fully enclosed e-tube with zipper opening mechanism is required
- ▶ Series R07 zipper e-tube, page 246
- If a cheaper, easy openable e-chain® is required
- ▶ Series B07 E2 micro, page 322
- If cable installation without opening of lids is required
- ▶ Series E06 easy chain®, page 168
- If opening of the links is not necessary
- ▶ Series 06 E2 micro, page 318

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

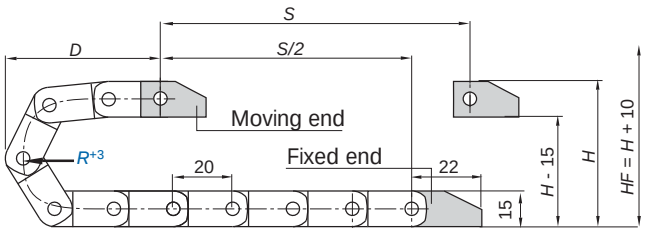
3D-CAD files, configurators, PDF ► www.igus.eu/eu/07





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	018	028	038	048*
H	51	71	91	111
D	56	66	76	86
K	100	130	160	195

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

*Radius 048 only for Series 07.64 - for other widths available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chain® | Series 07 | zip-open along outer radius

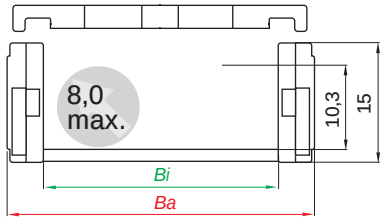
e-chain® zip-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
07. 06 .R.0	06	12,5	| 018 | 028 | 038 | 048* |	≈ 0,13
07. 10 .R.0	10	16,5	| 018 | 028 | 038 | 048* |	≈ 0,14
07. 16 .R.0	16	22,5	| 018 | 028 | 038 | 048* |	≈ 0,16
07. 20 .R.0	20	27	| 018 | 028 | 038 | 048* |	≈ 0,17
07. 30 .R.0	30	37	| 018 | 028 | 038 | 048* |	≈ 0,20
07. 40 .R.0	40	47	| 018 | 028 | 038 | 048* |	≈ 0,23
07. 50 .R.0	50	57	| 018 | 028 | 038 | 048* |	≈ 0,26
07. 64 .R.0	64	71	| 018 | 028 | 038 | 048 |	≈ 0,30

*Radius 048 only for Series 07.64 - for other widths available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R) Example: 07.40.038.0

Order key
07. 40. 038. 0 e-chain®

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type

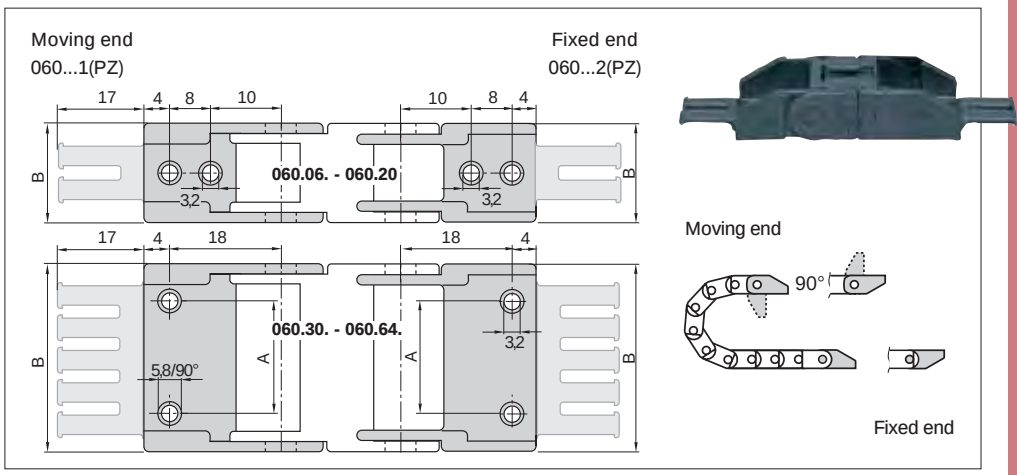


e-chain® links as single parts, overview ▶ page 235

Configuration options and order keys, overview ▶ page 236

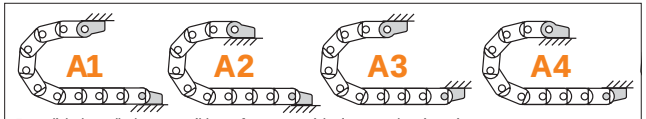
Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

ESD/ATEX permanently conductive e-chains® - Several widths with delivery from stock:
Inner widths Bi 10 - 50, Bending radii R 018 - 038. Full ESD product range ▶ www.igus.eu/ESD



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
06. ▶	060.06. 12PZ	060.06. 12	–	12,5	1
10. ▶	060.10. 12PZ	060.10. 12	–	16,5	1
16. ▶	060.16. 12PZ	060.16. 12	–	22,5	2
20. ▶	060.20. 12PZ	060.20. 12	–	27,0	2
30. ▶	060.30. 12PZ	060.30. 12	22	37,0	3
40. ▶	060.40. 12PZ	060.40. 12	32	47,0	4
50. ▶	060.50. 12PZ	060.50. 12	42	57,0	5
64. ▶	060.64. 12PZ	060.64. 12	56	71,0	6



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 060.40.12PZA1

Additional Features



Quicksnap - the complete, detachable mounting unit. Part Nos. 060.10.QS, 060.16.QS, 060.20.QS, 060.40.QS available from stock



Quickfix - mounting bracket with dowel, available upon request

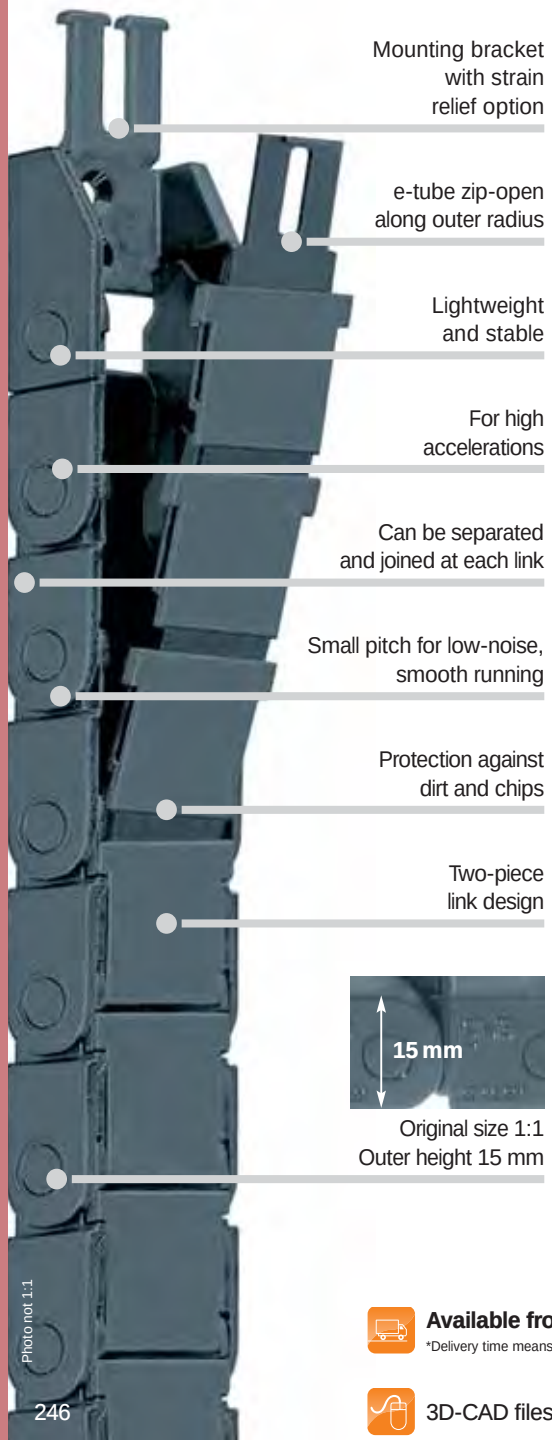


- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

Part No. structure
060.40.12 PZ A1

- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
060.40.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
060.40.2PZ A1 (preass. + tiewrap plate)



Original size 1:1
Outer height 15 mm

Photo not 1:1

Fast opening, enclosed zipper-band

When to use Series R07:

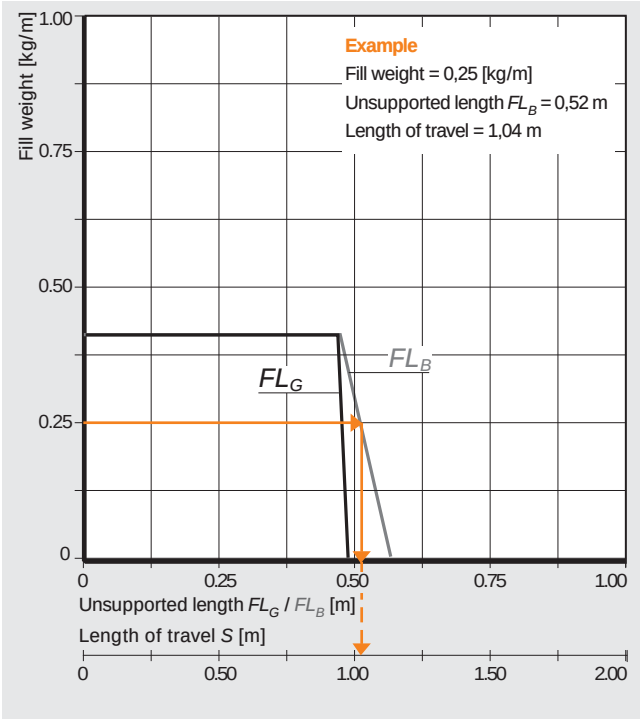
- If a very small e-tube with an inner height of 10,3 mm and smallest bending radii are required
- For inner widths up to 50 mm
- For unsupported lengths up to 0,55 m and fill weights up to 0,4 kg/m
- If chip protection is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

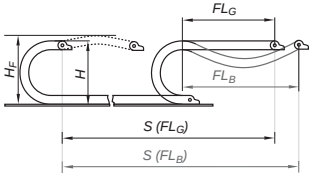
When to use a different igus® Series:

- If an e-chain® with zipper opening mechanism is required
- ▶ Series 07 zipper e-chain®, page 242
- If a cheaper, easy openable e-chain® is required
- ▶ Series B07 E2 micro, page 322
- If cable installation without opening of lids is required
- ▶ Series E06 easy chain®, page 168
- If opening of the links is not necessary
- ▶ Series 06 E2 micro, page 318

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

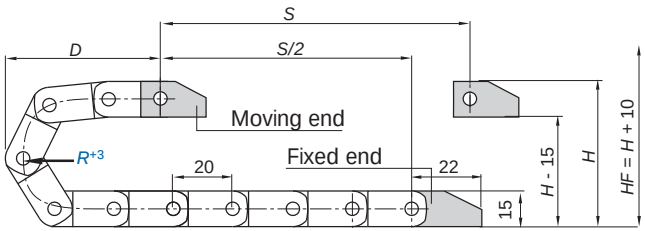
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/R07





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	038	048
H	91	111
D	76	86
K	160	195

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-tube | Series R07 | zip-open along outer radius

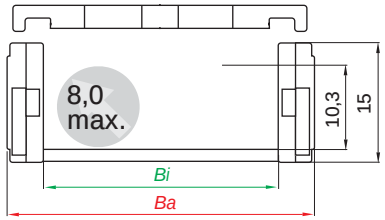
e-tube zip-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
R07. 06 .R.0*	06	12,5	| 038 | 048 |	≈ 0,15
R07. 10 .R.0	10	16,5	| 038 | 048 |	≈ 0,16
R07. 16 .R.0	16	22,5	| 038 | 048 |	≈ 0,18
R07. 20 .R.0	20	27	| 038 | 048 |	≈ 0,19
R07. 30 .R.0	30	37	| 038 | 048 |	≈ 0,22
R07. 40 .R.0	40	47	| 038 | 048 |	≈ 0,25
R07. 50 .R.0	50	57	| 038 | 048 |	≈ 0,28
R07. 64 R.0*	64	71	| 038 | 048 |	≈ 0,32

*Width available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R) Example: R07.40.038.0

Order key
R07. 40. 038. 0 e-tube

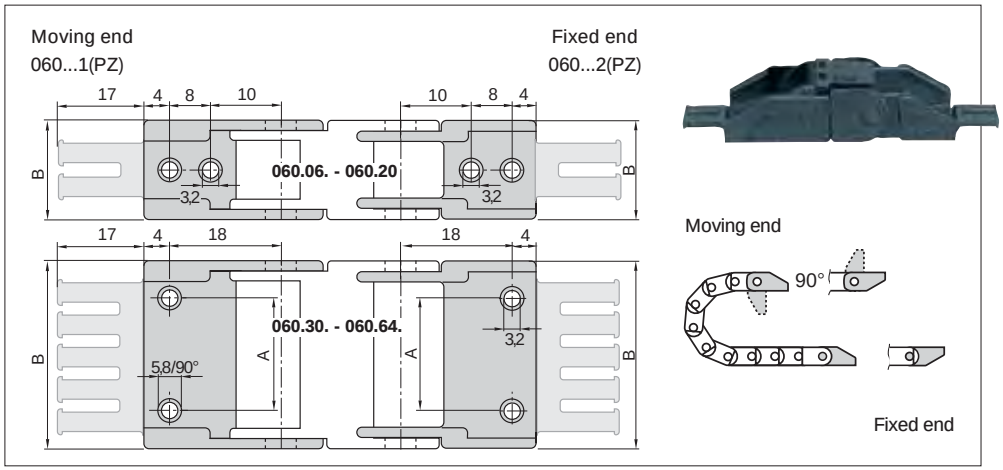
- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 235

Configuration options and order keys, overview ▶ page 236

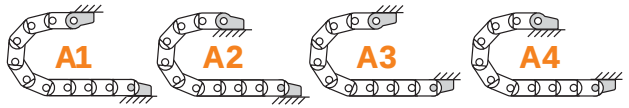
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer locking, one-piece | Universal for e-tubes
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
06.* ▶	060.06. 12PZ	060.06. 12	–	12,5	1
10. ▶	060.10. 12PZ	060.10. 12	–	16,5	1
16. ▶	060.16. 12PZ	060.16. 12	–	22,5	2
20. ▶	060.20. 12PZ	060.20. 12	–	27,0	2
30. ▶	060.30. 12PZ	060.30. 12	22	37,0	3
40. ▶	060.40. 12PZ	060.40. 12	32	47,0	4
50. ▶	060.50. 12PZ	060.50. 12	42	57,0	5
64.* ▶	060.64. 12PZ	060.64. 12	56	71,0	6

*Width available upon request, please consult igus® for delivery time



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 060.40.12PZA1

Additional Features



Quicksnap - the complete, detachable mounting unit. Part Nos. 060.10.QS, 060.16.QS, 060.20.QS, 060.40.QS available from stock



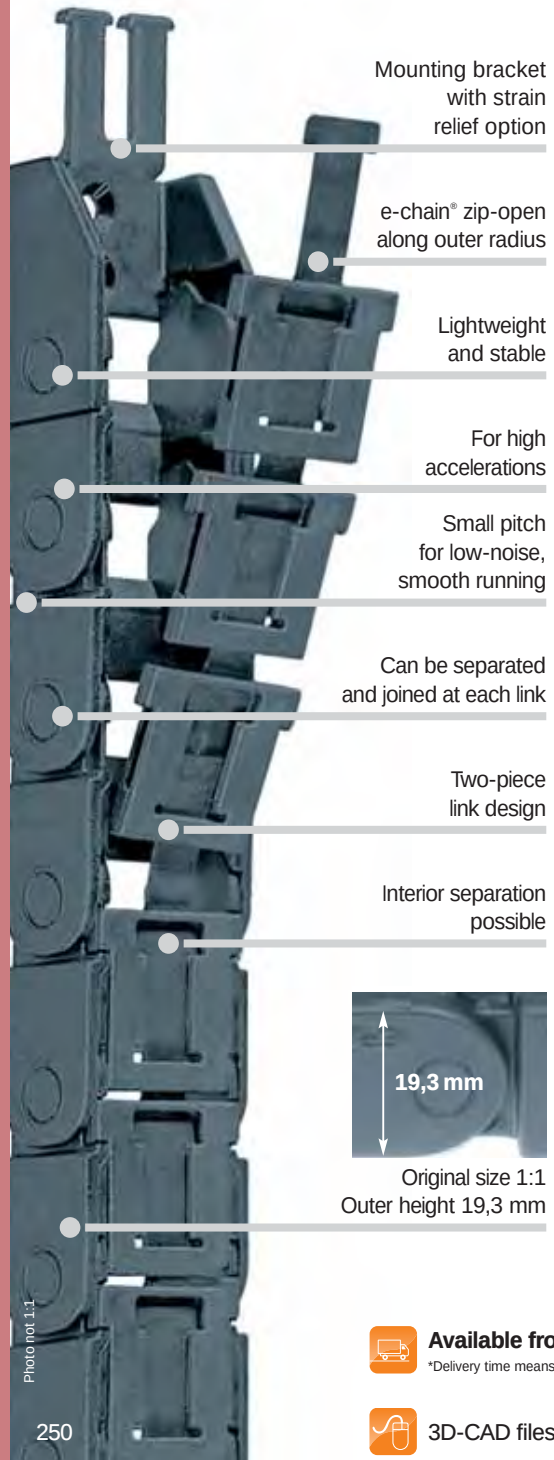
Quickfix - mounting bracket with dowel, available upon request

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

Part No. structure
060.40.12 PZ A1

- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
060.40.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
060.40.2PZ A1 (preass. + tiewrap plate)



Original size 1:1
Outer height 19,3 mm

Photo not 1:1

Fast opening, high accelerations

When to use Series 09:

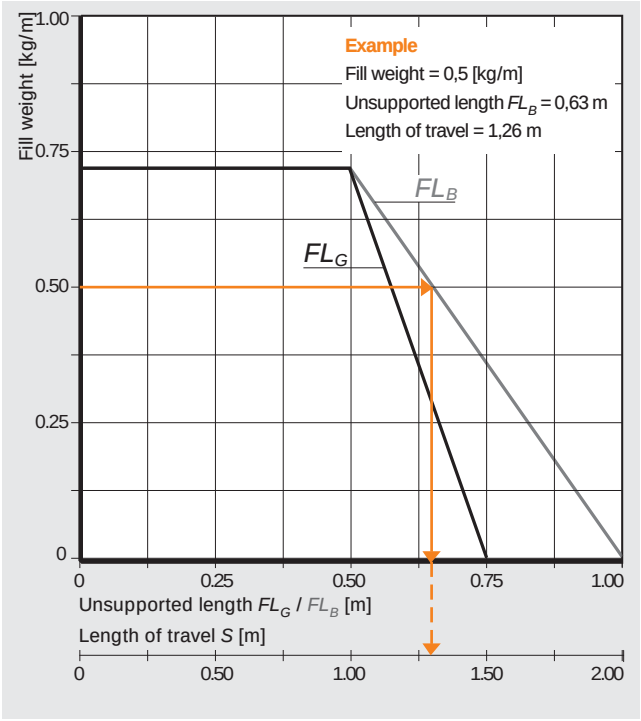
- If a very small e-chain® with an inner height of 15 mm and smallest bending radii are required
- For inner widths up to 50 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

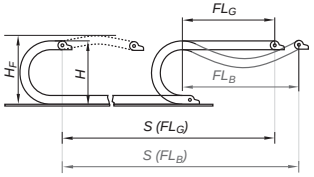
When to use a different igus® Series:

- If a fully enclosed e-tube with zipper opening mechanism is required
- ► Series R09 zipper e-tube, page 256
- If a cheaper, easy openable e-chain® is required
- ► Series B09 E2 micro, page 340
- If cable installation without opening of lids is required
- ► Series E08 easy chain®, page 176
- If an e-chain® snap-open along inner radius with film-hinge is required
- ► Series 094 E2 micro, page 330
- If opening of the links is not necessary
- ► Series 08 E2 micro, page 334

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

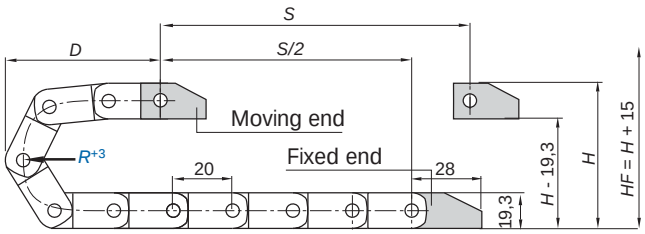
3D-CAD files, configurators, PDF ► www.igus.eu/eu/09





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 234

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	028	038	048
H	75	95	115
D	68	78	88
K	130	160	195

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



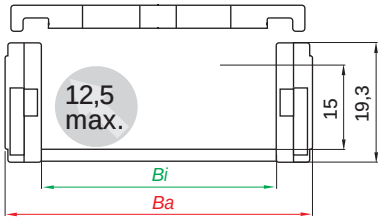
e-chain® | Series 09 | zip-open along outer radius

e-chain® zip-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
09. 10 .R.0	10	18,2	| 028 | 038 | 048 |	≈ 0,21
09. 16 .R.0	16	24,2	| 028 | 038 | 048 |	≈ 0,24
09. 20 .R.0	20	28,2	| 028 | 038 | 048 |	≈ 0,25
09. 30 .R.0	30	38,2	| 028 | 038 | 048 |	≈ 0,28
09. 40 .R.0	40	48,2	| 028 | 038 | 048 |	≈ 0,31
09. 50 .R.0	50	58,2	| 028 | 038 | 048 |	≈ 0,34

Supplement Part No. with required radius (*R*) Example: 09.40.048.0

Order key
09. 40. 048. 0 e-chain®

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

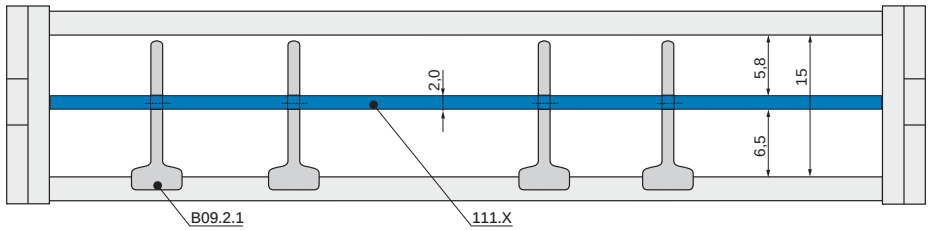


e-chain® links as single parts, overview ►page 235

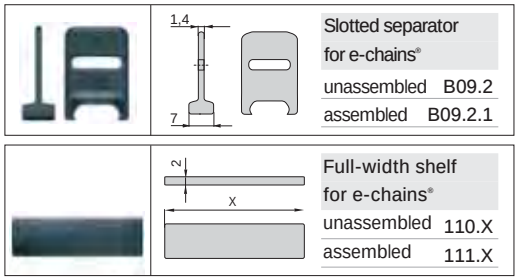
Configuration options and order keys, overview ►page 236

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

ESD/ATEX permanently conductive e-chains® - Several widths with delivery from stock:
Inner widths *Bi* 16 - 50, Bending radii *R* 028 - 048. Full ESD product range ► www.igus.eu/ESD



Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	B09.2
assembled	B09.2.1
Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Slotted separator B09.2

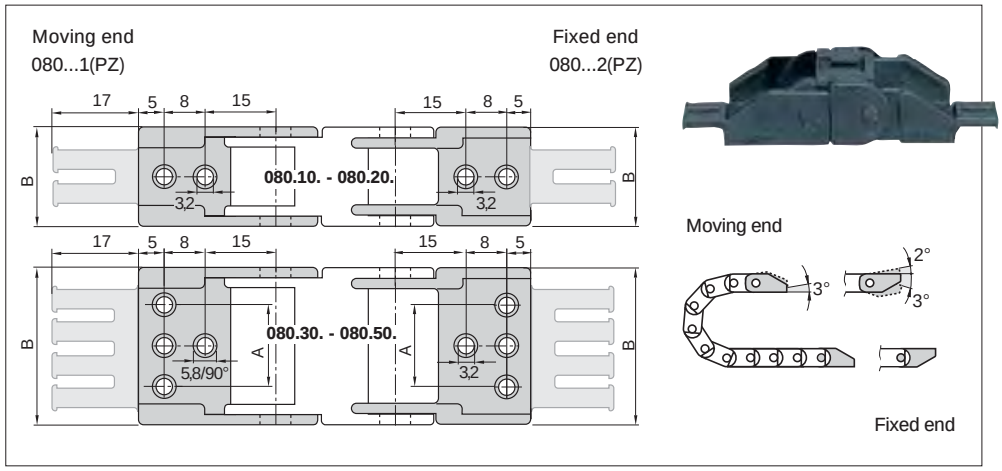
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Full-width shelf 110.X

this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision.

Full-width shelves

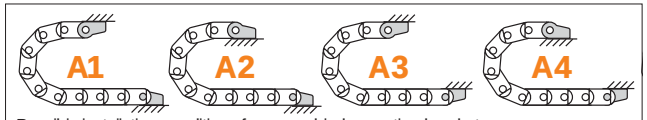
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
016	110.16	111.16	030	110.30	111.30	050	110.50	111.50
020	110.20	111.20	040	110.40	111.40			



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
10. ▶	080.10. 12PZ	080.10. 12	–	18,2	1
16. ▶	080.16. 12PZ	080.16. 12	–	24,2	2
20. ▶	080.20. 12PZ	080.20. 12	–	28,2	2
30. ▶	080.30. 12PZ	080.30. 12	22	38,2	3
40. ▶	080.40. 12PZ	080.40. 12	32	48,2	4
50. ▶	080.50. 12PZ	080.50. 12	42	58,2	5

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 080.40.12PZA1

Part No. structure

080.40.12 PZ A1

- A…must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

080.40.1 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

080.40.2 PZ A1 (preass. + tiewrap plate)

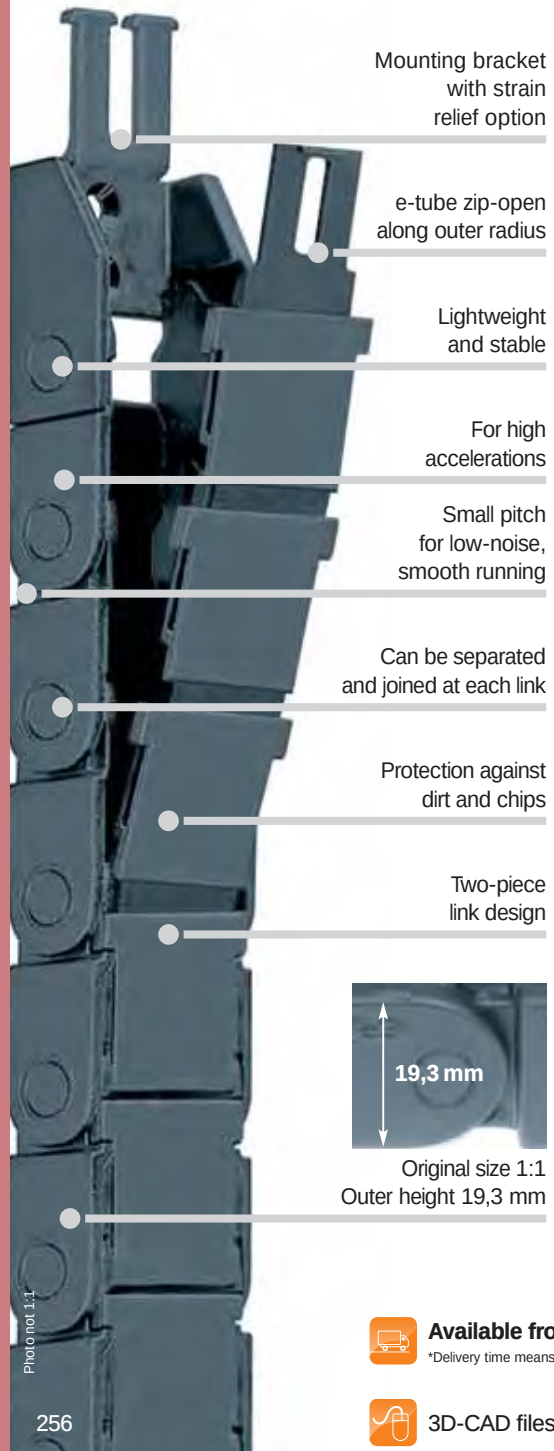
Additional Features



Quicksnap - the complete, detachable mounting unit. Part Nos. 080.20.QS, 080.30.QS available from stock



Quickfix - mounting bracket with dowel, available upon request



Original size 1:1
Outer height 19,3 mm

Photo not 1:1

Fast opening, enclosed zipper-band

When to use Series R09:

- If a very small e-tube with an inner height of 15 mm and smallest bending radii are required
- For inner widths up to 50 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- If chip protection is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required
- If quick insertion of cables with preassembled connectors is required

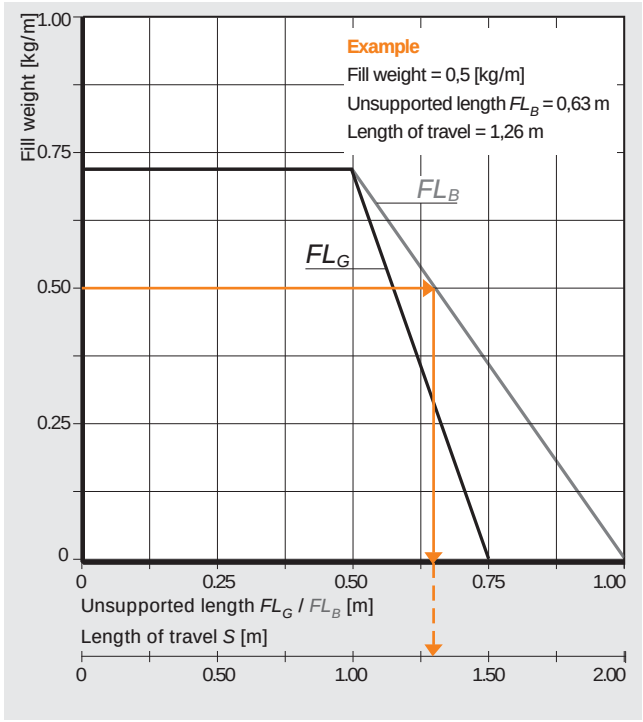
When to use a different igus® Series:

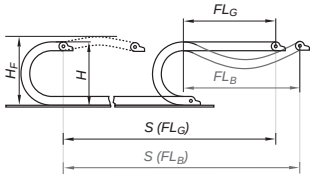
- If an e-chain® with zipper opening mechanism is required
- ▶ Series 09 zipper e-chain®, page 250
- If a cheaper, easy openable e-chain® is required
- ▶ Series B09 E2 micro, page 340
- If cable installation without opening of lids is required
- ▶ Series E08 easy chain®, page 176
- If an e-chain® snap-open along inner radius with film-hinge is required
- ▶ Series 094 E2 micro, page 330
- If opening of the links is not necessary
- ▶ Series 08 E2 micro, page 334

iF product design award
2002 igus® Series R09

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

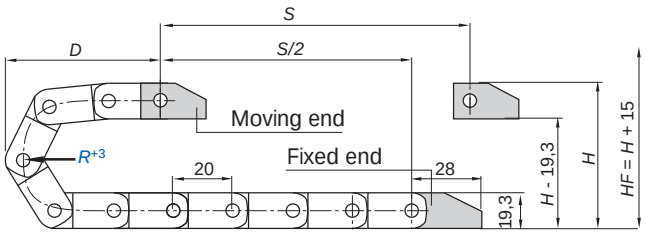
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/R09





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	048	075	100
H	115	169	219
D	88	115	140
K	195	280	355

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



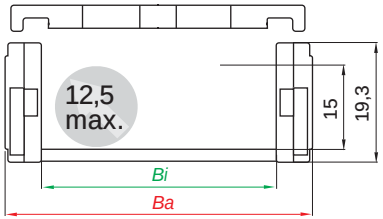
e-tube | Series R09 | zip-open along outer radius

e-tube zip-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
R09. 10 .*R*.0	10	18,2	| 048 | 075 | 100 |	≈ 0,23
R09. 16 .*R*.0	16	24,2	| 048 | 075 | 100 |	≈ 0,26
R09. 20 .*R*.0	20	28,2	| 048 | 075 | 100 |	≈ 0,27
R09. 30 .*R*.0	30	38,2	| 048 | 075 | 100 |	≈ 0,30
R09. 40 .*R*.0	40	48,2	| 048 | 075 | 100 |	≈ 0,33
R09. 50 .*R*.0	50	58,2	| 048 | 075 | 100 |	≈ 0,36

Supplement Part No. with required radius (*R*) Example: R09.40.048.0

Order key
R09. 40. 048. 0 e-tube

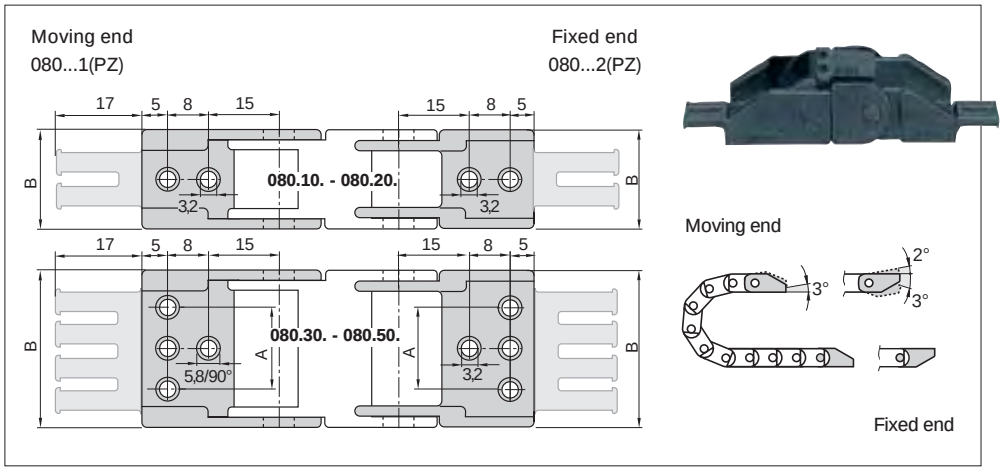
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶page 235

Configuration options and order keys, overview ▶page 236

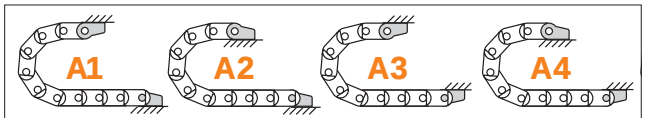
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer locking, one-piece | Universal for e-tubes
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
10. ▶	080.10. 12PZ	080.10. 12	–	18,2	1
16. ▶	080.16. 12PZ	080.16. 12	–	24,2	2
20. ▶	080.20. 12PZ	080.20. 12	–	28,2	2
30. ▶	080.30. 12PZ	080.30. 12	22	38,2	3
40. ▶	080.40. 12PZ	080.40. 12	32	48,2	4
50. ▶	080.50. 12PZ	080.50. 12	42	58,2	5

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶e.g. 080.40.12PZA1

Part No. structure
080.40.12 PZ A1
- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Additional Features

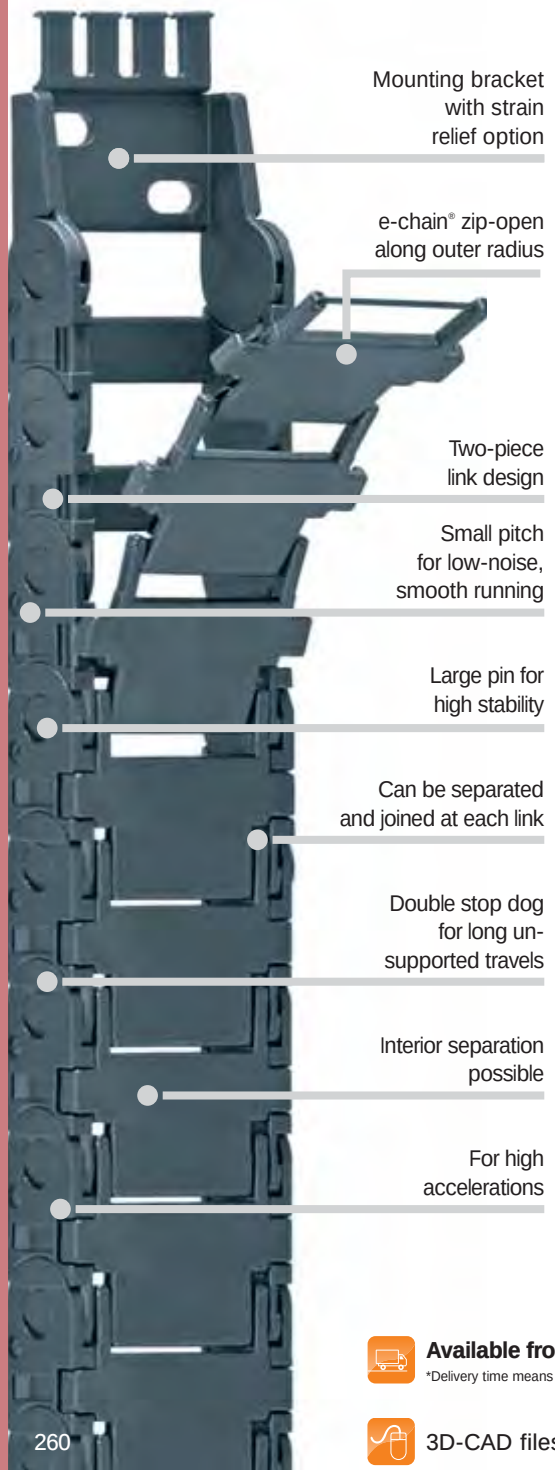


Quicksnap - the complete, detachable mounting unit. Part Nos. 080.20.QS, 080.30.QS available from stock



Quickfix - mounting bracket with dowel, available upon requestt

Single-part order
Mounting bracket Moving end
080.40.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
080.40.2 PZ A1 (preass. + tiewrap plate)



Fast opening, high stability

When to use Series 15:

- If a very small e-chain® with an inner height of 17 mm and smallest bending radii are required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,20 m and fill weights up to 1,5 kg/m
- If high stability and excellent service life is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

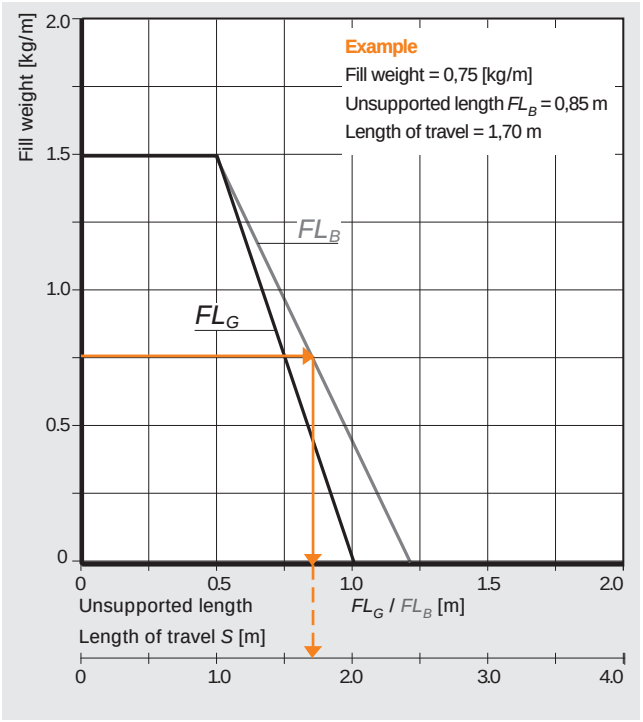
When to use a different igus® Series:

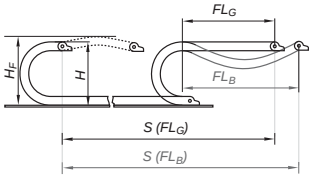
- If a fully enclosed e-tube with zipper opening mechanism is required
- ▶ Series R15 zipper e-tube, page 268
- If snap-open accessibility along the inner radius is required
- ▶ Series B15i E2 mini, page 380
- If snap-open links are not necessary
- ▶ Series 10 E2 mini, page 356
- If torsion occurs
- ▶ Series E14 easy chain®, page 180

iF product design award
2002 igus® Series 15

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

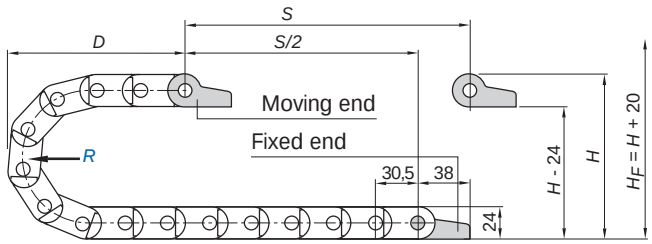
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/15





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	038	048	075	100	110	125	145	180
H	99	119	173	223	243	273	313	383
D	95	105	132	157	167	182	202	237
K	185	215	300	380	410	455	520	630

The required clearance height: $H_F = H + 20$ mm (with 1,0 kg/m fill weight)

Before using this Series on long travels please consult igus®.

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



e-chain® | Series 15 | zip-open along outer radius

e-chain® zip-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
15. 015 .R.0	15	26	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,35
15. 025 .R.0	25	36	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,40
15. 038 .R.0	38	49	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,46
15. 050 .R.0	50	61	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,52
15. 5 .R.0	63	76	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,63
15. 6 .R.0	80	94	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,70
15. 7 .R.0	100	113	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,76

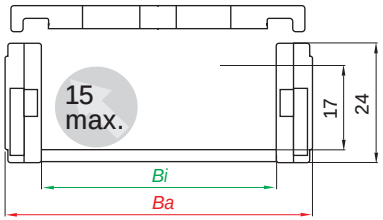
Supplement Part No. with required radius (*R*) Example: 15.025.038.0

Before using this Series on long travels please consult igus®.

Order key

15. 025. 038. 0 e-chain®

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

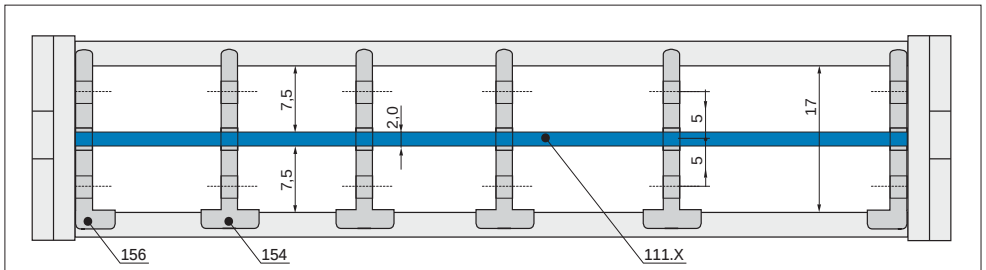


e-chain® links as single parts, overview ▶ page 235

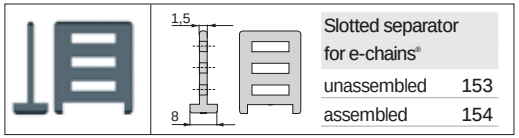
Configuration options and order keys, overview ▶ page 236

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



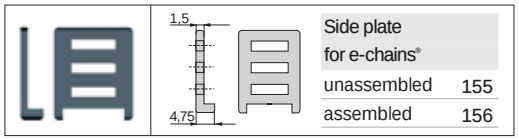
Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	153
assembled	154

Slotted separator 153

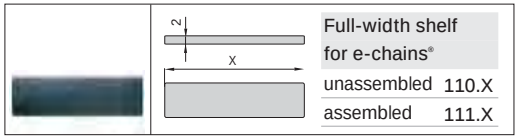
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Side plate for e-chains®	
unassembled	155
assembled	156

Side plate 155

Side plate for use with full-width shelf 110.X and slotted separator153.



Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

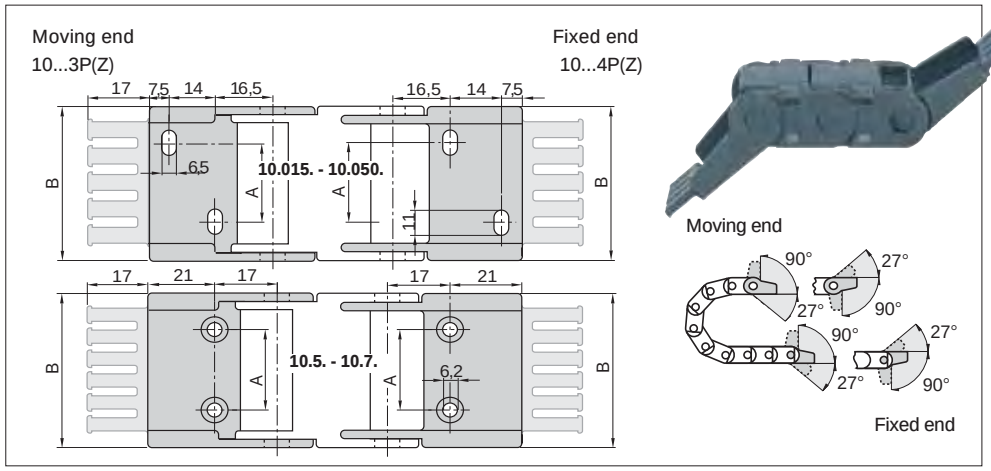
this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	110.15	111.15	050	110.50	111.50	100	110.100	111.100
025	110.25	111.25	063	110.63	111.63			
038	110.38	111.38	080	110.80	111.80			

zipper | e-chains® | Series 15 | Mounting brackets pivoting

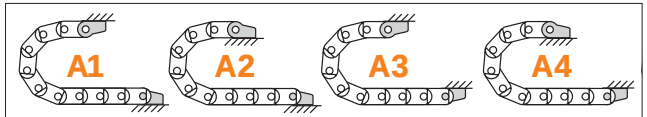
For tight installation conditions



Polymer pivoting, one-piece | Standard | Universal for e-chains®
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	1015.34PZ	1015.34P	–	25,5	2
025. ▶	1025.34PZ	1025.34P	10	35,5	3
038. ▶	1038.34PZ	1038.34P	23	48,5	4
050. ▶	1050.34PZ	1050.34P	35	60,5	5
5. ▶	105. 34PZ	105. 34P	48	75,0	6
6. ▶	106. 34PZ	106. 34P	65	92,0	8
7. ▶	107. 34PZ	107. 34P	85	112,0	10

- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end



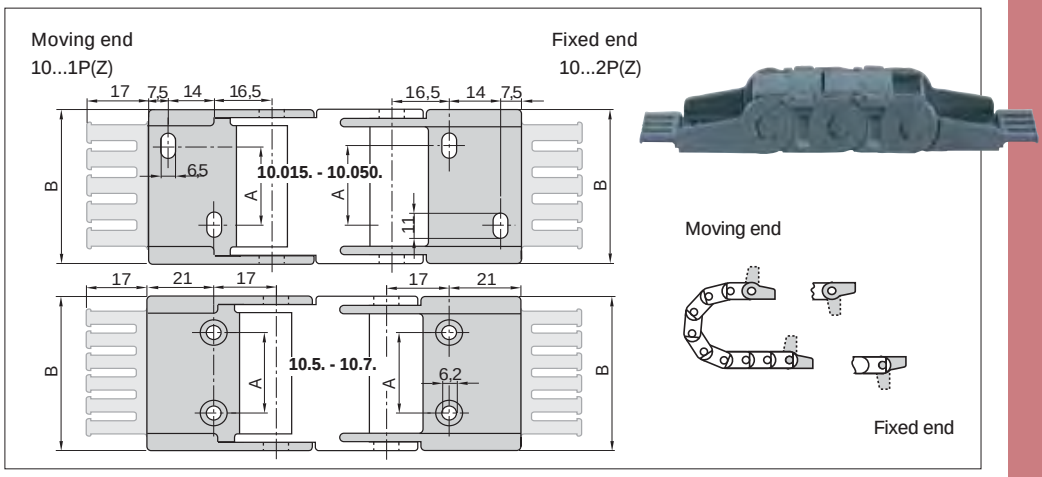
Possible installation conditions for assembled, pivoting mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 1025.34PZA1

Part No. structure
1025. 34 PZ A1
A...must be indicated on preassembled configurations
Strain relief with chainfix tiewrap plates
Full set pivoting = 34
Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
1025. 3 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
1025. 4 PZ A1 (preass. + tiewrap plate)

zipper | e-chains® | Series 15 | Mounting brackets locking

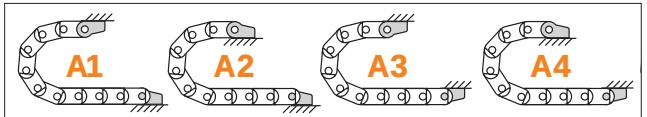
For very high speed and acceleration



Polymer locking, one-piece | Universal for e-chains®
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	1015.12PZ	1015.12P	–	25,5	2
025. ▶	1025.12PZ	1025.12P	10	35,5	3
038. ▶	1038.12PZ	1038.12P	23	48,5	4
050. ▶	1050.12PZ	1050.12P	35	60,5	5
5. ▶	105. 12PZ	105. 12P	48	75,0	6
6. ▶	106. 12PZ	106. 12P	65	92,0	8
7. ▶	107. 12PZ	107. 12P	85	112,0	10

- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 1025.12PZA1

Part No. structure (locking)
1025. 12 PZ A1
A...must be indicated on preassembled configurations
Strain relief with chainfix tiewrap plates
Full set locking = 12
Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
1025. 1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
1025. 2 PZ A1 (preass. + tiewrap plate)

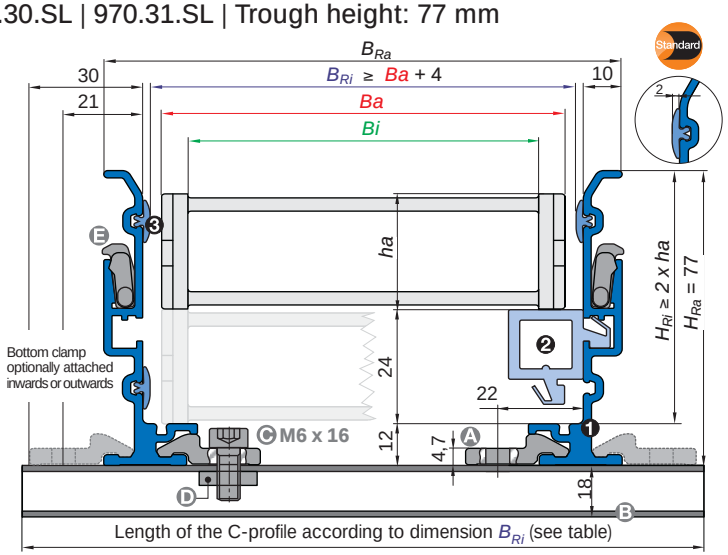
Aluminum SuperTrough | Basic Version

Part No. 970.30.SL | 970.31.SL | Trough height: 77 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

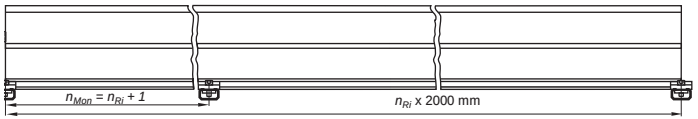
For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	30	upon request	960.30.125
.025	40	upon request	960.30.150
.038	53	upon request	960.30.150
.050	65	960.30.175	960.30.175
.5	80	960.30.175	960.30.175
.6	98	960.30.200	960.30.200
.7	117	960.30.225	960.30.225



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 15.025.038.0 with B_{Ri} = 40

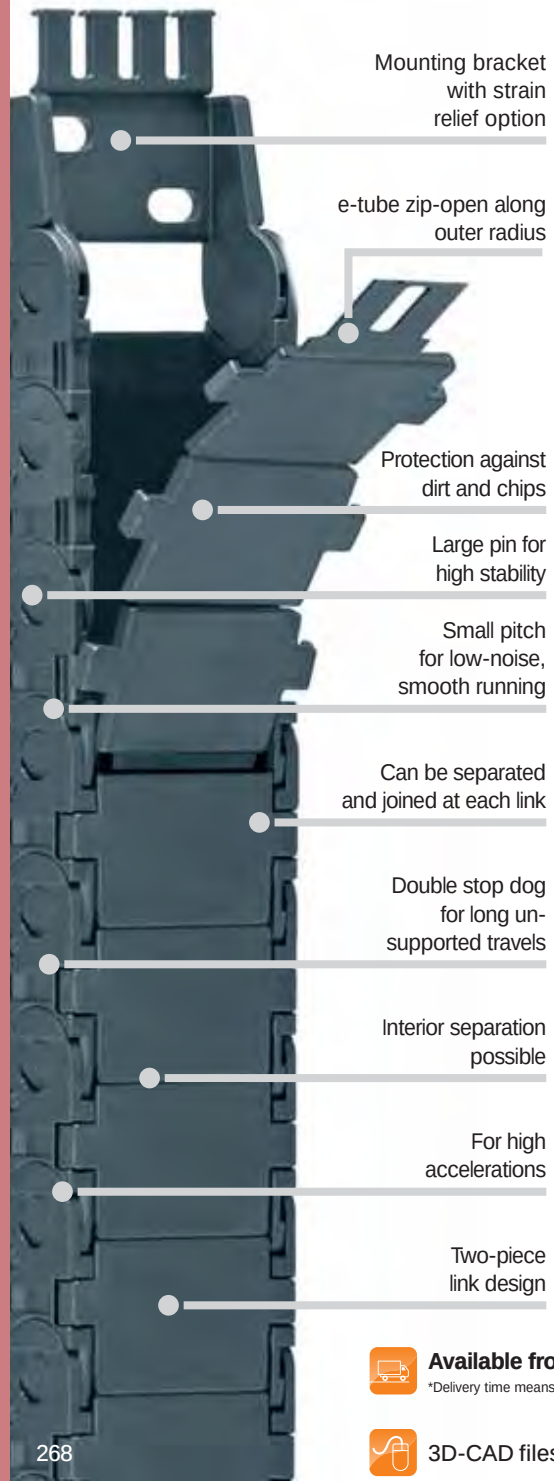
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 970.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 970.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.150
Module for the fixed end	
Order text: 1 set	Part No. 970.80



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail ▶ from page 1190

● Trough set ● Installation set ● Glide bar ● C-profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Fast opening, enclosed zipper-band

When to use Series R15:

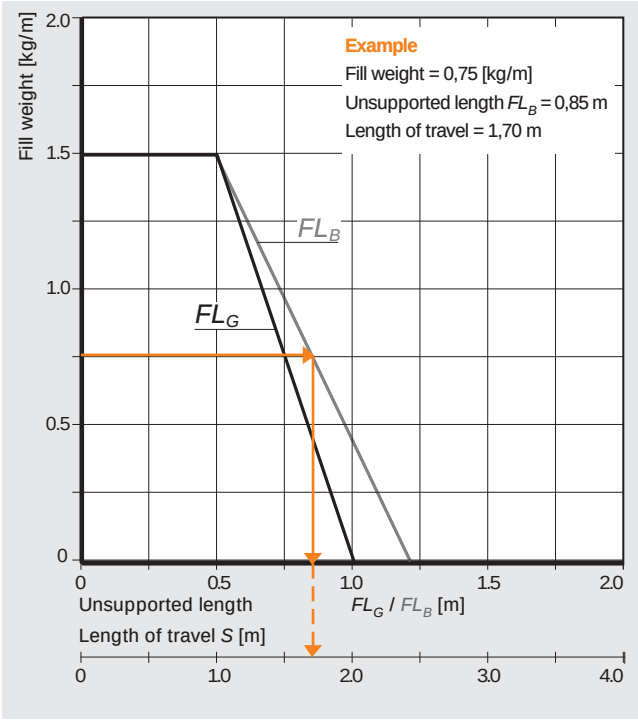
- If a very small e-tube with an inner height of 17 mm and smallest bending radii are required
- For inner widths up to 80 mm
- For unsupported lengths up to 1,20 m and fill weights up to 1,5 kg/m
- If chip protection is required
- If high stability and excellent service life is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

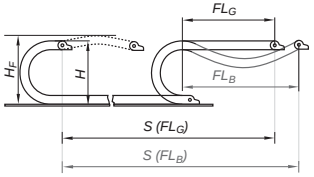
When to use a different igus® Series:

- If an e-chain® with zipper opening mechanism is required
- ▶ Series 15 zipper e-chain®, page 260
- If snap-open accessibility along the inner radius is required
- ▶ Series B15i E2 mini, page 380
- If snap-open links are not necessary
- ▶ Series 10 E2 mini, page 356
- If torsion occurs
- ▶ Series E14 easy chain®, page 180

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

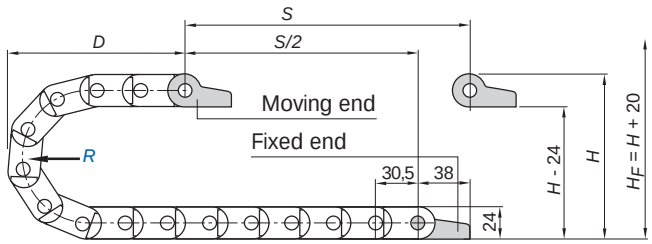
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/R15





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	063	075	100	110	125	145	180
H	149	173	223	243	273	313	383
D	120	132	157	167	182	202	237
K	260	300	380	410	455	520	630

The required clearance height: $H_F = H + 20$ mm (with 1,0 kg/m fill weight)

Before using this Series on long travels please consult igus®.

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



e-tube | Series R15 | zip-open along outer radius

e-tube zip-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
R15. 015 .*R*.0*	15	26	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,40
R15. 025 .*R*.0	25	36	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,45
R15. 038 .*R*.0	38	49	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,51
R15. 050 .*R*.0*	50	61	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,57
R15. 063 .*R*.0	63	76	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,68
R15. 080 .*R*.0	80	94	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,75
R15. 100 .*R*.0*	100	113	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,81

*Width available upon request, please consult igus® for delivery time

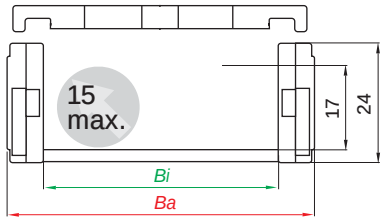
Supplement Part No. with required radius *(R)* Example: R15.063.063.0

Before using this Series on long travels please consult igus®.

Order key

R15. 063. 063. 0 e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

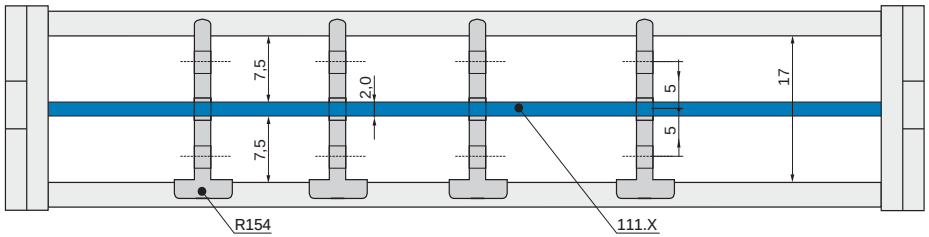


e-chain® links as single parts, overview ▶ page 235

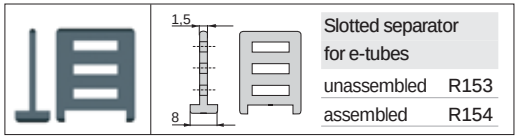
Configuration options and order keys, overview ▶ page 236

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



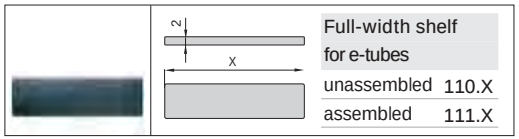
Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-tubes	
unassembled	R153
assembled	R154

Slotted separator R153

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Full-width shelf for e-tubes	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

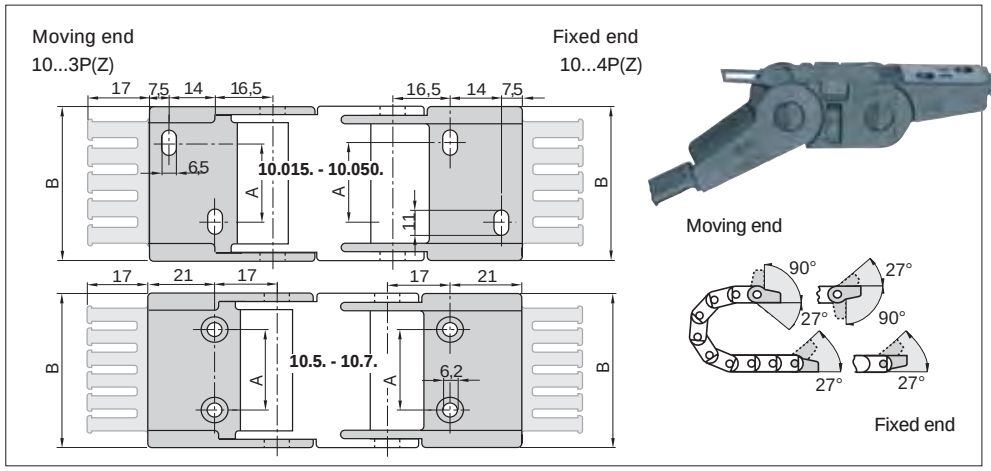
this option makes sense in applications with many thin cables with similar diameters. For a consequent sub-division. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
025	110.25	111.25	063	110.63	111.63
038	110.38	111.38	080	110.80	111.80

zipper | e-tubes | Series R15 | Mounting brackets pivoting

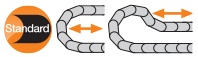
For tight installation conditions



Polymer pivoting, one-piece | Standard | Universal for e-tubes
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015.* ▶	1015.34PZ	1015.34P	–	25,5	2
025. ▶	1025.34PZ	1025.34P	10	35,5	3
038. ▶	1038.34PZ	1038.34P	23	48,5	4
050.* ▶	1050.34PZ	1050.34P	35	60,5	5
063. ▶	105. 34PZ	105. 34P	48	75,0	6
080. ▶	106. 34PZ	106. 34P	65	92,0	8
100.* ▶	107. 34PZ	107. 34P	85	112,0	10

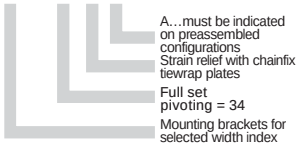
*Width available upon request, please consult igus® for delivery time



- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end

Part No. structure

105. 34 PZ A1



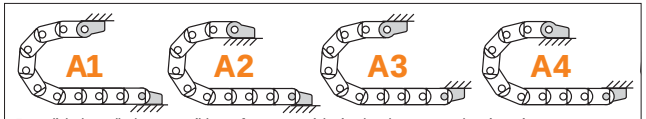
Single-part order

Mounting bracket Moving end

105. 3 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

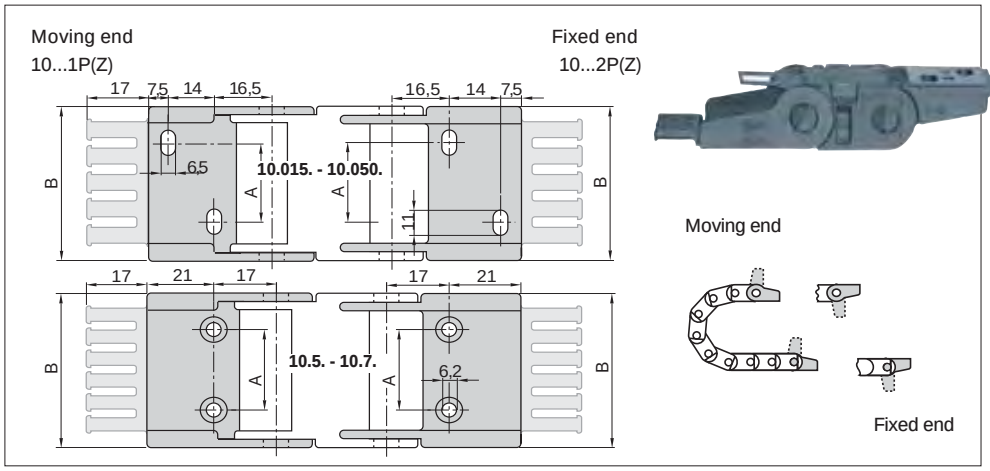
105. 4 PZ A1 (preass. + tiewrap plate)



Possible installation conditions for assembled, pivoting mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 105.34PZA1

zipper | e-tubes | Series R15 | Mounting brackets locking

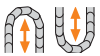
For very high speed and acceleration



Polymer locking, one-piece | Universal for e-tubes
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015.* ▶	1015.12PZ	1015.12P	–	25,5	2
025. ▶	1025.12PZ	1025.12P	10	35,5	3
038. ▶	1038.12PZ	1038.12P	23	48,5	4
050.* ▶	1050.12PZ	1050.12P	35	60,5	5
063. ▶	105. 12PZ	105. 12P	48	75,0	6
080. ▶	106. 12PZ	106. 12P	65	92,0	8
100.* ▶	107. 12PZ	107. 12P	85	112,0	10

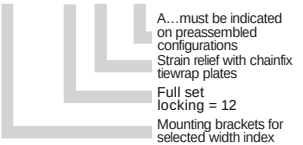
*Width available upon request, please consult igus® for delivery time



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

105. 12 PZ A1



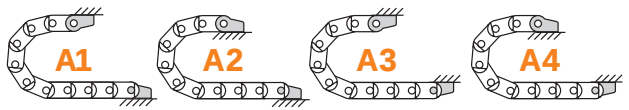
Single-part order

Mounting bracket Moving end

105. 1 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

105. 2 PZ A1 (preass. + tiewrap plate)



Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 105.12PZA1

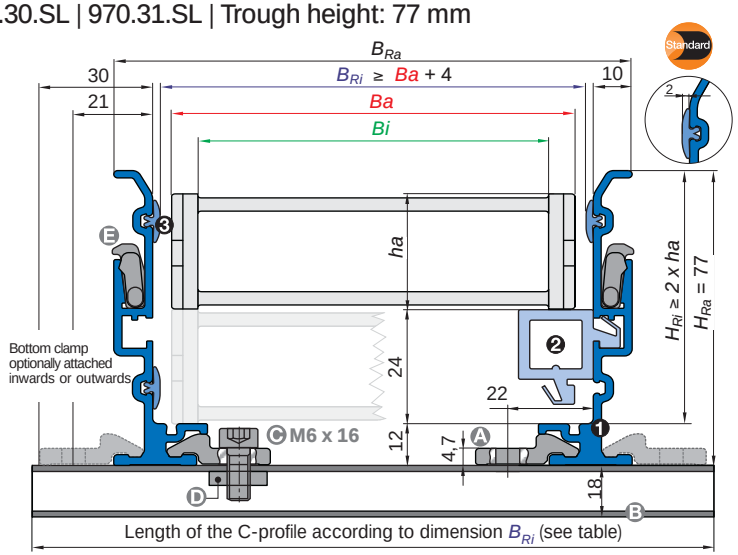
Aluminum SuperTrough | Basic Version

Part No. 970.30.SL | 970.31.SL | Trough height: 77 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

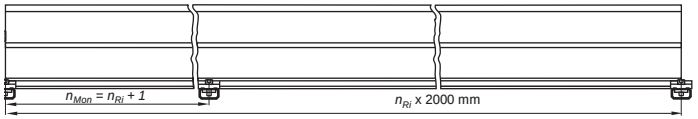
For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.025	40	upon request	960.30.150
.038	80	upon request	960.30.150
.063	80	upon request	960.30.175
.080	98	960.30.150	960.30.200



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series R15.080.063.0 with B_{Ri} = 98

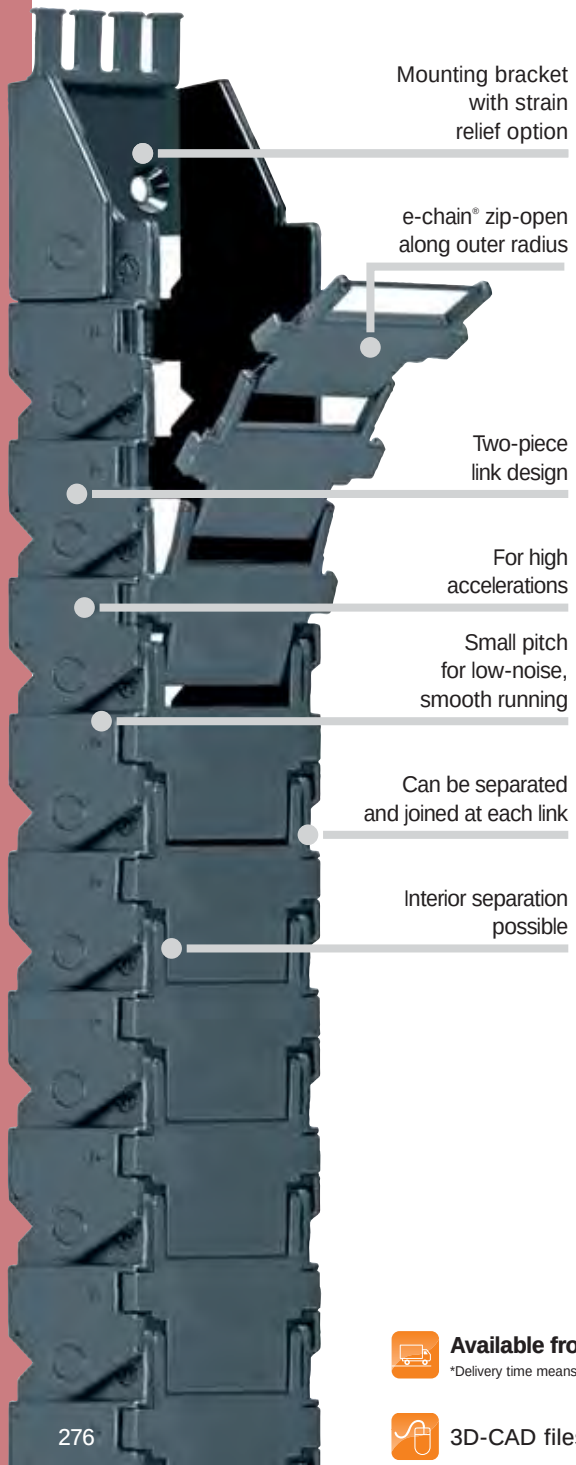
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 970.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 970.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.150
Module for the fixed end	
Order text: 1 set	Part No. 970.80



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail ▶ from page 1190

● Trough set ● Installation set ● Glide bar ● C-profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Fast opening, large inner height

When to use Series 17 E2 mini:

- If an e-chain® with an inner height of 32 mm is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,0 m and fill weights up to 1,5 kg/m
- If a very small e-chain® with a large inner height is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

When to use a different igus® Series:

- If a fully enclosed e-tube with zipper opening mechanism is required
- ▶ Series R17 zipper e-tube, page 282
- If snap-open accessibility along the inner radius is required
- ▶ Series B17i E2 mini, page 388
- If maximum stability is required
- ▶ Series R4.32, page 646
- If torsion occurs
- ▶ Series E16/Z16 easy chain®, page 190

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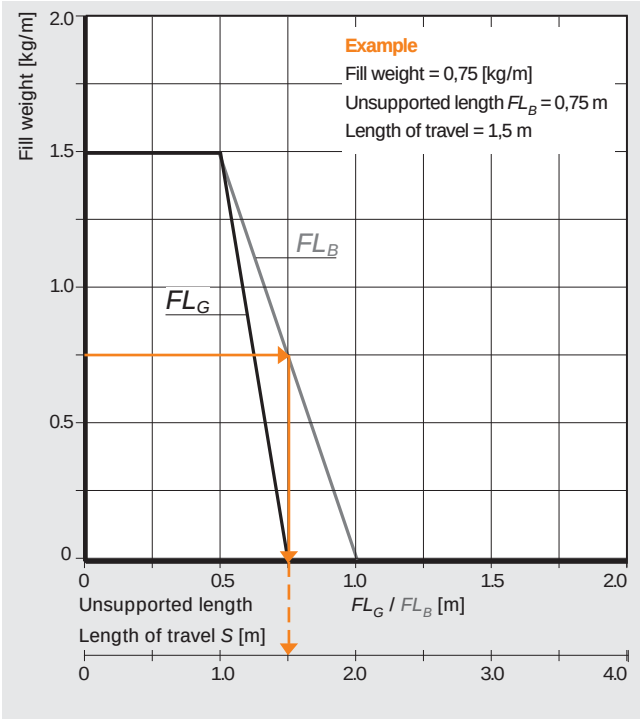
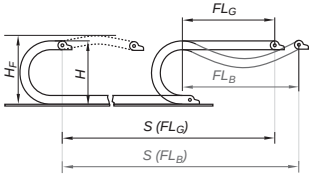
*Delivery time means time until shipping of goods (after technical release)

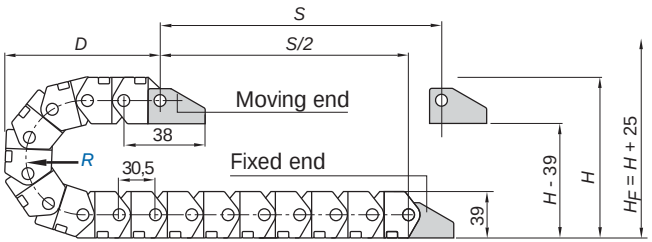
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/17





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	063	075	100	125
H	165	189	239	289
D	128	140	165	190
K	260	300	380	455

The required clearance height: $H_F = H + 25$ mm (with 1,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



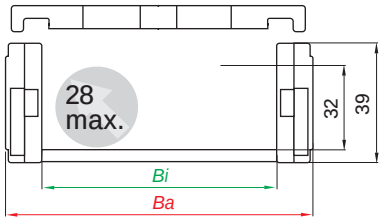
e-chain® | Series 17 | zip-open along outer radius

e-chain® zip-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
17. 1 .R.0	15	25,5	| 063 | 075 | 100 | 125 |	≈ 0,52
17. 2 .R.0	25	35,5	| 063 | 075 | 100 | 125 |	≈ 0,59
17. 3 .R.0	38	48,5	| 063 | 075 | 100 | 125 |	≈ 0,65
17. 4 .R.0	50	60,5	| 063 | 075 | 100 | 125 |	≈ 0,70
17. 5 .R.0	63	76	| 063 | 075 | 100 | 125 |	≈ 0,83
17. 6 .R.0	80	93	| 063 | 075 | 100 | 125 |	≈ 0,92
17. 7 .R.0	100	113	| 063 | 075 | 100 | 125 |	≈ 1,06

Supplement Part No. with required radius (*R*) Example: 17.2.075.0

Order key
17. 2. 075. 0 e-chain®

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 235

Configuration options and order keys, overview ▶ page 236

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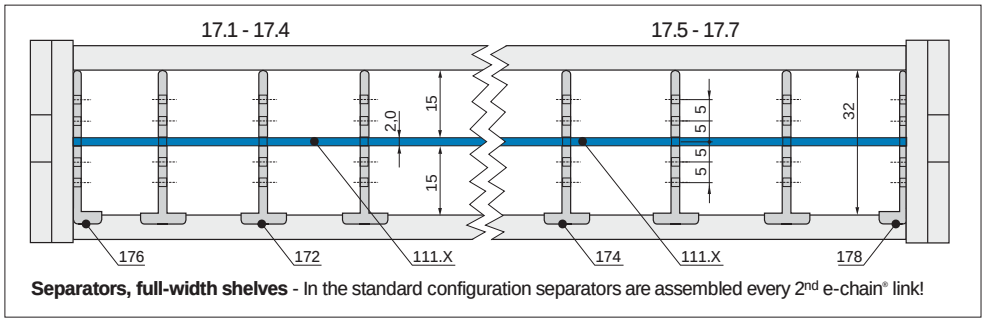
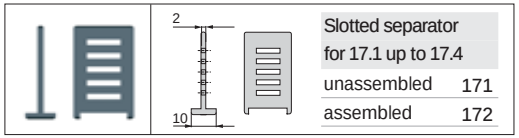
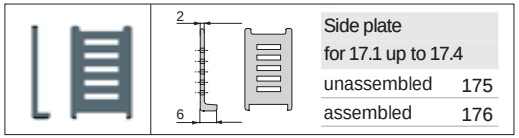
*Delivery time means time until shipping of goods (after technical release)



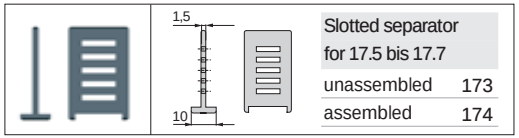
Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



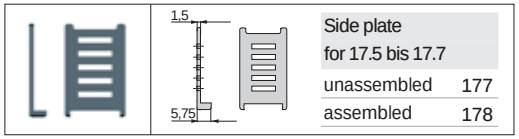
Slotted separator for 17.1 up to 17.4
unassembled 171
assembled 172



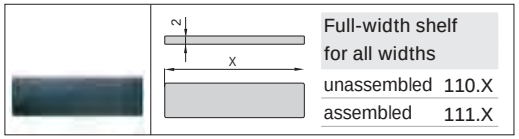
Side plate for 17.1 up to 17.4
unassembled 175
assembled 176



Slotted separator for 17.5 bis 17.7
unassembled 173
assembled 174



Side plate for 17.5 bis 17.7
unassembled 177
assembled 178



Full-width shelf for all widths
unassembled 110.X
assembled 111.X

Slotted separator 171 (17.1 up to 17.4)
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Side plate 175 (17.1 up to 17.4)
Side plate for use with full-width shelf 110.X and slotted separator 171.

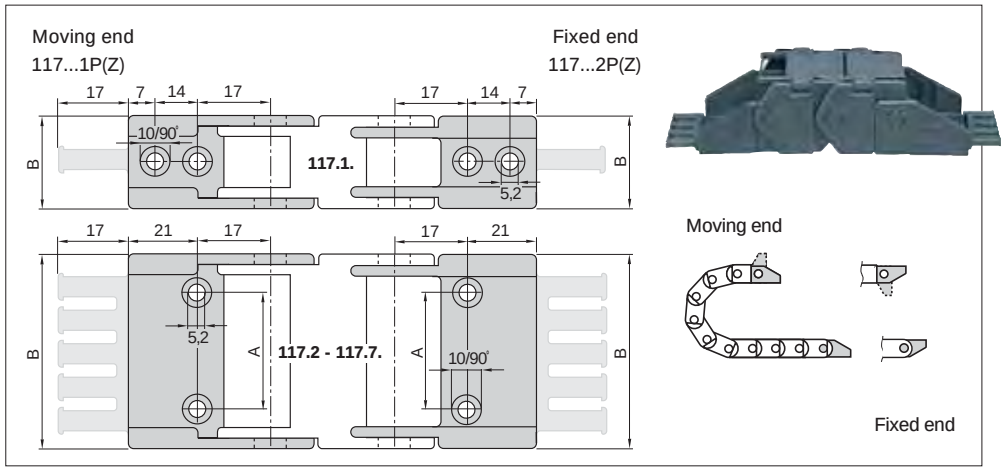
Slotted separator 173 (17.5 up to 17.7)
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Side plate 177 (17.5 up to 17.7)
Side plate for use with full-width shelf 110.X and slotted separator 174.

Full-width shelf 110.X (for all widths)
this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves (for all widths)

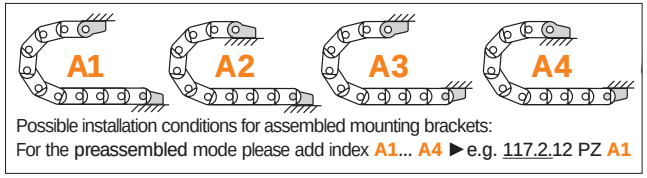
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	110.15	111.15	050	110.50	111.50	100	110.100	111.100
025	110.25	111.25	063	110.63	111.63			
038	110.38	111.38	080	110.80	111.80			



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index		Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
1.	▶	117.1.12PZ	117.1.12P	–	25,5	2
2.	▶	117.2.12PZ	117.2.12P	12	35,5	3
3.	▶	117.3.12PZ	117.3.12P	25	48,5	4
4.	▶	117.4.12PZ	117.4.12P	37	60,5	5
5.	▶	117.5.12PZ	117.5.12P	48	76	6
6.	▶	117.6.12PZ	117.6.12P	65	93	8
7.	▶	117.7.12PZ	117.7.12P	85	113	10

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ►e.g. 117.2.12 PZ **A1**

Part No. structure

117.2.12 PZ **A1**

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

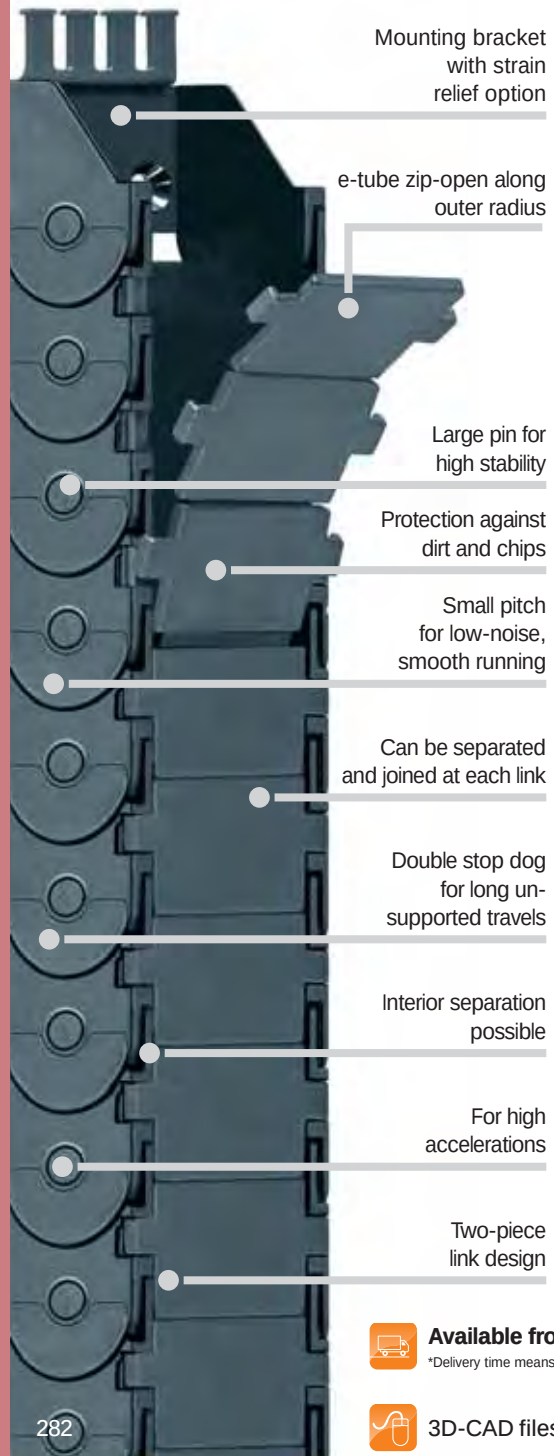
Single-part order

Mounting bracket Moving end

117.2.1 PZ **A1** (preass. + tiewrap plate)

Mounting bracket Fixed end

117.2.2 PZ **A1** (preass. + tiewrap plate)



Fast opening, enclosed zipper-band

When to use Series R17:

- If a very small e-tube with an inner height of 32 mm and smallest bending radii are required
- For inner widths up to 63 mm
- For unsupported lengths up to 1,20 m and fill weights up to 1,5 kg/m
- If chip protection is required
- If high stability and excellent service life is required
- Small pitch for smooth running
- If fast, zipper-like accessibility to cables is required

When to use a different igus® Series:

- If an e-chain® with zipper opening mechanism is required
- ▶ Series 17 zipper e-chain®, page 276
- If snap-open accessibility along the inner radius is required
- ▶ Series B17i E2 mini, page 388
- If maximum stability is required
- ▶ Series R4.32, page 645
- If torsion occurs
- ▶ Series E16/Z16 easy chain®, page 190
- For gliding applications
- ▶ Series 2600/2700/2650/2680 E2/000, page 444

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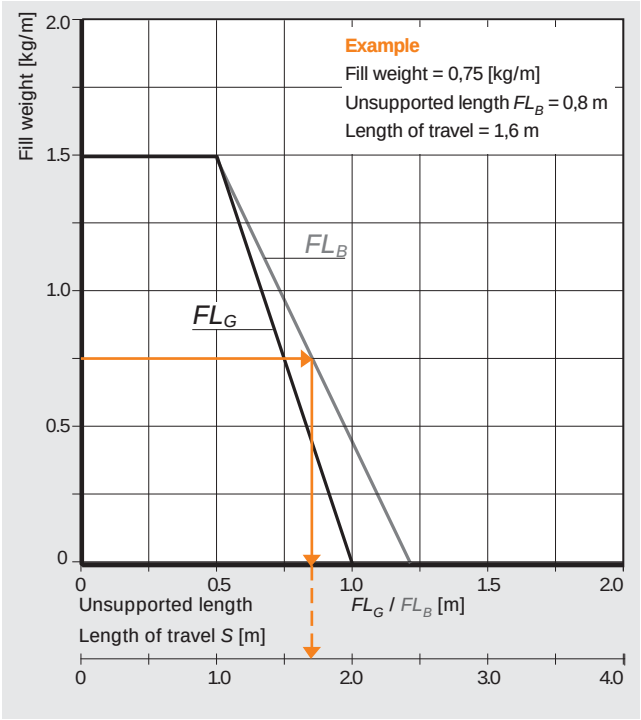
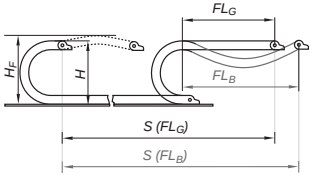
*Delivery time means time until shipping of goods (after technical release)

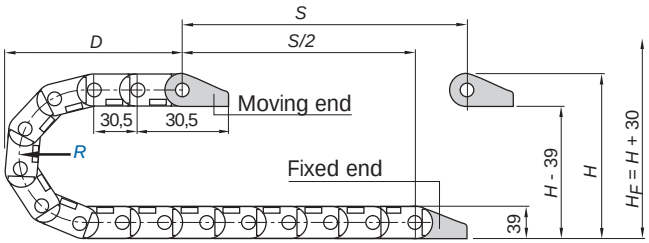
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/R17





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 234

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	063	075	100	125
H	165	189	239	289
D	128	140	165	190
K	260	300	380	455

The required clearance height: $H_F = H + 30$ mm (with 1,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



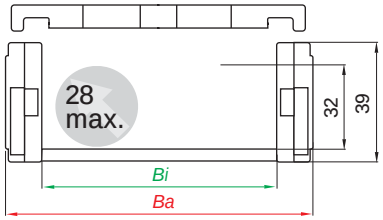
e-tube | Series R17 | zip-open along outer radius

e-tube zip-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
R17. 015 .*R*.0	15	26	| 063 | 075 | 100 | 125 |	≈ 0,57
R17. 025 .*R*.0	25	36	| 063 | 075 | 100 | 125 |	≈ 0,64
R17. 063 .*R*.0	63	74	| 063 | 075 | 100 | 125 |	≈ 0,88

Supplement Part No. with required radius (*R*) Example: R17.015.063.0

Order key
R17. 015. 063. 0 e-tube

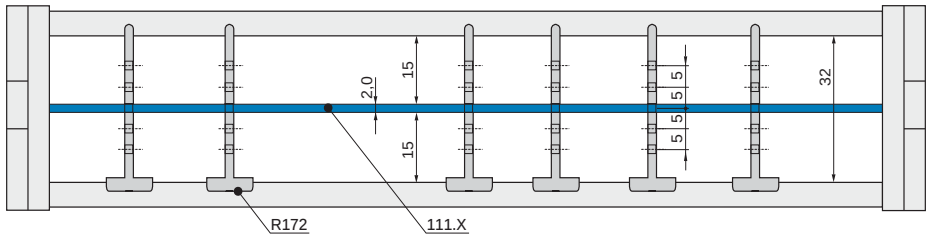
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 235

Configuration options and order keys, overview ▶ page 236

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-tubes	
unassembled	R171
assembled	R172

Slotted separator R171

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



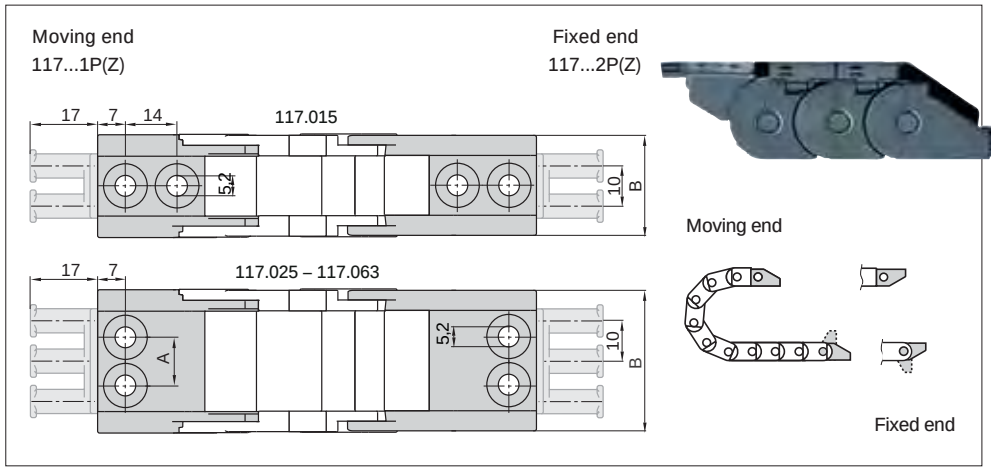
Full-width shelf for e-tubes	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

this option makes sense in applications with many thin cables with similar diameters. For a consequent sub-division. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves

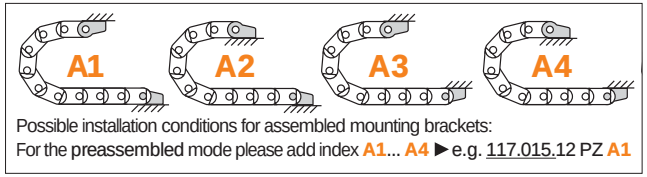
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	110.15	111.15	063	110.63	111.63
025	110.25	111.25			



Polymer locking, one-piece | Universal for e-tubes
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	117.015.12PZ	117.015.12P	–	25,7	2
025. ▶	117.025.12PZ	117.025.12P	12	35,7	3
063. ▶	117.063.12PZ	117.063.12P	48	73,7	6

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ▶ e.g. 117.015.12 PZ **A1**

Part No. structure

117.015.12 PZ **A1**

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

117.015.1 PZ **A1** (preass. + tiewrap plate)

Mounting bracket Fixed end

117.015.2 PZ **A1** (preass. + tiewrap plate)



System E2 Allrounder

micro | mini | E2/000 e-chains® and e-tubes



E2 micro - for smallest spaces

Perfect to use for short travels and unsupported applications

- e-chains® for limited space conditions
- One- and two-piece e-chains® available
- Smallest inner heights and bending radii
- Very lightweight, easy to assemble and cost-efficient
- Mounting brackets with or without strain relief option available
- Inner heights *hi:* 5 - 15 mm

► **www.igus.eu/eu/E2micro**

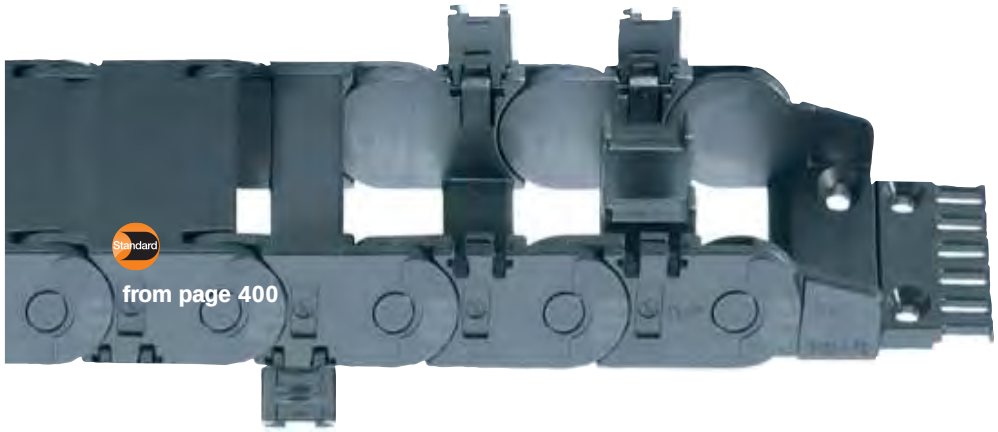


E2 mini - small and medium sizes

Perfect to use for short travels and unsupported applications

- Small pitch for smooth running
- One- and two-piece e-chains® available
- Smallest inner heights and bending radii
- Very lightweight, easy to assemble and cost-efficient
- Mounting brackets with or without strain relief option available
- Inner heights *hi:* 17 - 41 mm

► **www.igus.eu/eu/E2mini**



System E2/000 - The E2 Standard

Available as e-chain®, half and fully enclosed e-tube, combinable variations

- Open crossbar left or right quickly with screwdriver or the igus® e-chain® opener
- Lightning fast with thumb catch - secure fit without additional locking devices
- Excellent mechanical stability, long life due to design and material
- Very easy to assemble and cost-efficient due to the 2-piece design
- Suitable for long (gliding) travels and unsupported applications
- Extender crossbars for a large increase of the interior height and for the smooth guiding of hoses
- Many accessories are available
- Inner heights *hi:* 21 - 45 mm

► **www.igus.eu/eu/E2000**



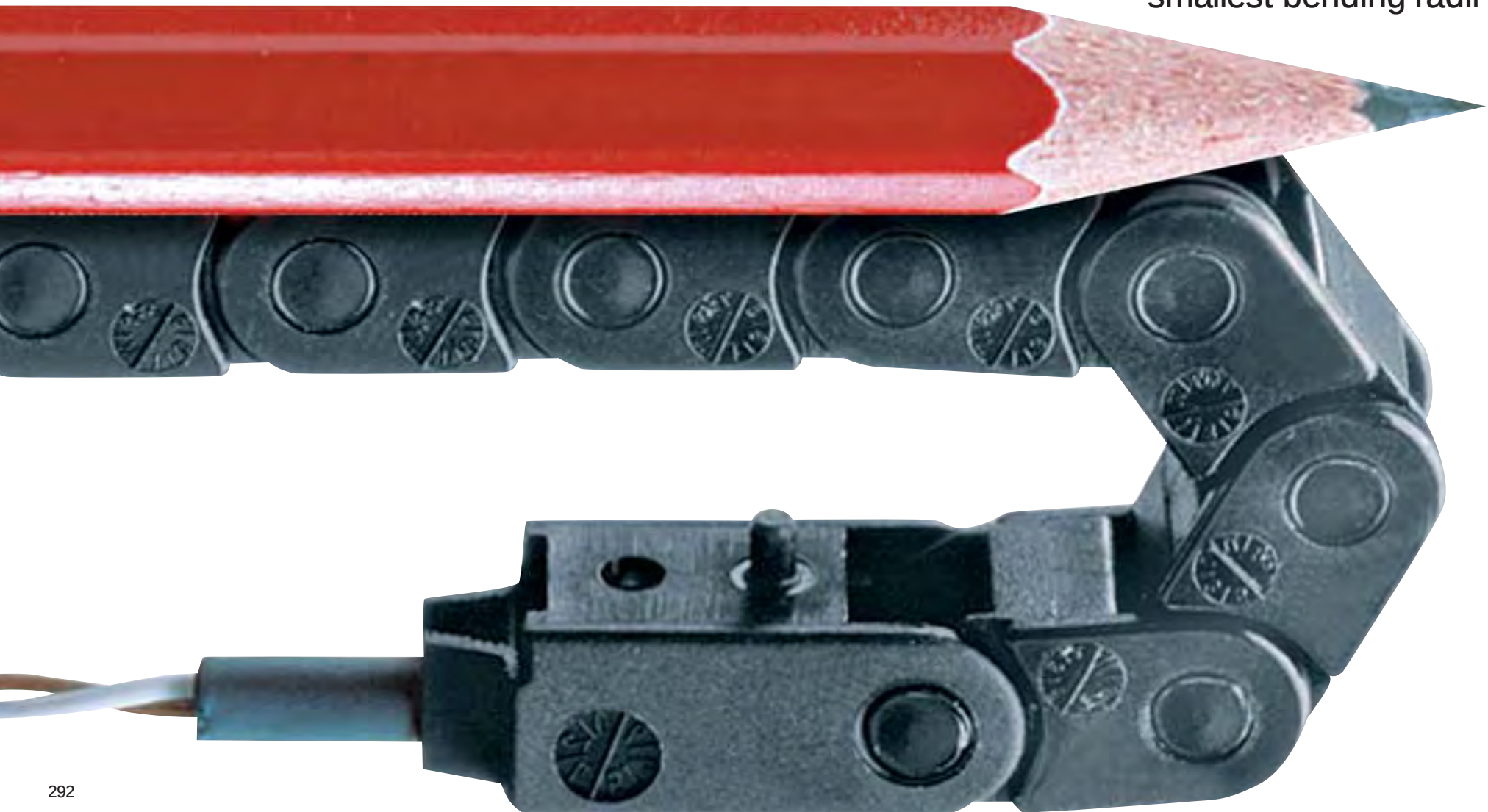
New in this catalog

Next generation of small igus® e-chains®

● Lighter, more stable and easier to open ● Cannot be opened or snapped open in the inner or outer radius ● In 2 sizes available: 10 mm, 15 mm ● An e-chain® opener is included with every Series that can be opened, which significantly reduces installation time, especially for long lengths ● +25% more unsupported lenghts compared to Series 08 ● Many accesories
More information ►www.igus.eu/E2.1open

igus®
E2 micro

Smallest inner heights, smallest bending radii



Smallest inner heights and bending radii - E2 micro e-chains®

E2 micro are very small, one-piece or two-piece (B07/B09), lightweight e-chains® ideal for high dynamic applications. E2 micro e-chains® are very cost effective and available in thousands of variations. igus® also offers a host of accessories and fixation options. "Upgrades" to openable versions are available for many types. In these cases they are interchangeable and offer more services as repair kits or new installations.

Typical industries and applications

- Models (micro e-chains®)
- Automatic doors
- Vehicles
- Measuring machines
- Electric equipment
- Handlings
- Pick and place robots
- General machinery



Cleanroom test upon request

Special equipment: Electrically conductive ESD/ATEX version upon request

42 dB(A) tested in igus® lab, v = 1,0 m/s unsupported, Series 06.10.038.0

UL94-V2 classifications - for Series 03, 074, 094 (UL94-V0 upon request)

iF product design award
1989 igus® Series 05



igus® E2 micro e-chains® are robust for standing applications



Sliding door in train - UL94-V2 version



Sliding door in subway with igus® chainflex® CF9 cable for smallest spaces

Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	Page
 **E2 micro - One-piece e-chains®** One-piece, non snap-open							
03	5,0	5 - 10	8,7 - 13,7	8,0	10 - 28	0,40	302
04	7,0	7 - 30	12,0 - 35,0	10,0	15 - 48	0,50	306
045	10,3	6 - 64	12,0 - 70,0	12,5	18 - 83	0,50	310
05	10,0	6 - 64	10,0 - 68,0	12,0	18 - 38	0,55	314
06	10,5	6 - 64	12,5 - 71,0	15,0	18 - 38	0,60	318
08	15,0	10 - 50	18,2 - 58,2	19,3	25 - 48	1,00	334
 **E2 micro - One-piece e-chains®** Snap-open along inner radius with film-hinge							
074	10,9	10	16,3 - 46,3	15,0	18 - 38	0,55	326
094	14,3	10	18,2	19,3	28 - 48	1,00	330
 **E2 micro - Two-piece e-chains®** Snap-open along outer radius							
B07	10,3	16 - 40	22,5 - 47,0	15,0	18 - 38	0,55	322
B09	14,3	16 - 40	24,2 - 48,2	19,3	28 - 48	1,00	340

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Twist and click



Twist and separate



Speciality: E2 micro e-chains® - for smallest bending radii with chainflex® cables



Speciality two-piece e-chains®: B07 and B09 snap-open along outer radius. Series 074 and 094 snap-open along inner radius

Technical Data, overview ▶page 298

e-chain® links as single parts, overview ▶page 299

Configuration options and order keys, overview ▶page 300

Assembly video available online at ▶www.igus.eu/eu/video

Technical Data - System E2 micro

Gliding speed / acceleration (maximum)	max. 3 [m/s] / max. 10 [m/s²]
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Material - permitted temperature °C, igumid NB (only Series 03, 074, 094)	-40° up to +80° C
Material lower part - permitted temperature °C, igumid G (only Series B07, B09)	-40° up to +120° C
Material crossbar- permitted temperature °C, igumid NB (only Series B07, B09)	-40° up to +80° C
Flammability class:	igumid G = VDE 0304 IIC UL94-HB / igumid NB = VDE 0304 IIC UL94-V2

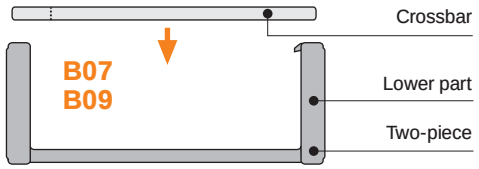
FL_G = with straight upper run FL_B = with permitted sag

Installation methods overview, maximum travels - System E2 micro

e-chain® Series	Unsupported application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application
03	≤ 0,40 m	upon request	upon request	upon request	with rework	upon request
04	≤ 0,50 m	upon request	upon request	upon request	with rework	upon request
045	≤ 0,50 m	upon request	upon request	upon request	with rework	upon request
05	≤ 0,55 m	upon request	upon request	upon request	with rework	upon request
06	≤ 0,60 m	upon request	upon request	upon request	with rework	upon request
B07	≤ 0,55 m	upon request	upon request	upon request	with rework	upon request
074	≤ 0,55 m	upon request	upon request	upon request	with rework	upon request
094	≤ 1,00 m	upon request	upon request	upon request	with rework	upon request
08	≤ 1,00 m	upon request	upon request	upon request	with rework	upon request
B09	≤ 1,00 m	upon request	upon request	upon request	with rework	upon request

Part No. one- and two-piece e-chain® links as single parts - System E2 micro

Two-piece, snap-open along outer radius

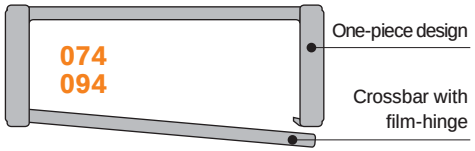


e-chain® Series	e-chain® Crossbar*	e-chain® Lower parts**
B07	090.*Bi*	B07.*Bi* 00.*R*
B09	090.*Bi*	B09.*Bi* 00.*R*

* Crossbar: supplement Part No. with required width index *(Bi)* Example: 090.10

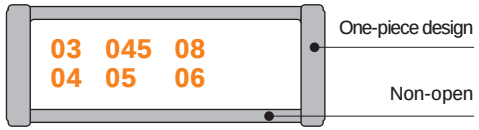
** Lower parts: supplement Part No. with required width index *(Bi)* + 00 and radius *(R)* Example: B07.10 00.10

One-piece design, snap-open along inner radius



e-chain® Series	One-piece e-chain® link	Crossbar with film-hinge
074	one-piece design	snap-open
094	one-piece design	snap-open

One-piece design, non snap-open



e-chain® Series	One-piece e-chain® link
03	one-piece design, non snap-open
04	one-piece design, non snap-open
045	one-piece design, non snap-open
05	one-piece design, non snap-open
06	one-piece design, non snap-open
08	one-piece design, non snap-open

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)

Standard	*NC-Version - (no camber) without pretension*	*Reverse bending radius for circular movements*	*ATEX / ESD classified e-chains®* ⟨Ex⟩ *II 2 GD*
Part No. **Standard**	Part No. **NC-Material**	Part No. **RBR**	Part No. **ESD-Material**
08.50.*R*.0	08.50.*R*.0.**NC**	08.50.*R1/R2*.0	08.50.*R*.0.**ESD**
		(2-5 work days with express surcharge)	
Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* 5-10 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® Series 08 (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 50 links	08.50.038.0
+ Mounting brackets	1 set (+ tiewrap plates)	080.50.12PZ
+ Interior separation	with 2 separators assembled every 2nd link	2 x B09.2.1

Order text: 1,0 m 08.50.038.0 + 080.50.12PZ + 2 x B09.2.1

Order key
08.50.038.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Series 03 - Limited installation space for the smallest, dirt-repellent igus® e-chain®. spray-painting robot shown here

Next generation of small igus® e-chains®

● Lighter, more stable and easier to open ● In 2 designs and 2 sizes available: 10 mm, 15 mm ● An e-chain® opener is included with every Series that can be opened, which significantly reduces installation time ● +25% more unsupported lenghts compared to Series 08 ● Many accesories More information ►www.igus.eu/E2.1open



New in this catalog



Photo not 1:1

Smallest Spaces

When to use the Series 03 E2 micro:

- Smallest igus® e-chain® - Inner dimensions: 5 x 5 mm
- If a very small e-chain® with 5,0 mm inner height and smallest bending radii is required
- For inner widths up to 10 mm
- For unsupported lengths up to 0,40 m and fill weights up to 0,24 kg/m
- If a lightweight and cost-effective e-chain® is required
- If a one-piece, non snap-open e-chain® is required

When to use a different igus® Series:

- If snap-open links are required
- ► Series 047 zipper, page 238
- If quick insertion of cables with preassembled connectors is required
- ► Series E03 easy chain®, page 156

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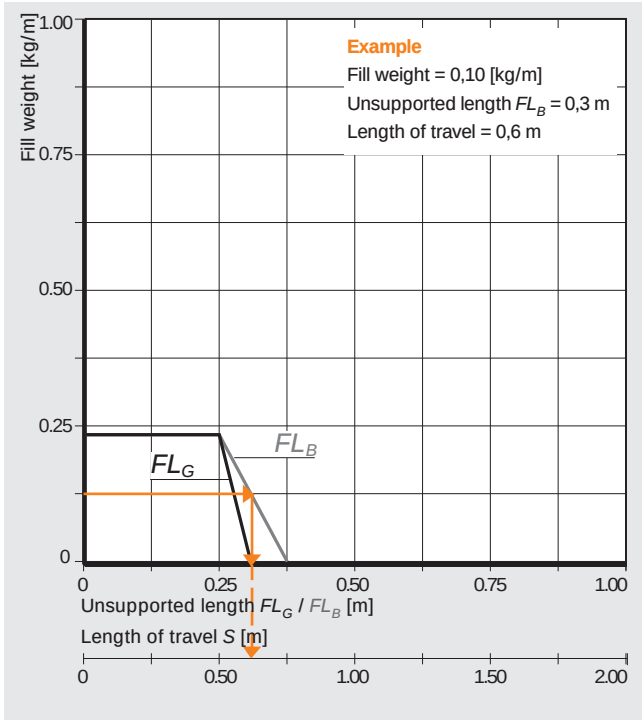
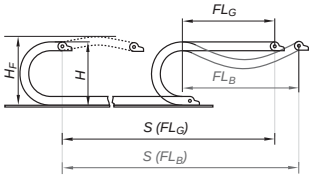
*Delivery time means time until shipping of goods (after technical release)

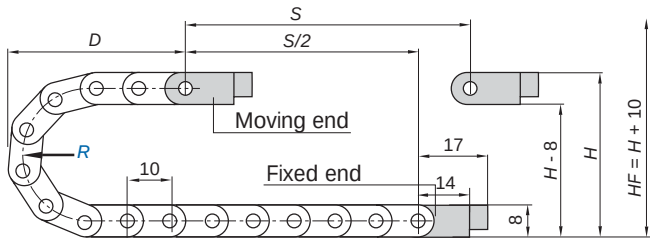
3D-CAD files, configurators, PDF ► www.igus.eu/eu/03





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 10 mm/link
Links/m = 100 (1000 mm)
Chain length = $S/2 + K$

R	010	012	015	018	028
H	28	32	38	44	64
D	29	31	34	37	47
K	55	60	70	80	110

The required clearance height: $H_F = H + 10$ mm (with 0,1 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



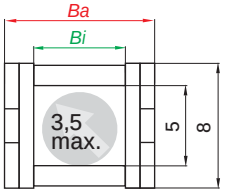
Series 03 | One-piece, non snap-open e-chain®

non snap-open	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
03. 05 .*R*.0	5	8,7	| 010 | 012 | 015 | 018 | 028 |	≈ 0,04
03. 07 .*R*.0	7	10,7	| 010 | 012 | 015 | 018 | 028 |	≈ 0,05
03. 10 .*R*.0	10	13,7	| 010 | 012 | 015 | 018 | 028 |	≈ 0,06

Supplement Part No. with required radius (*R*). Example: 03.05.028.0

Order key
03. 05. 028. 0

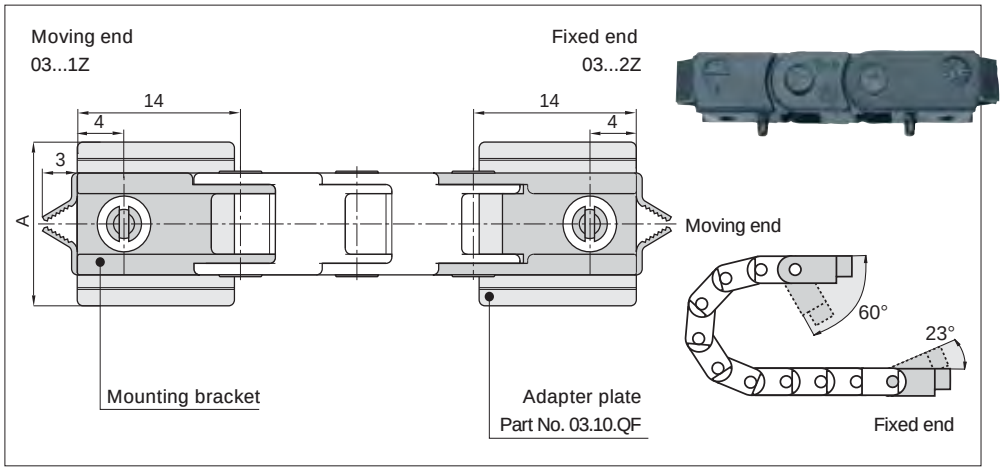
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶page 299

Configuration options and order keys, overview ▶page 300

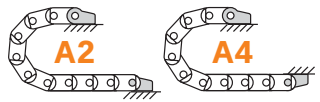
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer pivoting, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set	Dim. A [mm]
.05. ▶	03.05. 12Z	8,7
.07. ▶	03.07. 12Z	10,7
.10. ▶	03.10. 12Z	13,7

- One-piece mounting bracket
- With integrated strain relief
- Corrosion-resistant
- Adapter plate for rapid installation



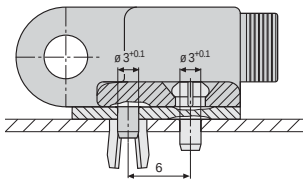
Possible installation conditions:
For the preassembled mode please add index **A2** or **A4**
▶e.g. 03.05.1Z**A2**

Part No. structure
03.05. 12Z **A2**
- A...must be indicated on preassembled configurations
- Full set = 12Z
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
03.05. 1Z **A2** (preassembled)
Mounting bracket Fixed end
03.05. 2Z **A2** (preassembled)

Additional Features





Adapter plate for rapid installation: for all sizes of Part No. 03.10.QF
The adapter has broken edges so that it can be adapted to the respective chain width. It is not absolutely necessary when attaching the mounting brackets. The mounting brackets can also be screwed on without the adapter plate.



Mounting bracket with strain relief option

Very lightweight, cost-effective

One-piece design, non snap-open

Dirt-repellent exterior



Original size 1:1
Outer height 10 mm

Low Weight

When to use the Series 04 E2 micro:

- Small igus® e-chain® - interior dimensions 7 x 7 mm
- If a small e-chain® with an inner height of 7,0 mm and small bending radii is required
- For inner widths up to 30 mm
- For unsupported lengths up to 0,50 m and fill weights up to 0,35 kg/m
- If a lightweight and cost-effective e-chain® is required
- If a one-piece, non snap-open e-chain® is required

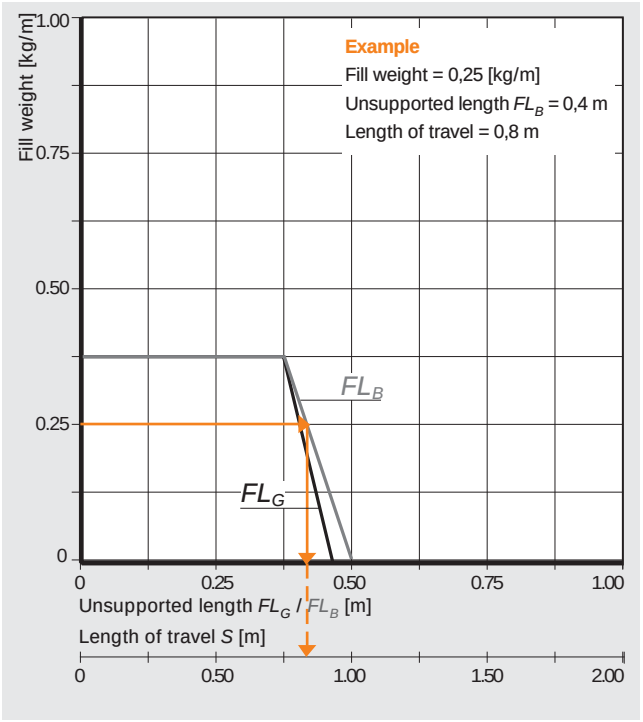
When to use a different igus® Series:

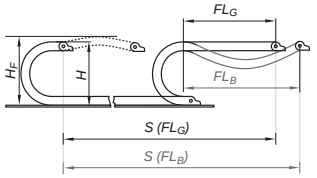
- If snap-open links are required
- ► Series 047 zipper, page 238
- If quick insertion of cables with preassembled connectors is required
- ► Series E04 easy chain®, page 160

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/04

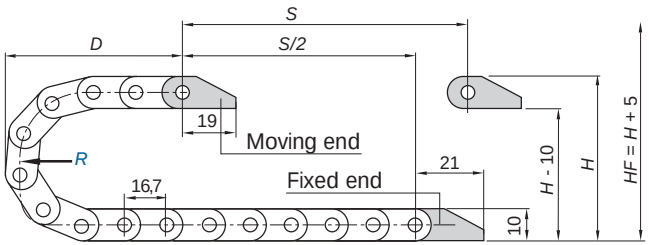
Photo not 1:1





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 16,7 mm/link
Links/m = 60 (1002 mm)
Chain length = $S/2 + K$

R	015	018	028	038	048
H	40	46	66	86	106
D	45	48	58	68	78
K	85	90	125	155	185

The required clearance height: $H_F = H + 5$ mm (with 0,1 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



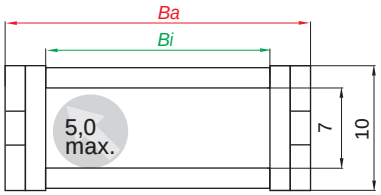
Series 04 | One-piece, non snap-open e-chain®

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
04. 07 .R.0	7	12	| 015 | 018 | 028 | 038 | 048 |	≈ 0,07
04. 10 .R.0	10	15	| 015 | 018 | 028 | 038 | 048 |	≈ 0,08
04. 16 .R.0	16	21	| 015 | 018 | 028 | 038 | 048 |	≈ 0,09
04. 20 .R.0	20	25	| 015 | 018 | 028 | 038 | 048 |	≈ 0,10
04. 30 .R.0	30	35	| 015 | 018 | 028 | 038 | 048 |	≈ 0,11

Supplement Part No. with required radius (*R*). Example: 04.10.028.0

Order key
04. 10. 028. 0

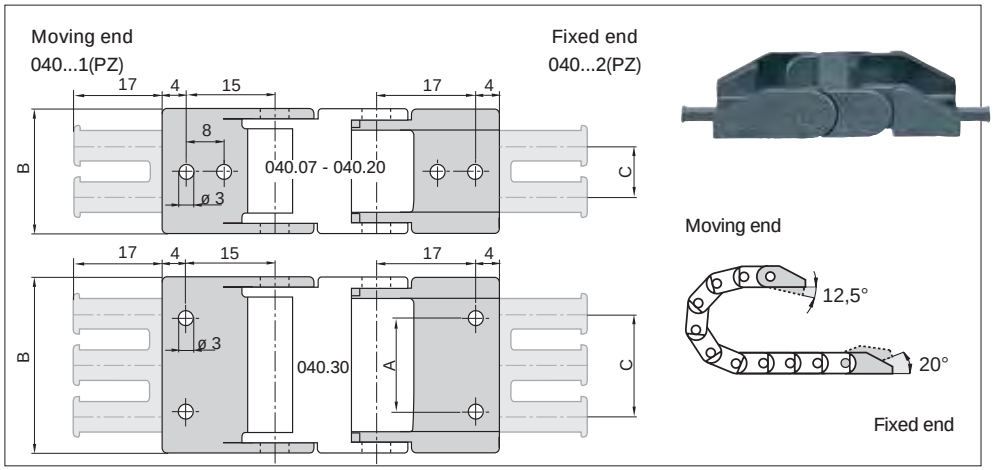
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 299

Configuration options and order keys, overview ▶ page 300

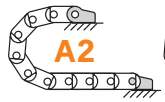
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer pivoting, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Number of teeth
.07.[1)] ▶	040.07.12PZ	040.07.12	–	12	–	1
.10. ▶	040.10.12PZ	040.10.12	–	15	–	1
.16. ▶	040.16.12PZ	040.16.12	–	21	10	2
.20. ▶	040.20.12PZ	040.20.12	–	25	10	2
.30. ▶	040.30.12PZ	040.30.12	22	35	20	3

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions: For the preassembled mode please add index **A2** or **A4** ▶ e.g. 040.10.12 PZ**A2**
1) For width index .07. A1 and A3 also possible

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 040.07.QS available from stock



Quickfix - mounting bracket with dowel, available upon request

Part No. structure
040.10.12 PZ **A2**

- A…must be indicated on preassembled configurations With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
040.10.1 PZ **A2** (preass. + tiewrap plate)
Mounting bracket Fixed end
040.10.2PZ **A2** (preass. + tiewrap plate)



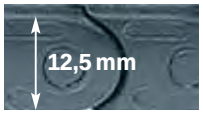
Small pitch, smooth running

When to use the Series 045 E2 micro:

- If a small e-chain® with an inner height of 10,3 mm and small pitch is required
- For inner widths up to 64 mm
- For unsupported lengths up to 0,50 m and fill weights up to 0,25 kg/m
- Small pitch for smooth running
- For very lightweight applications - recommended for low inertia applications
- If a one-piece, non snap-open e-chain® is required

When to use a different igus® Series:

- If snap-open links are required
- ▶ Series 047 zipper, page 238
- If quick insertion of cables with preassembled connectors is required
- ▶ Series E06 easy chain®, page 168
- If extra torsional rigidity is required
- ▶ Series 06 E2 micro, page 318



Original size 1:1
Outer height 12,5 mm

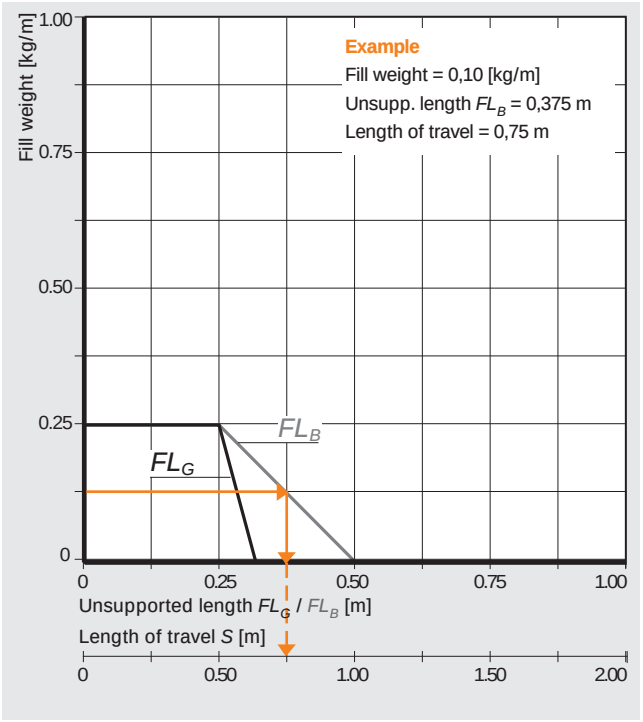


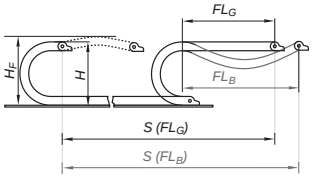
Series 046 with molded-in separator available.
More information ▶ page 312

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/045

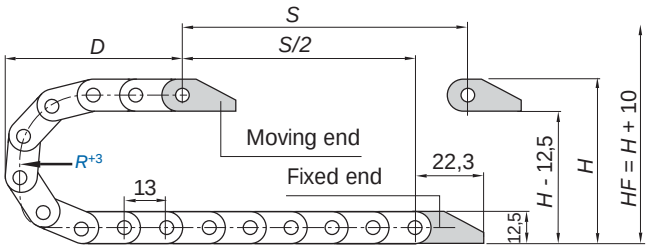
Photo not 1:1





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 298

Pitch = 13 mm/link
Links/m = 77 (1001 mm)
Chain length = $S/2 + K$

R	018	028	038	083*
H	48,5	68,5	88,5	178,5
D	44	54	64	109
K	85	115	150	290

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

*Radius 083 only for 045.20. For all other widths available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series 045 | One-piece, non snap-open e-chain®

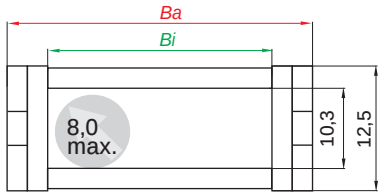
non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
045. 06 .R.0	6	12	| 018 | 028 | 038 | 083* |	≈ 0,09
045. 10 .R.0	10	16	| 018 | 028 | 038 | 083* |	≈ 0,10
045. 16 .R.0	16	22	| 018 | 028 | 038 | 083* |	≈ 0,11
045. 20 .R.0	20	26	| 018 | 028 | 038 | 083 |	≈ 0,13
045. 30 .R.0	30	36	| 018 | 028 | 038 | 083* |	≈ 0,16
045. 64 .R.0	64	70	| 018 | 028 | 038 | 083* |	≈ 0,19

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R). Example: 045.10.028.0

Order key
045. 10. 028. 0

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



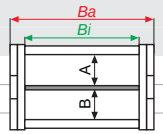
e-chain® links as single parts, overview ▶page 299

Configuration options and order keys, overview ▶page 300

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

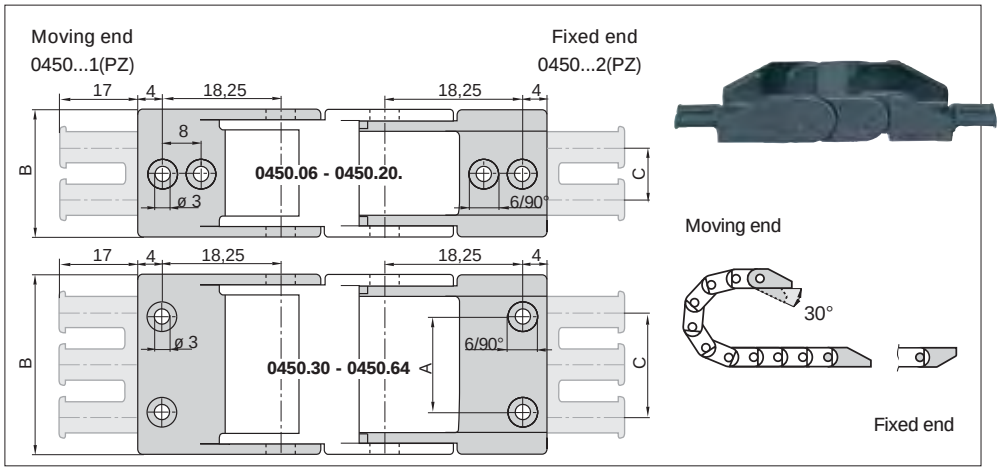
Series 046 | Optional | With molded-in separation

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Dim. A [mm]	Dim. B [mm]	Weight [kg/m]
046. 16 .R.0	16	22	| 018 | 028 | 038 |	4,6	4,6	≈ 0,14



More widths upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R). Example: 046.16.028.0

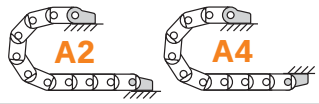


Polymer one-piece, one side pivoting | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Number of teeth
.06. ▶	0450.06.12PZ	0450.06.12	–	12	–	1
.10. ▶	0450.10.12PZ	0450.10.12	–	16	–	1
.16. ▶	0450.16.12PZ	0450.16.12	–	22	10	2
.20. ▶	0450.20.12PZ	0450.20.12	–	26	10	2
.30. ▶	0450.30.12PZ	0450.30.12	22	36	20	3
.64. ▶	0450.64.12PZ	0450.64.12	56	70	50	6

Mounting bracket with strain relief tiewrap plate has reductions of ø 3 mm / ø 6 mm, 90°.
Mounting bracket without strain relief tiewrap plate only has holes of ø 3 mm.

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions:
For the preassembled mode please add index **A2** or **A4**
▶e.g. 045.10.1Z**A2**

Part No. structure
0450.10.12 PZ **A2**

- A…must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
0450.10.1 PZ **A2** (preass. + tiewrap plate)
Mounting bracket Fixed end
0450.10.2PZ **A2** (preass. + tiewrap plate)



Photo not 1:1

Low weight, high dynamic

When to use the Series 05 E2 micro:

- If a small e-chain® with an inner height of 10 mm and small bending radii is required
- For inner widths up to 64 mm
- For unsupported lengths up to 0,55 m and fill weights up to 0,35 kg/m
- For very lightweight applications - recommended for low inertia applications
- If a one-piece, non snap-open e-chain® is required

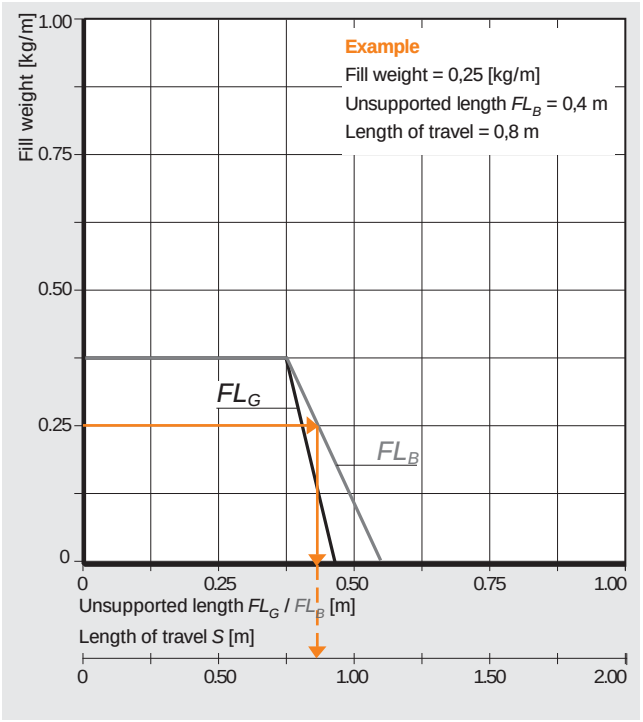
When to use a different igus® Series:

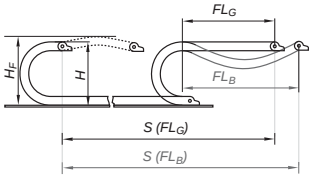
- If snap-open links are required
- ► Series 07 zipper, page 242
- If quick insertion of cables with preassembled connectors is required
- ► Series E06 easy chain®, page 168
- If extra torsional rigidity is required
- ► Series 06 E2 micro, page 318

iF product design award
1989 igus® Series 05

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

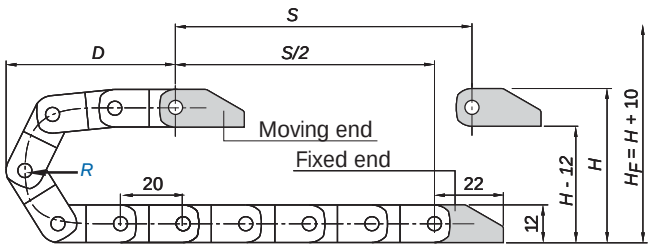
3D-CAD files, configurators, PDF ► www.igus.eu/eu/05





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	018	028	038
H	48	68	88
D	54	64	74
K	100	130	160

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



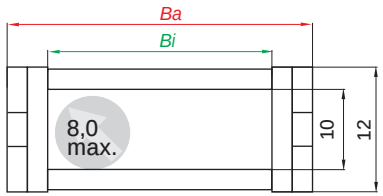
Series 05 | One-piece, non snap-open e-chain®

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
05. 06 .R.0	6	10	| 018 | 028 | 038 |	≈ 0,06
05. 10 .R.0	10	14	| 018 | 028 | 038 |	≈ 0,07
05. 16 .R.0	16	20	| 018 | 028 | 038 |	≈ 0,07
05. 20 .R.0	20	24	| 018 | 028 | 038 |	≈ 0,08
05. 30 .R.0	30	34	| 018 | 028 | 038 |	≈ 0,09
05. 64 .R.0	64	68	| 018 | 028 | 038 |	≈ 0,19

Supplement Part No. with required radius (*R*). Example: 05.10.028.0

Order key
05. 10. 028. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



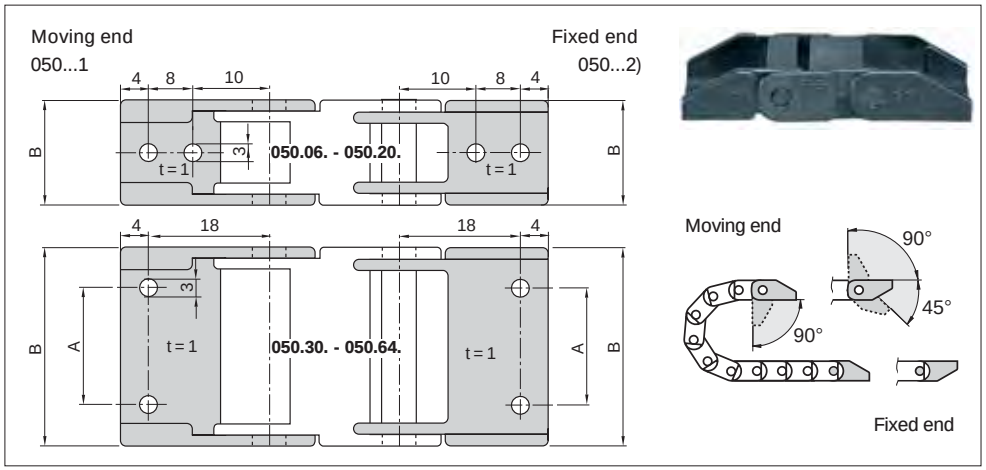
e-chain® links as single parts, overview ▶page 299

Configuration options and order keys, overview ▶page 300

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Next generation of small igus® e-chains®
● Lighter, more stable and easier to open ● In 2 designs and 2 sizes available: 10 mm, 15 mm ● An e-chain® opener is included with every Series that can be opened, which significantly reduces installation time ● +25% more unsupported lenghts compared to Series 08 ● Many accesories More information ▶www.igus.eu/E2.1open



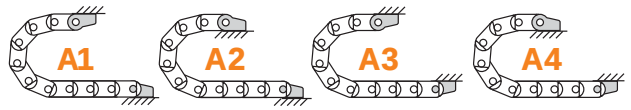


Polymer one-piece, one side pivoting | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set one-piece	Dim. A [mm]	Dim. B [mm]
.06. ▶	050.06.12	–	10,7
.10. ▶	050.10.12	–	14,7
.16. ▶	050.16.12	–	20,7
.20. ▶	050.20.12	–	24,7
.30. ▶	050.30.12	22	34,7
.64. ▶	050.64.12	56	68,7



- One-piece mounting bracket
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶e.g. 050.10.12PZA1

Part No. structure
050.10.12 A1
- A...must be indicated on preassembled configurations
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
050.10.1 PZ A1 (preassembled)
Mounting bracket Fixed end
050.10.2PZ A1 (preassembled)



Mounting bracket with strain relief option

One-piece design, non snap-open

Very lightweight, cost-effective

Dirt-repellent exterior

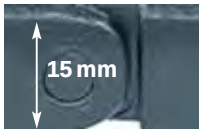
Low weight, high dynamic

When to use the Series 06 E2 micro:

- If a small e-chain® with an inner height of 10,5 mm and small bending radii is required
- For inner widths up to 64 mm
- For unsupported lengths up to 0,62 m and fill weights up to 0,48 kg/m
- If extra torsional rigidity is required
- If a one-piece, non snap-open e-chain® is required

When to use a different igus® Series:

- If snap-open links are required
- ► Series 07 zipper, page 242
- ► Series B07 E2 micro, page 322
- If quick insertion of cables with preassembled connectors is required
- ► Series E06 easy chain®, page 168
- If very quiet operation is required
- ► Series 045 E2 micro, page 310



Original size 1:1
Outer height 15 mm

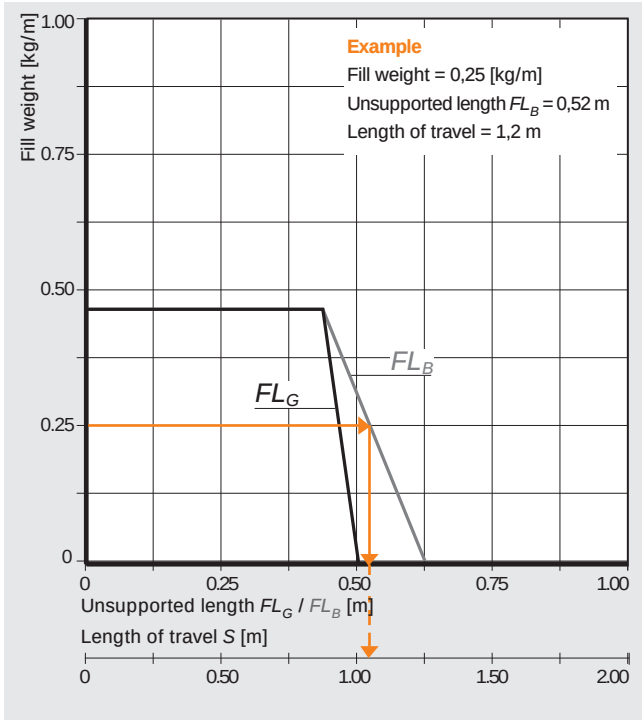


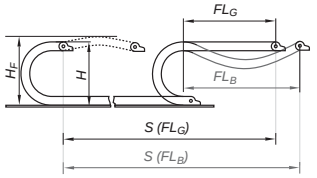
Series 06 with molded-in separator available.
More information ► page 320

Photo not 1:1

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

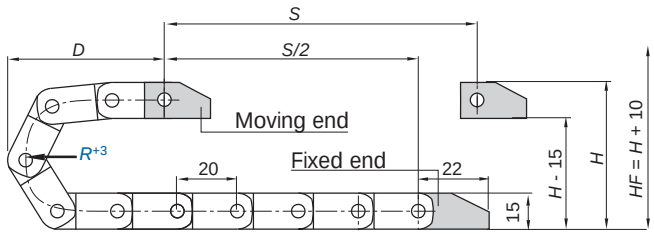
3D-CAD files, configurators, PDF ► www.igus.eu/eu/06





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	018	028	038
H	51	71	91
D	56	66	76
K	100	130	160

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"

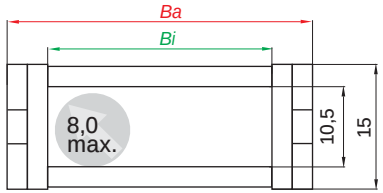


Series 06 | One-piece, non snap-open e-chain®

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
06. 06 .R.0	6	12,5	| 018 | 028 | 038 |	≈ 0,13
06. 10 .R.0	10	16,5	| 018 | 028 | 038 |	≈ 0,14
06. 16 .R.0	16	22,5	| 018 | 028 | 038 |	≈ 0,16
06. 20 .R.0	20	27	| 018 | 028 | 038 |	≈ 0,17
06. 30 .R.0	30	37	| 018 | 028 | 038 |	≈ 0,20
06. 40 .R.0	40	47	| 018 | 028 | 038 |	≈ 0,23
06. 50 .R.0	50	57	| 018 | 028 | 038 |	≈ 0,26
06. 64 .R.0	64	71	| 018 | 028 | 038 |	≈ 0,30

Supplement Part No. with required radius (R). Example: 06.10.028.0

Order key
06. 10. 028. 0
- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



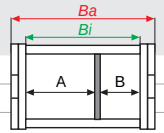
e-chain® links as single parts, overview ▶ page 299

Configuration options and order keys, overview ▶ page 300

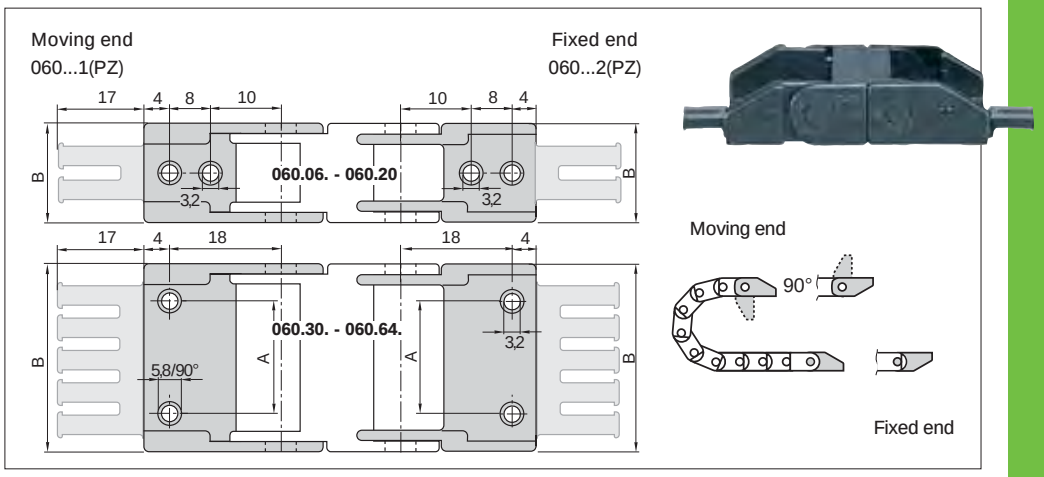
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Series 06 | Optional | With molded-in vertical separation

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Dim. A [mm]	Dim. B [mm]	Weight [kg/m]
06. 16 .R.0.S1	16	22	| 018 |	8,5	6,3	≈ 0,18



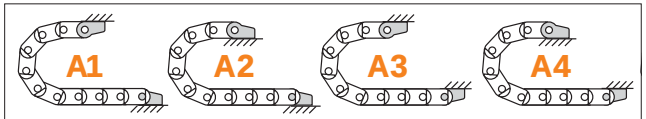
Supplement Part No. with required radius (R). Example: 06.16.018.0.S1



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim. A [mm]	Dim. B [mm]	Number of teeth
.06. ▶	060.06.12PZ	060.06.12	–	12,5	1
.10. ▶	060.10.12PZ	060.10.12	–	16,5	1
.16. ▶	060.16.12PZ	060.16.12	–	22,5	2
.20. ▶	060.20.12PZ	060.20.12	–	27,0	2
.30. ▶	060.30.12PZ	060.30.12	22	37,0	3
.40. ▶	060.40.12PZ	060.40.12	32	47,0	4
.50. ▶	060.50.12PZ	060.50.12	42	57,0	5
.64. ▶	060.64.12PZ	060.64.12	56	71,0	6

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 060.10.12PZA1

Part No. structure
060.10.12 PZ A1
- A...must be indicated on preassembled configurations With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 060.10.QS, 060.16.QS, 060.20.QS, 060.40.QS available from stock



Quickfix - mounting bracket with dowel, available upon request

Single-part order
Mounting bracket Moving end
060.10.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
060.10.2 PZ A1 (preass. + tiewrap plate)



Original size 1:1
Outer height 15 mm

Photo not 1:1

Snap-open along outer radius

When to use the Series B07 E2 micro:

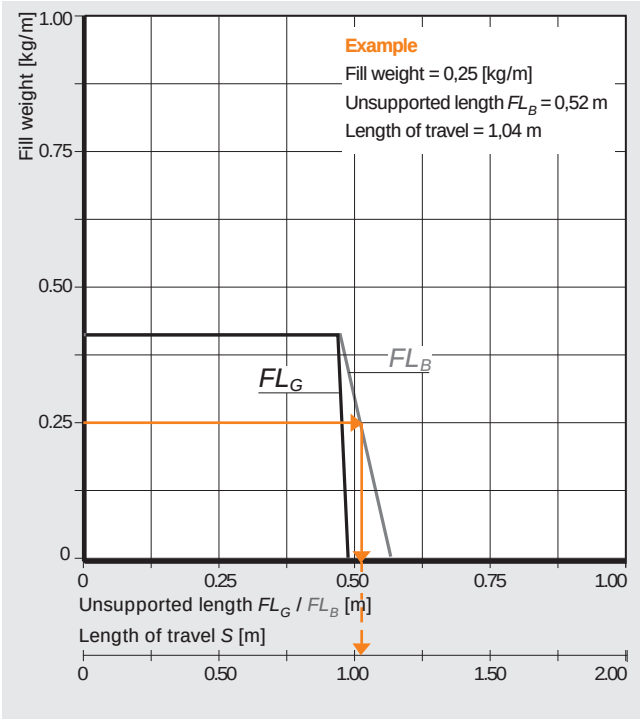
- If a small e-chain® with an inner height of 10,3 mm and smallest bending radii is required
- For inner widths up to 40 mm
- For unsupported lengths up to 0,55 m and fill weights up to 0,4 kg/m
- Small pitch, smooth running
- If a cost-effective, snap-open e-chain® is required
- If quick insertion of cables with preassembled connectors is required

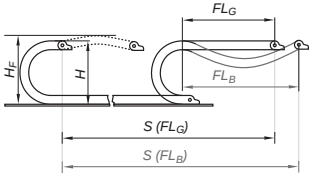
When to use a different igus® Series:

- If snap-open links are not necessary
- ► Series 06 E2 micro, page 318
- If a fully enclosed e-tube is required
- ► Series R07 zipper-e-tube, page 246

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

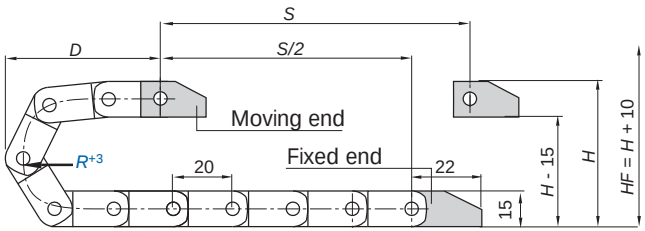
3D-CAD files, configurators, PDF ► www.igus.eu/eu/B07





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	018	028	038
H	51	71	91
D	56	66	76
K	100	130	160

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



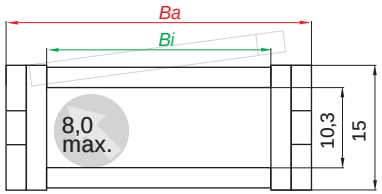
Series B07 | Two-piece link design, snap-open along outer radius

Snap-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
B07. 16 .*R*.0	16	22,5	| 018 | 028 | 038 |	≈ 0,16
B07. 20 .*R*.0	20	27	| 018 | 028 | 038 |	≈ 0,17
B07. 30 .*R*.0	30	37	| 018 | 028 | 038 |	≈ 0,20
B07. 40 .*R*.0	40	47	| 018 | 028 | 038 |	≈ 0,23

Supplement Part No. with required radius (*R*). Example: B07.40.038.0

Order key
B07. 40. 038. 0

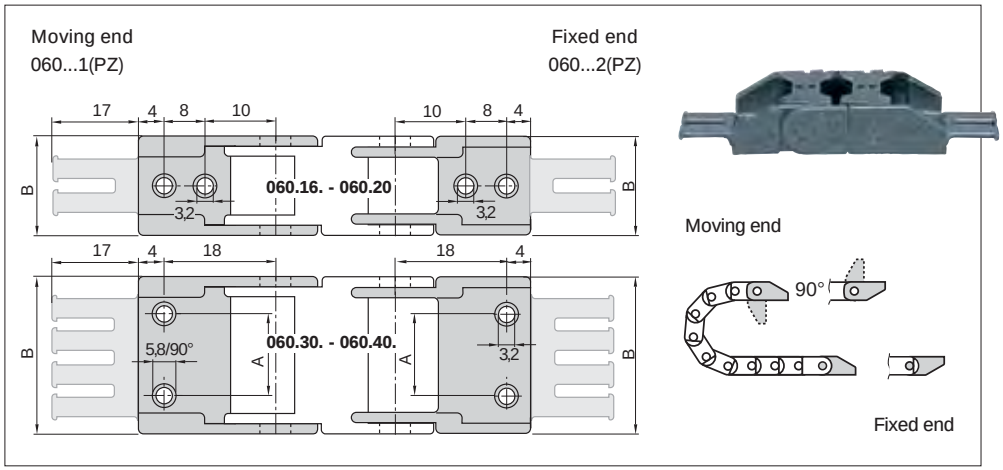
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 299

Configuration options and order keys, overview ▶ page 300

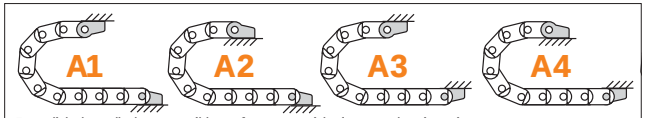
Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
.16. ▶	060.16. 12PZ	060.16. 12	–	22,5	2
.20. ▶	060.20. 12PZ	060.20. 12	–	27,0	2
.30. ▶	060.30. 12PZ	060.30. 12	22	37,0	3
.40. ▶	060.40. 12PZ	060.40. 12	32	47,0	4

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ▶ e.g. 060.40.12PZ**A1**

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 060.10.QS, 060.16.QS, 060.20.QS, 060.40.QS available from stock

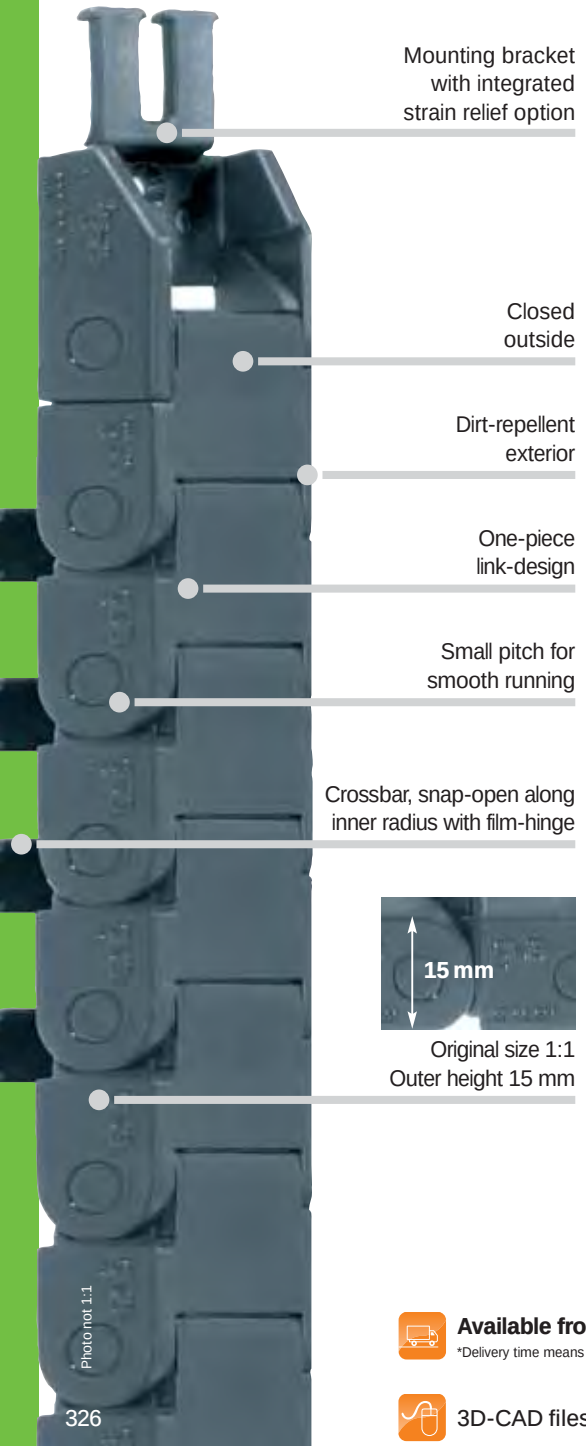


Quickfix - mounting bracket with dowel, available upon request

Part No. structure
060.40.12 PZ **A1**

- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
060.40.1 PZ **A1** (preass. + tiewrap plate)
Mounting bracket Fixed end
060.40.2PZ **A1** (preass. + tiewrap plate)



Snap-open along inner radius

When to use the Series 074 E2 micro:

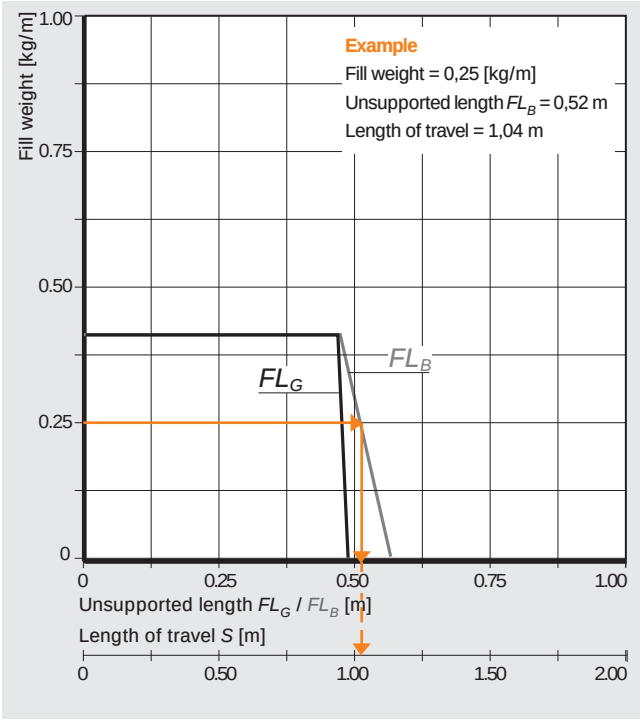
- If a small e-chain® with an inner height of 10,9 mm and small bending radii is required
- Inner width 10 mm
- For unsupported lengths up to 0,55 m and fill weights up to 0,4 kg/m
- Small pitch for smooth running
- If snap-open mechanism with film-hinge is required
- If quick insertion of cables with preassembled connectors is required

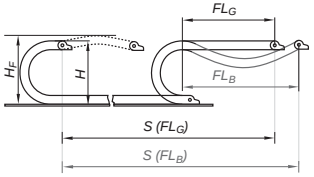
When to use a different igus® Series:

- If snap-open links are not necessary
- ▶ Series 06 E2 micro, page 318
- If a fully enclosed e-tube is required
- ▶ Series R07 zipper-e-tube, page 246

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

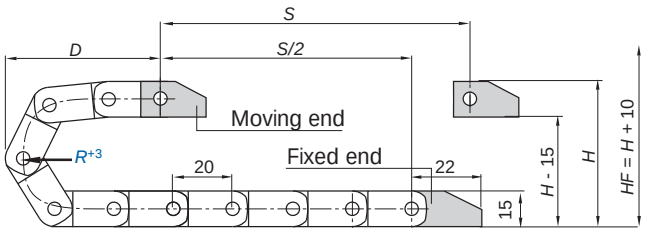
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/074





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	018	028	038
H	51	71	91
D	56	66	76
K	100	130	160

The required clearance height: $H_F = H + 10$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



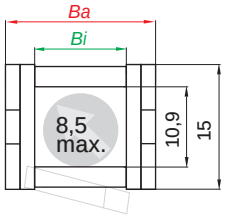
Series 074 | One-piece, snap-open along inner radius with film-hinge

Snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
074. 10 .R.0	10	16,3	| 018 | 028 | 038 |	≈ 0,15
074. 16 .R.0*	16	22,3	| 018 | 028 | 038 |	≈ 0,16
074. 20 .R.0*	20	26,3	| 018 | 028 | 038 |	≈ 0,17
074. 30 .R.0*	30	36,3	| 018 | 028 | 038 |	≈ 0,20
074. 40 .R.0*	40	46,3	| 018 | 028 | 038 |	≈ 0,23

*Width available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R). Example: 074.10.018.0

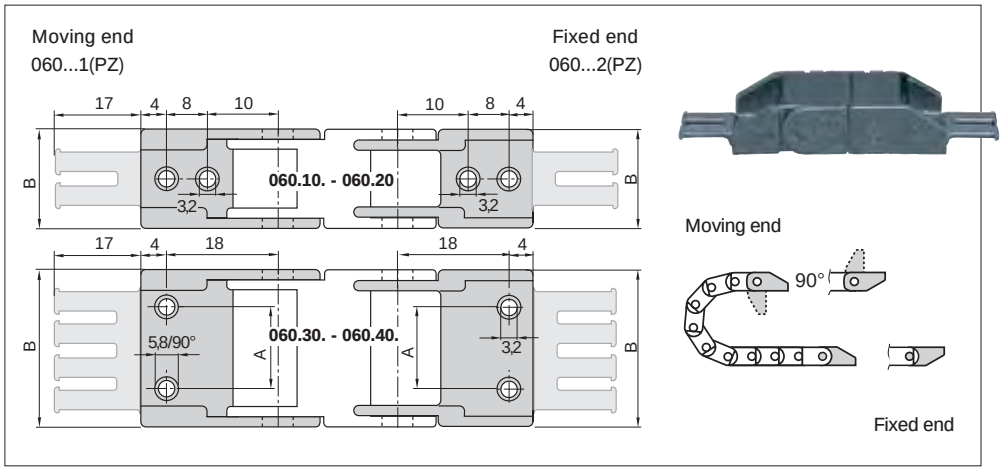
Order key
074. 10. 018. 0
- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ►page 299

Configuration options and order keys, overview ►page 300

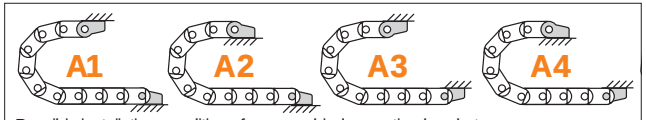
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim. A [mm]	Dim. B [mm]	Number of teeth
.10. ▶	060.10. 12PZ	060.10. 12	–	16,5	1
.16. ▶	060.16. 12PZ*	060.16. 12*	–	22,5	2
.20. ▶	060.20. 12PZ*	060.20. 12*	–	27	2
.30. ▶	060.30. 12PZ*	060.30. 12*	22	37	3
.40. ▶	060.40. 12PZ*	060.40. 12*	32	47	4

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ► e.g. 060.10.12PZA1

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 060.10.QS, 060.16.QS, 060.20.QS, 060.40.QS available from stock

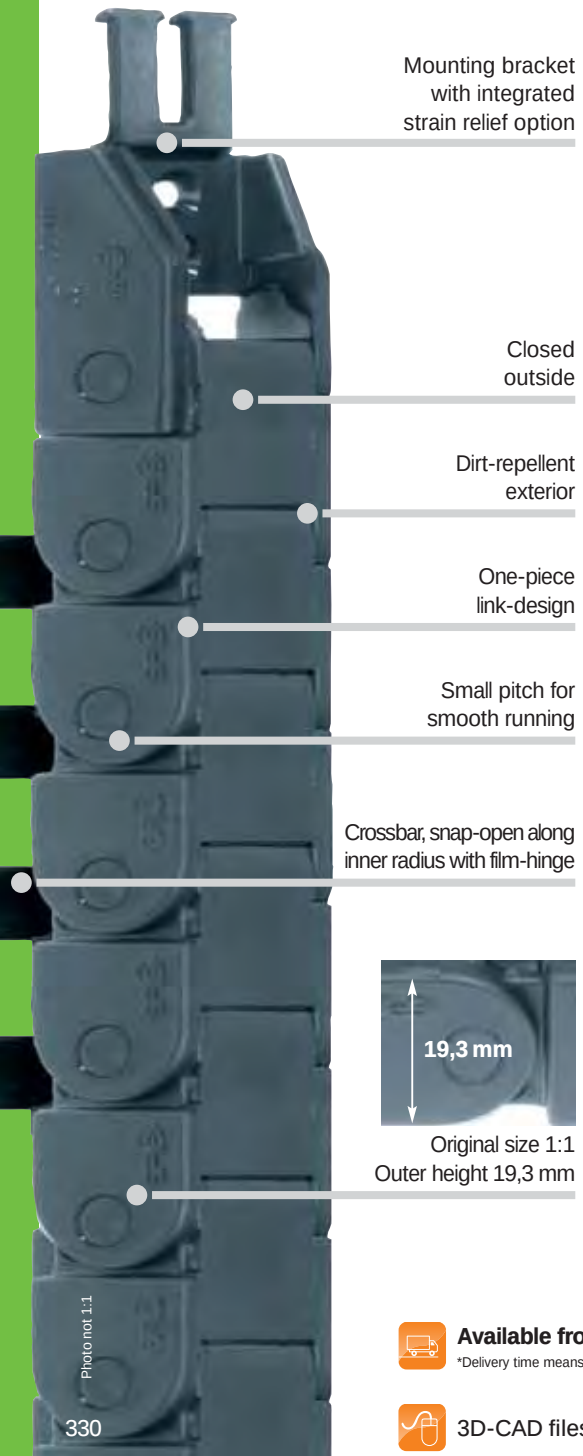


Quickfix - mounting bracket with dowel, available upon request

Part No. structure
060.10.12 PZ A1
- A...must be indicated on preassembled configurations
- With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
060.10.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
060.10.2PZ A1 (preass. + tiewrap plate)





Original size 1:1
Outer height 19,3 mm

Snap-open along inner radius

When to use the Series 094 E2 micro:

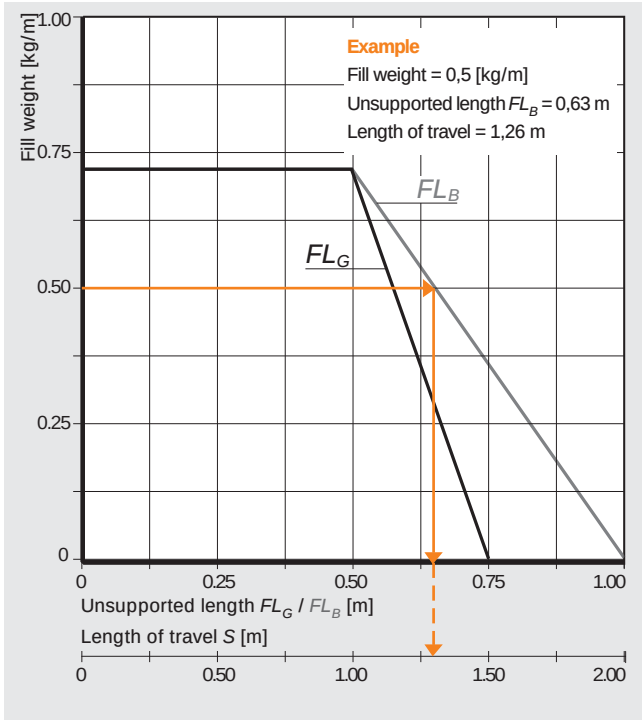
- If a small e-chain® with an inner height of 14,3 mm and small bending radii is required
- Inner width 10 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- Small pitch for smooth running
- If snap-open mechanism with film-hinge is required
- If quick insertion of cables with preassembled connectors is required

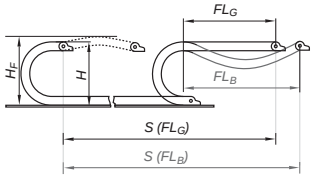
When to use a different igus® Series:

- If snap-open links are not necessary
- ► Series 08 E2 micro, page 334
- If a fully enclosed e-tube is required
- ► Series R09 zipper-e-tube, page 256

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

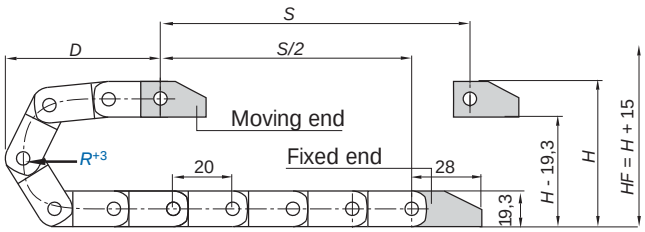
3D-CAD files, configurators, PDF ► www.igus.eu/eu/094





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	028	038	048
H	75	95	115
D	68	78	88
K	130	160	195

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series 094 | One-piece, snap-open along inner radius with film-hinge

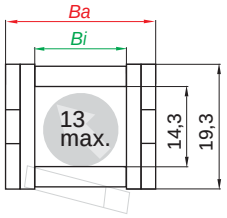
Snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
094. 10 .R.0	10	18,2	| 028 | 038 | 048 |	≈ 0,23
094. 16 .R.0*	16	24,2	| 028 | 038 | 048 |	≈ 0,24
094. 20 .R.0*	20	28,2	| 028 | 038 | 048 |	≈ 0,25
094. 30 .R.0*	30	38,2	| 028 | 038 | 048 |	≈ 0,28
094. 40 .R.0*	40	48,2	| 028 | 038 | 048 |	≈ 0,31

*Width available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*). Example: 094.10.028.0

Order key
094. 10. 028. 0

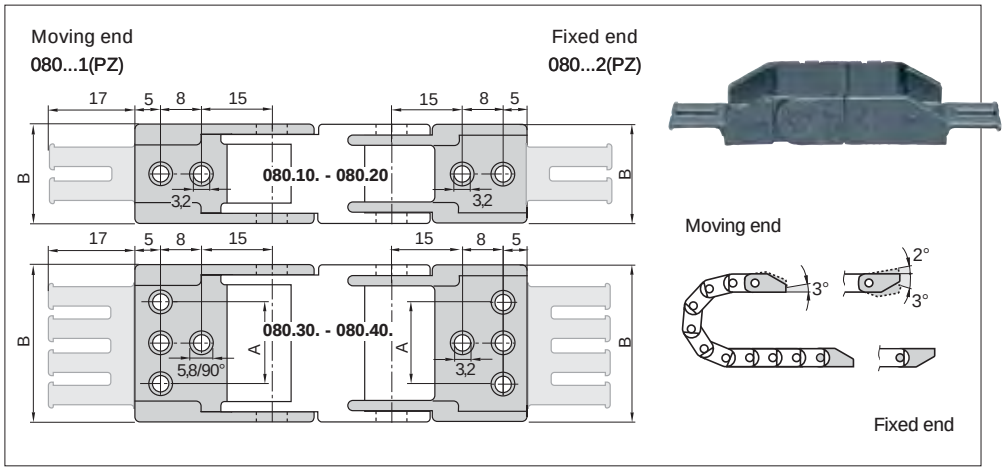
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ►page 299

Configuration options and order keys, overview ►page 300

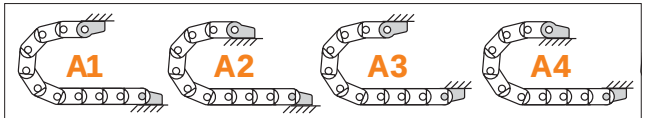
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim. A [mm]	Dim. B [mm]	Number of teeth
.10. ▶	080.10. 12PZ	080.10. 12	–	18,2	1
.16. ▶	080.16. 12PZ*	080.16. 12*	–	24,2	2
.20. ▶	080.20. 12PZ*	080.20. 12*	–	28,2	2
.30. ▶	080.30. 12PZ*	080.30. 12*	22	38,2	3
.40. ▶	080.40. 12PZ*	080.40. 12*	32	48,2	4

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ►e.g. 080.10.12PZA1

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 080.20.QS, 080.30.QS available from stock

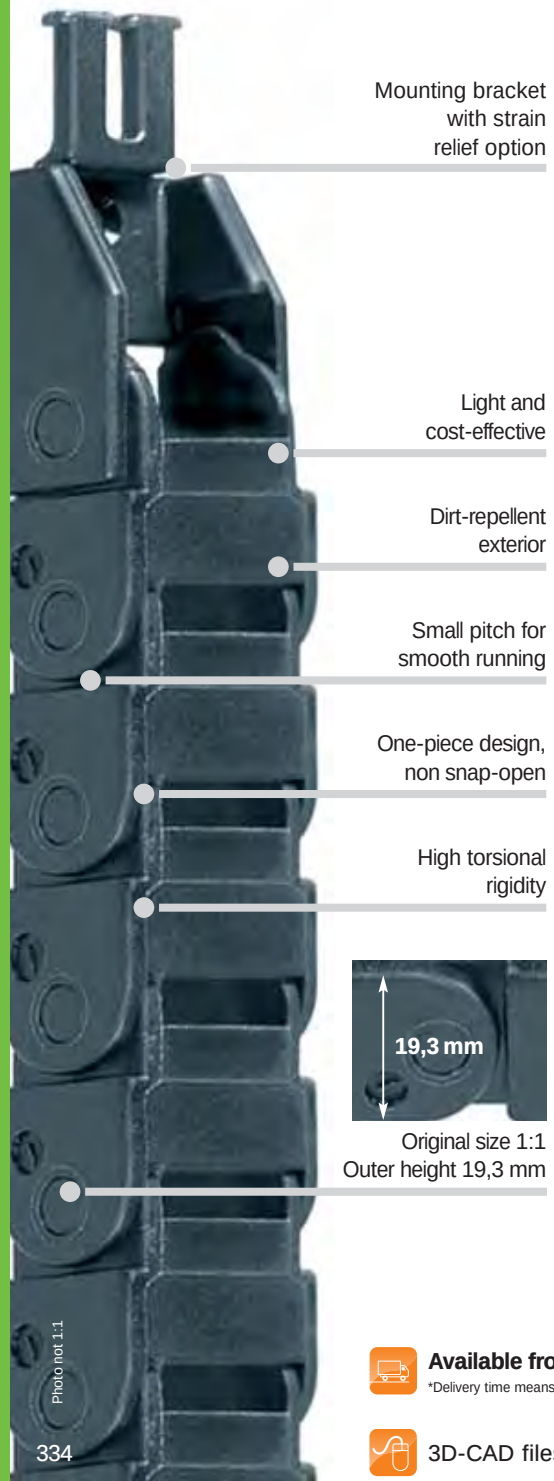


Quickfix - mounting bracket with dowel, available upon request

Part No. structure
080.10.12 PZ A1

- A...must be indicated on preassembled configurations With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
080.10.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
080.10.2 PZ A1 (preass. + tiewrap plate)



Original size 1:1
Outer height 19,3 mm

Photo not 1:1

Small pitch, high stability

When to use the Series 08 E2 micro:

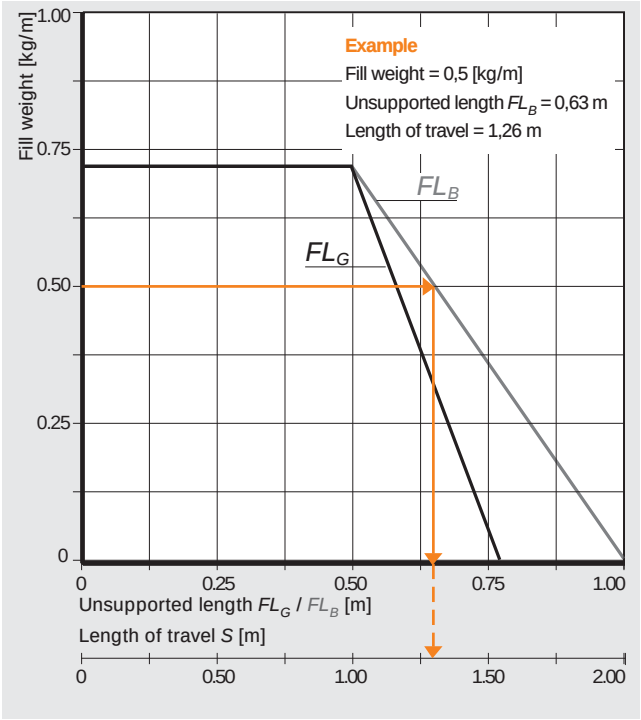
- If a small e-chain® with an inner height of 15 mm and smallest bending radii is required
- For inner widths up to 50 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- Small pitch, smooth running
- If extra torsional rigidity is required
- If a one-piece, non snap-open e-chain® is required
- If an interior separation is required

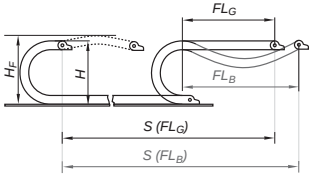
When to use a different igus® Series:

- If snap-open links are required
  - ▶ Series 09 zipper, page 250
  - ▶ Series B09 E2 micro, page 340
- If quick insertion of cables with preassembled connectors is required
  - ▶ Series E08 easy chain®, page 176
- If a fully enclosed e-tube is required
  - ▶ Series R09 zipper-e-tube, page 256

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

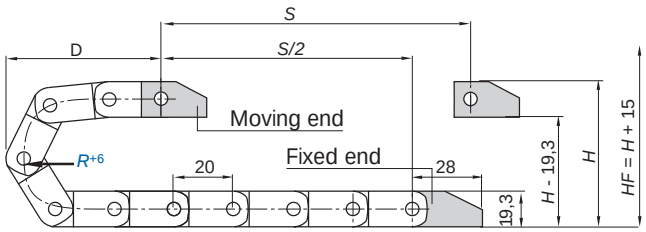
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/08





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	025*	028	038	048*
H	69	75	95	115
D	65	68	78	88
K	120	130	160	195

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

*Radius 025 and 048 available only for certain widths. For all other widths available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series 08 | One-piece, non snap-open e-chain®

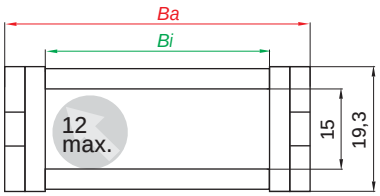
non snap-open	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
08. 10 .*R*.0	10	18,2	| 025 | 028 | 038 | 048 |	≈ 0,21
08. 13 .*R*.0	13	21,2	| 025* | 028 | 038 | 048* |	≈ 0,23
08. 16 .*R*.0	16	24,2	| 025* | 028 | 038 | 048 |	≈ 0,24
08. 20 .*R*.0	20	28,2	| 025 | 028 | 038 | 048 |	≈ 0,25
08. 30 .*R*.0	30	38,2	| 025* | 028 | 038 | 048 |	≈ 0,28
08. 40 .*R*.0	40	48,2	| 025* | 028 | 038 | 048 |	≈ 0,31
08. 50 .*R*.0	50	58,2	| 025* | 028 | 038 | 048 |	≈ 0,37

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*). Example: 08.50.038.0

Order key
08. 50. 038. 0

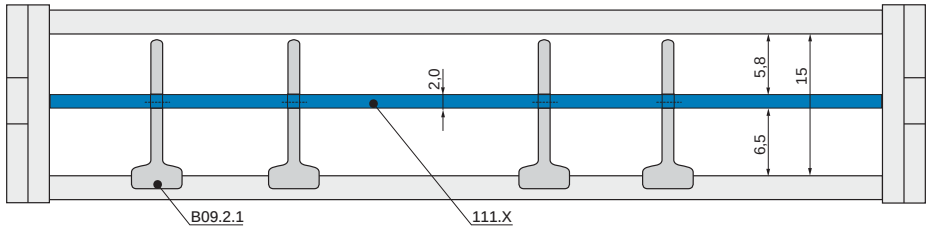
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ►page 299

Configuration options and order keys, overview ►page 300

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!
Note: When utilizing these one-piece links, please assemble the interior separation before mounting the e-chain!



Slotted separator for e-chains®	
unassembled	B09.2
assembled	B09.2.1

Slotted separator B09.2

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



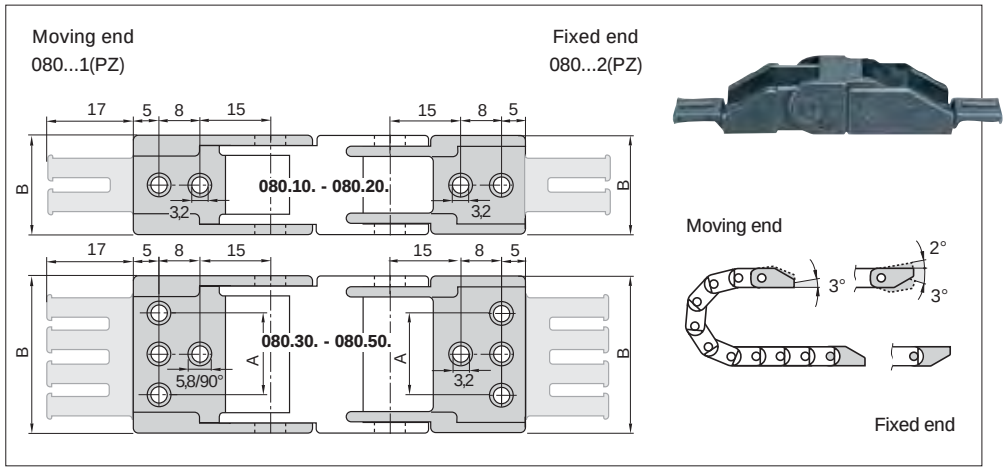
Full-width shelf e-chains®/e-tubes	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision.

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
010	110.10	111.10	020	110.20	111.20	050	110.50	111.50
013	110.13	111.13	030	110.30	111.30			
016	110.16	111.16	040	110.40	111.40			



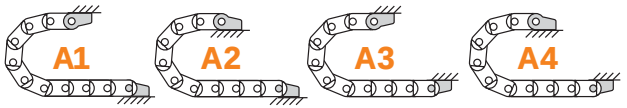


Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
.10. ▶	080.10. 12PZ	080.10. 12	–	18,2	1
.13. ▶	080.13. 12PZ*	080.13. 12	–	21,2	–
.16. ▶	080.16. 12PZ	080.16. 12	–	24,2	2
.20. ▶	080.20. 12PZ	080.20. 12	–	28,2	2
.30. ▶	080.30. 12PZ	080.30. 12	22	38,2	3
.40. ▶	080.40. 12PZ	080.40. 12	32	48,2	4
.50. ▶	080.50. 12PZ	080.50. 12	42	58,2	5

*Available upon request, please consult igus® for delivery time

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index A1... A4 ▶ e.g. 080.50.12PZA1

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 080.20.QS, 080.30.QS available from stock



Quickfix - mounting bracket with dowel, available upon request

Order example
080.50.12 PZ A1
- A1 ... must be indicated on preassembled configurations With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
080.50.1 PZ A1 (preass. + tiewrap plate)
Mounting bracket Fixed end
080.50.2PZ A1 (preass. + tiewrap plate)

Next generation of small igus® e-chains®

● Lighter, more stable and easier to open ● In 2 designs and 2 sizes available: 10 mm, 15 mm ● An e-chain® opener is included with every Series that can be opened, which significantly reduces installation time ● +25% more unsupported lenghts compared to Series 08 ● Many accesories More information ▶ www.igus.eu/E2.1open



New in this catalog



Snap-open along outer radius

When to use the Series B09 E2 micro:

- If a small e-chain® with an inner height of 14,3 mm and small bending radii is required
- For inner widths up to 40 mm
- For unsupported lengths up to 1,0 m and fill weights up to 0,7 kg/m
- Small pitch, smooth running
- If a cost-effective, snap-open e-chain® is required
- If quick insertion of cables with preassembled connectors is required
- If an interior separation is required

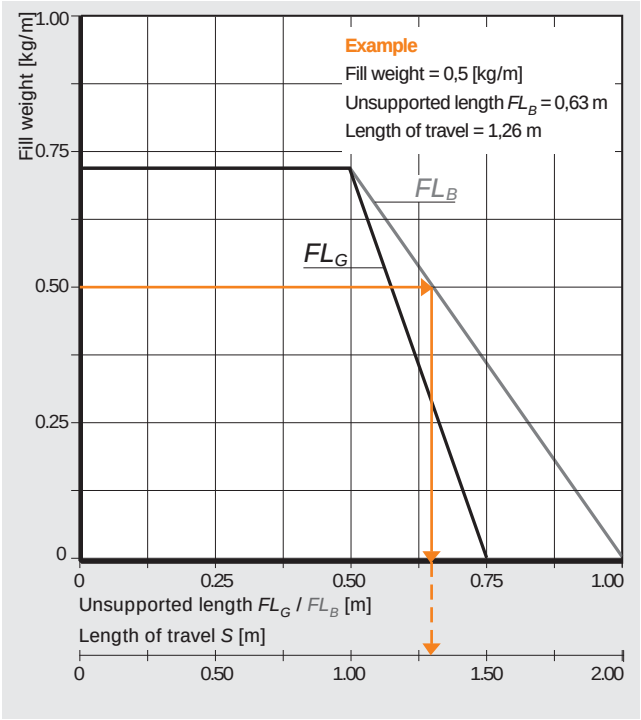
When to use a different igus® Series:

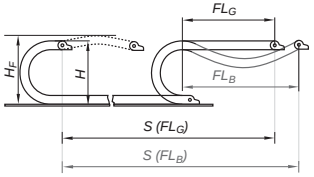
- If snap-open links are not necessary
- ► Series 08 E2 micro, page 334
- If a fully enclosed e-tube is required
- ► Series R09 zipper-e-tube, page 256

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

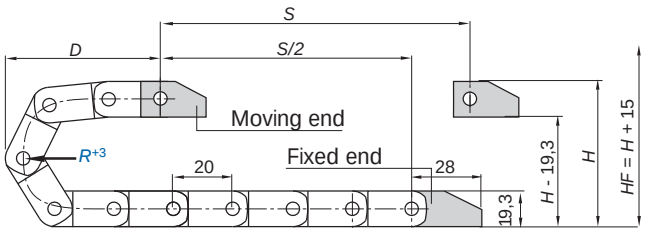
3D-CAD files, configurators, PDF ► www.igus.eu/eu/B09





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 298

Pitch = 20 mm/link
Links/m = 50 (1000 mm)
Chain length = $S/2 + K$

R	028	038	048
H	75	95	115
D	68	78	88
K	130	160	195

The required clearance height: $H_F = H + 15$ mm (with 0,3 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



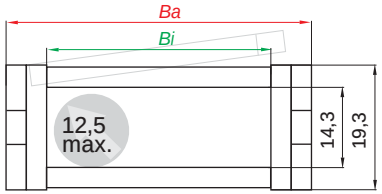
Series B09 | Two-piece link design, snap-open along outer radius

Snap-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
B09. 16 .*R*.0	16	24,2	| 028 | 038 | 048 |	≈ 0,24
B09. 20 .*R*.0	20	28,2	| 028 | 038 | 048 |	≈ 0,25
B09. 30 .*R*.0	30	38,2	| 028 | 038 | 048 |	≈ 0,28
B09. 40 .*R*.0	40	48,2	| 028 | 038 | 048 |	≈ 0,31

Supplement Part No. with required radius (*R*). Example: B09.40.038.0

Order key
B09. 40. 038. 0

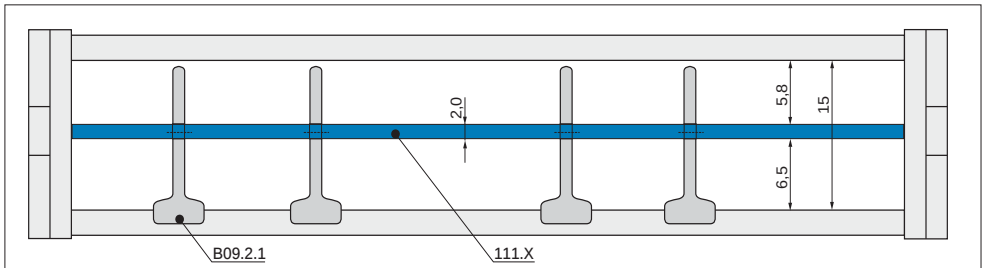
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



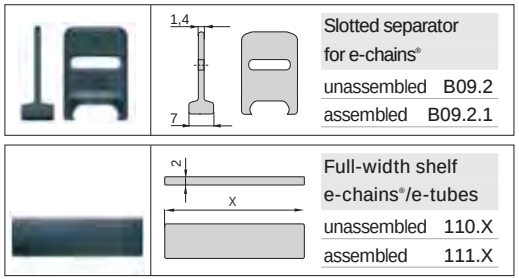
e-chain® links as single parts, overview ▶ page 299

Configuration options and order keys, overview ▶ page 300

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	B09.2
assembled	B09.2.1

Full-width shelf e-chains®/e-tubes	
unassembled	110.X
assembled	111.X

Slotted separator B09.2

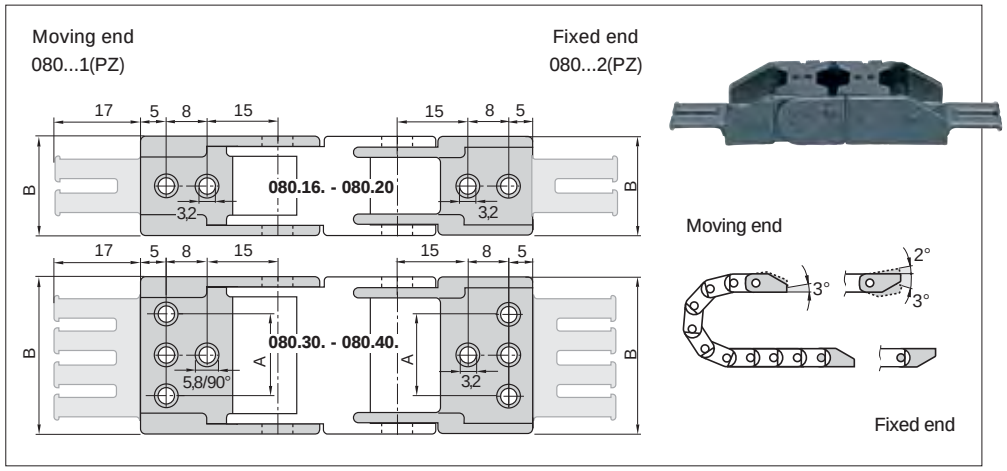
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Full-width shelf 110.X

this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision.

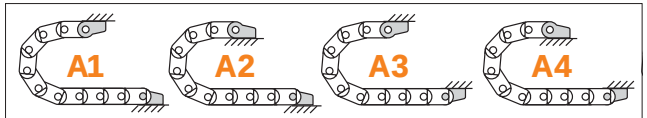
Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
010	110.10	111.10	020	110.20	111.20	050	110.50	111.50
013	110.13	111.13	030	110.30	111.30			
016	110.16	111.16	040	110.40	111.40			



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
.16. ▶	080.16. 12PZ	080.16. 12	–	24,2	2
.20. ▶	080.20. 12PZ	080.20. 12	–	28,2	2
.30. ▶	080.30. 12PZ	080.30. 12	22	38,2	3
.40. ▶	080.40. 12PZ	080.40. 12	32	48,2	4



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ▶ e.g. 080.40.12PZ**A1**

Additional Features



Quicksnap - the complete, detachable mounting unit. Part No. 080.20.QS, 080.30.QS available from stock



Quickfix - mounting bracket with dowel, available upon request

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Inner and outer attachment possible
- Various installation options on the fixed end and/or the moving end

Part No. structure

080.40.12 PZ **A1**

- A1 ... must be indicated on preassembled configurations With integrated strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

080.40.1 PZ **A1** (preass. + tiewrap plate)

Mounting bracket Fixed end

080.40.2 PZ **A1** (preass. + tiewrap plate)



E2 micro e-chain® space saving "ZigZag" design in this mobile operating table



igus®
E2 mini

Small and medium sizes

Small and medium sizes - E2 mini

E2 mini are small one-piece or two-piece e-chains®, recommended for high dynamic applications. igus® also offers a host of accessories and fixation options. "Upgrades" to openable versions are available for many types; they are interchangeable and can also serve as replacements.

Typical industries and applications
- Construction machinery
- Handlings
- Furniture
- Packaging machines
- Textile machines
- Vehicle construction
- Woodworking machines
- Glass machines
- Automation
- General machinery

Cleanroom Class 1 (ISO class 3) for Series 10, tested by the Dryden Engineering Company, California

Special equipment: Electrically conductive ESD/ATEX version upon request

UL94-V2 classifications - for Series 14 and F17 (UL94-V0 upon request)





E2 mini e-chain®, RBR-version with reverse bending radius



E2 mini e-chain® in a tooling machine, coolant resistant



Long travel applications of up to 40 m are possible. Here: Series 10 in a textile machine

Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	Page
							
E2 mini - One-piece e-chains® One-piece, non snap-open							
10	18	15 - 100	26 - 113	23	028 - 180	1,20	356
11.031	23	31	41,2	28	045 - 070	≈1,35	364
11.080	28	80	93	33,4	038	1,50	368
11.1/11.2	41	15 - 25	25,5 - 35,5	46	040 - 100	≈1,35	372
							
E2 mini - One-piece e-chains® Snap-open along inner radius with film-hinge							
14	20	15 - 50	26 - 61	25	028 - 125	0,65	376
F17	32	15	26	39	048	1,20	394
							
E2 mini - Two-piece e-chains® Snap-open along outer radius							
B15	17	15 - 100	26,0 - 113	23	038 - 180	1,20	380
B17	32	15 - 100	25,5 - 113	39	048 - 125*	1,00	388
							
E2 mini - Two-piece e-chains® Snap-open along inner radius							
B15i	17	15 - 100	26,0 - 113	23	038 - 180	1,20	380
B17i	32	25 - 38	35,5 - 48,5	39	048 - 125*	1,00	388

*Radii for several widths available upon request (please see delivery programm table).

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Push, click and snap in pin



Lever crossbars open



Separating: release side-link



Twist and pull apart

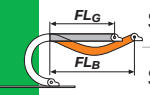
Technical Data, overview ▶page 352

e-chain® links as single parts, overview ▶page 353

Configuration options and order keys, overview ▶page 354

Assembly video available online at ▶www.igus.eu/eu/video

Technical Data - System E2 mini



Gliding speed / acceleration (maximum)	max. 3 [m/s] / max. 10 [m/s²]
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Material - permitted temperature °C, igumid NB (only Series 14)	-40° up to +80° C
Material lower part - permitted temperature °C, igumid G (only Series B15/B15i, B17/B17i, F17)	-40° up to +120° C
Material crossbar - permitted temperature °C, igumid NB (only Series B15/B15i, B17/B17i, F17)	-40° up to +80° C
Flammability class:	igumid G = VDE 0304 IIC UL94-HB / igumid NB = VDE 0304 IIC UL94-V2

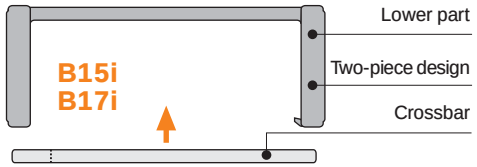
FL_G = with straight upper run FL_B = with permitted sag

Installation methods overview, maximum travels - System E2 mini

e-chain® Series	Unsupported application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application
10	≤ 1,20 m	upon request	upon request	upon request	with rework	upon request
11.031	≤ 1,35 m	upon request	upon request	upon request	–	upon request
11.080	≤ 1,50 m	upon request	upon request	upon request	–	upon request
11.1/11.2	≤ 1,35 m	upon request	upon request	upon request	–	upon request
14	≤ 0,65 m	upon request	upon request	upon request	with rework	upon request
B15i / B15	≤ 1,20 m	upon request	upon request	upon request	with rework	upon request
B17i / B17	≤ 1,00 m	upon request	upon request	upon request	with rework	upon request
F17	≤ 1,20 m	upon request	upon request	upon request	with rework	upon request

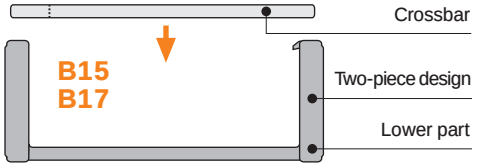
Part No. one- and two-piece e-chain® links as single parts - System E2 mini

Two-piece design, snap-open along inner radius



e-chain® Series	e-chain® Crossbar*	e-chain® Lower parts**
B15i	170.*Bi*	B15i.*Bi* 00.*R*
B17i	170.*Bi*	B17i.*Bi* 00.*R*

Two-piece design, snap-open along outer radius

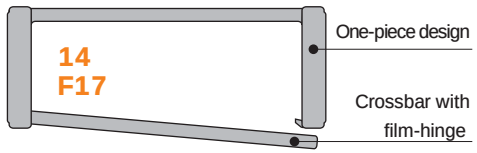


e-chain® Series	e-chain® Crossbar*	e-chain® Lower parts**
B15	170.*Bi*	B15.*Bi* 00.*R*
B17	170.*Bi*	B17.*Bi* 00.*R*

* Crossbar: supplement Part No. with required width index *(Bi)* Example: 170.15

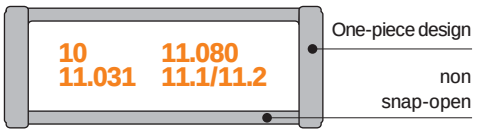
** Lower parts: supplement Part No. with required width index *(Bi)* + 00 and radius *(R)* Example: B15.15 00.038

One-piece design, snap-open along inner radius



Series e-chains®	One-piece e-chain link	Crossbar with film-hinge
14	One-piece design	snap-open
F17	One-piece design	snap-open

One-piece design, non snap-open



Series e-chains®	One-piece e-chain link
10	One-piece design, non snap-open
11.031	One-piece design, non snap-open
11.080	One-piece design, non snap-open
11.1/11.2	One-piece design, non snap-open

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E2 mini | Configuration options and order key (based on Series B15)

Standard	*NC-Version - (no camber) without pretension*	*Reverse bending radius for circular movements*	*Unsupported lengths +25% possible*	*ATEX / ESD classified e-chains® II 2 GD*
Part No. **Standard**	Part No. **NC-Material**	Part No. **RBR**	Part No. **XXL-Material***	Part No. **ESD-Material**
B15.025.*R*.0	B15.025.*R*.0.**NC**	B15.025.*R1/R2*.0	B15.025.*R*.0.**XXL**	B15.025.*R*.0.**ESD**
Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* - Several widths from stock	Delivery time* 5 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® Series B15 (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 33 links	B15.025.038.0
+ Mounting brackets	1 set (+ tiewrap plates)	1025.34PZ
+ Interior separation	with 2 separators assembled every 2nd link	2 x 154

Order text: 1,0 m B15.025.038.0 + 1025.34PZ + 2 x 154

Order key
B15.025.038.0

- Standard color black
- Bending radius *R*
- Width index (depends on *B*)
- Series / Type

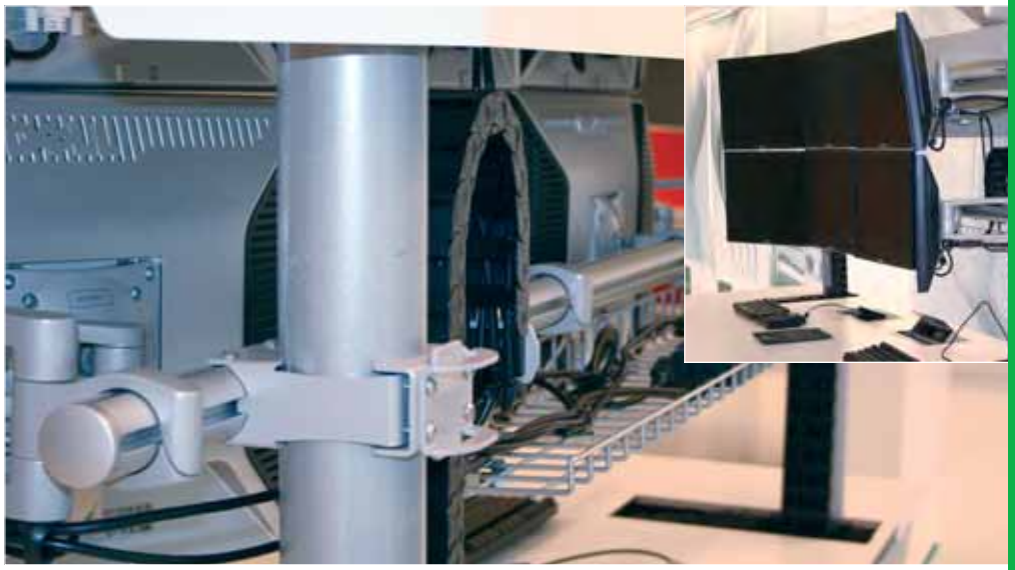
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E2 mini | Application



Cost-effective cable guidance with E2 mini



Mounting bracket with strain relief option

One-piece design, non snap-open

Lightweight and stable

Large pin for high stability

Dirt-repellent exterior

Double stop dog for long un-supported travels

Stable and cost-effective

When to use the Series 10 E2 mini:

- If an e-chain® with an inner height of 18 mm and small bending radii is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,2 m and fill weights up to 1,5 kg/m
- If a small but very stable e-chain® is required
- If a one-piece, non snap-open e-chain® is required
- If an interior separation is required

When to use a different igus® Series:

- If extremely quick opening of the links is necessary

► Series 15 zipper, page 260

- If quick insertion of cables with preassembled connectors is required

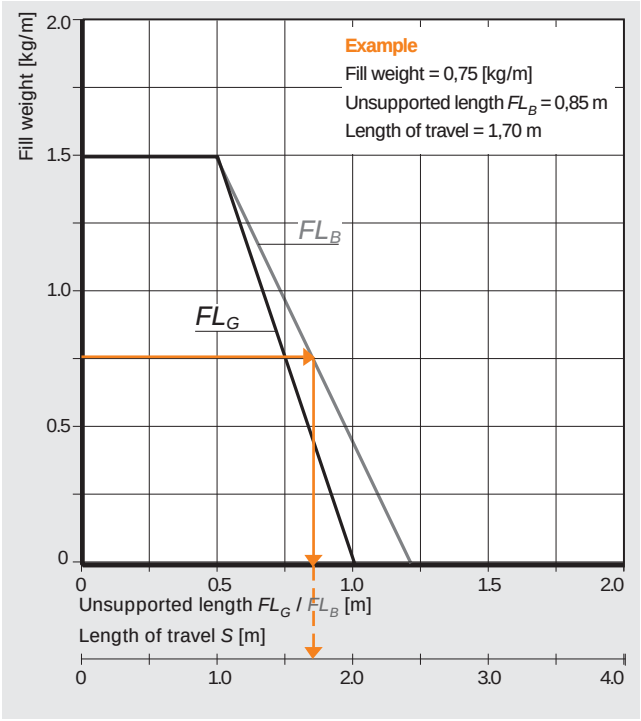
► Series E14 easy chain®, page 180

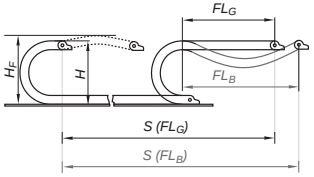


Series 10 with molded-in separator available.
More information ► page 358

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

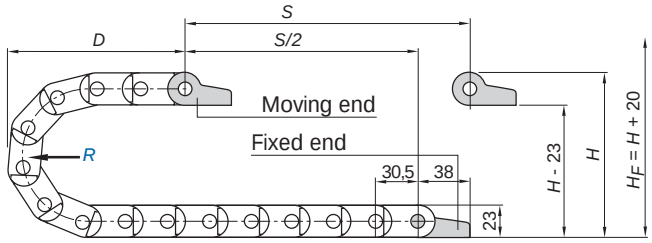
3D-CAD files, configurators, PDF ► www.igus.eu/eu/10





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 352

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	028	038	048	075	100	110	125	145	180
H	79	99	119	173	223	243	273	313	383
D	85	95	105	132	157	167	182	202	237
K	150	185	215	300	380	410	455	520	630

The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

Before using this Series on long travels please consult igus®.

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series 10 | One-piece, non snap-open e-chain®

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
10. 015 .R.0	15	26	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,35
10. 025 .R.0	25	36	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,40
10. 038 .R.0	38	49	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,46
10. 050 .R.0	50	61	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,52
10. 5 .R.0	63	76	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,63
10. 6 .R.0	80	94	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,70
10. 7 .R.0	100	113	| 028 | 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,76

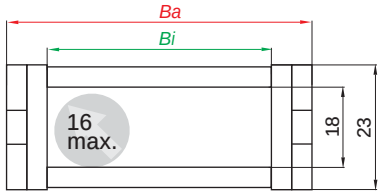
Supplement Part No. with required radius (*R*). Example: 10.025.038.0

Before using this Series on long travels please consult igus®.

Order key

10. 025. 038. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

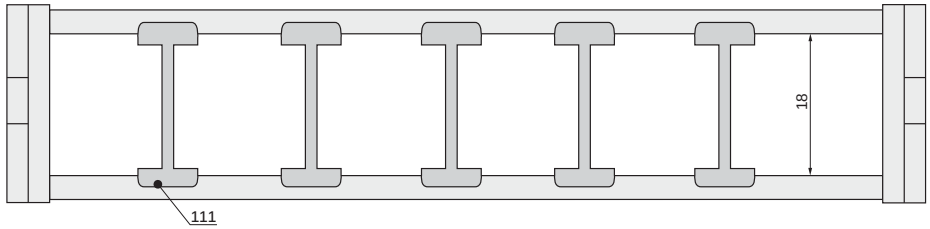


e-chain® links as single parts, overview ▶page 353

Configuration options and order keys, overview ▶page 354

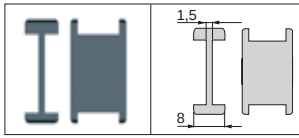
Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



In the standard configuration separators are assembled every 2nd e-chain® link!

Note: When utilizing these one-piece links, please assemble the interior separation before mounting the e-chain!



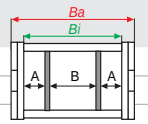
Separator, for e-chains®	
unassembled	101
assembled	111

Separator 101

For a simple vertical subdivision on e-chains®. Separators can be arranged anywhere in the e-chain® cross section. Interior separation for Series 10.015.*R*.0 not possible!

Series 10 | Optional | With molded-in vertical separation

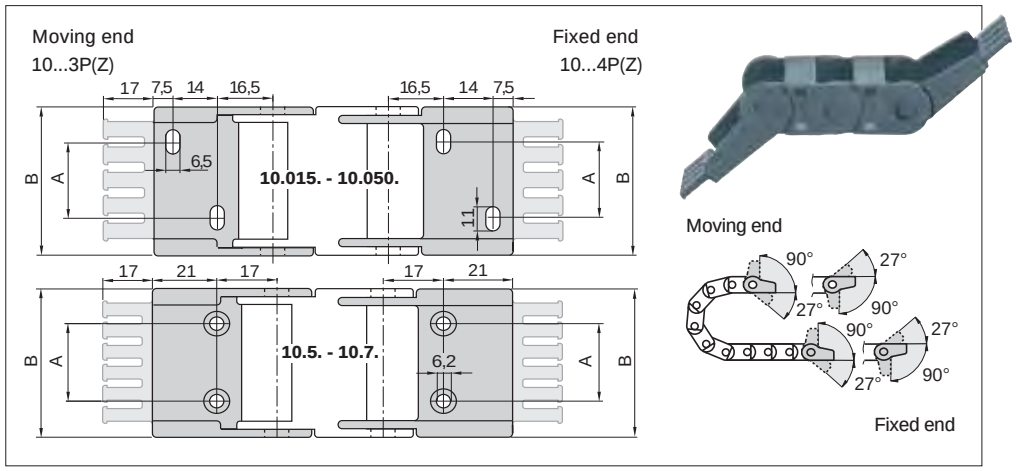
non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Side compartment Dim. A [mm]	Middle compartment Dim. B [mm]	Weight [kg/m]
10. 038 .R.0.S	38	49	| 075 |	10	15	≈ 0,79
10. 050 .R.0.S	50	61	| 075 |	13	21	≈ 0,85



Supplement Part No. with required radius (*R*). Example: 10.038.075.0.**S** or 10.050.075.0.**S**

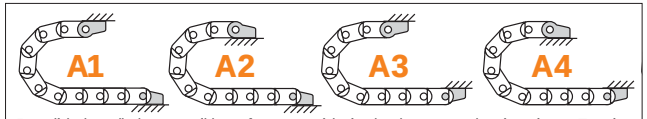
E2 mini | Series 10 | Mounting brackets pivoting

For tight installation conditions

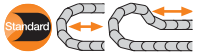


Polymer pivoting, one-piece | Standard
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	1015.34PZ	1015.34P	–	25,5	2
025. ▶	1025.34PZ	1025.34P	10	35,5	3
038. ▶	1038.34PZ	1038.34P	23	48,5	4
050. ▶	1050.34PZ	1050.34P	35	60,5	5
5. ▶	105. 34PZ	105. 34P	48	75	6
6. ▶	106. 34PZ	106. 34P	65	92	8
7. ▶	107. 34PZ	107. 34P	85	112	10



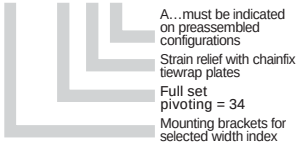
Possible installation conditions for assembled, pivoting mounting brackets. For the preassembled mode please add index A1... A4 ▶ e.g. 1025.34PZA1



- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

1025. 34 PZ A1



Single-part order

Mounting bracket Moving end

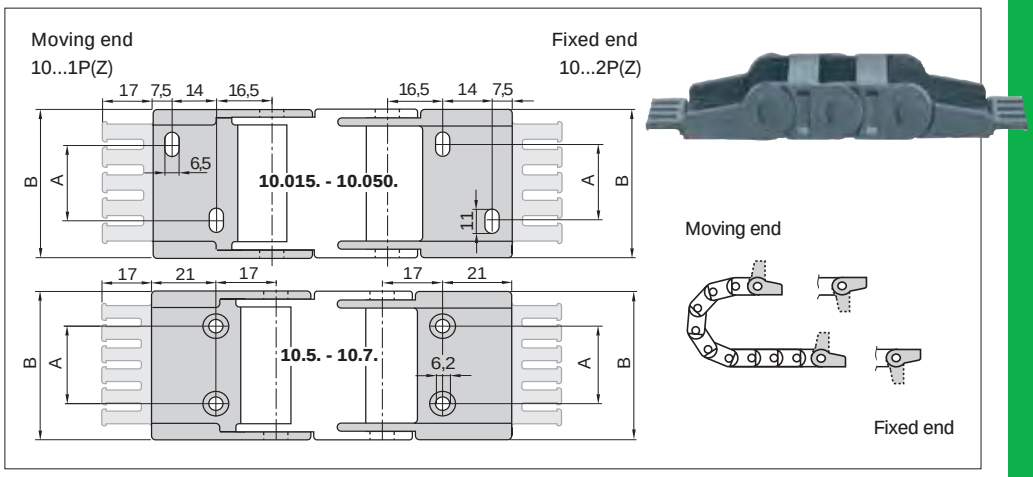
1025. 3 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

1025. 4 PZ A1 (preass. + tiewrap plate)

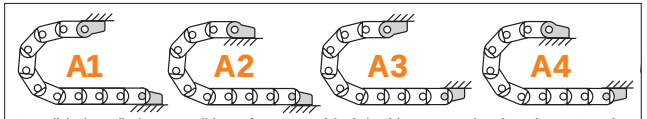
E2 mini | Series 10 | Mounting brackets locking

For very high speed and acceleration



Polymer locking, one-piece
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	1015.12PZ	1015.12P	–	25,5	2
025. ▶	1025.12PZ	1025.12P	10	35,5	3
038. ▶	1038.12PZ	1038.12P	23	48,5	4
050. ▶	1050.12PZ	1050.12P	35	60,5	5
5. ▶	105. 12PZ	105. 12P	48	75	6
6. ▶	106. 12PZ	106. 12P	65	92	8
7. ▶	107. 12PZ	107. 12P	85	112	10



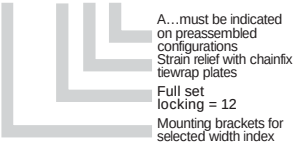
Possible installation conditions for assembled, locking mounting brackets. For the preassembled mode please add index A1... A4 ▶ e.g. 1025.12PZA1



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

1025. 12 PZ A1



Single-part order

Mounting bracket Moving end

1025. 1 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

1025. 2 PZ A1 (preass. + tiewrap plate)

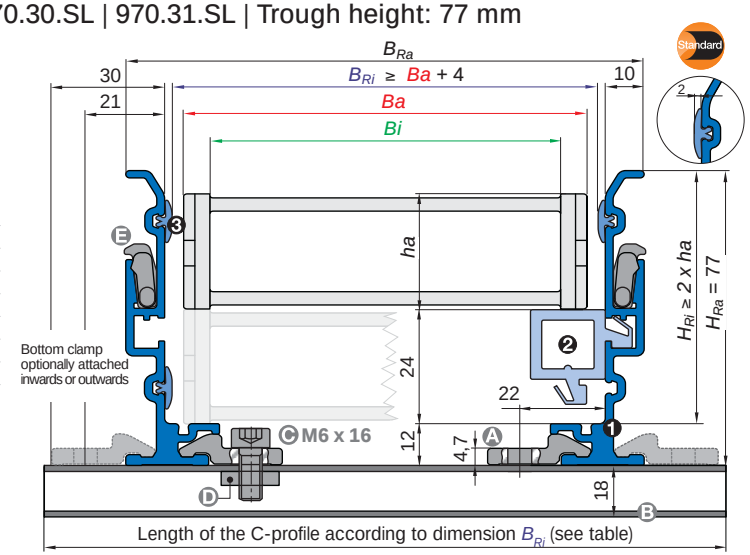
Aluminum SuperTrough | Basic Version

Part No. 970.30.SL | 970.31.SL | Trough height: 77 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

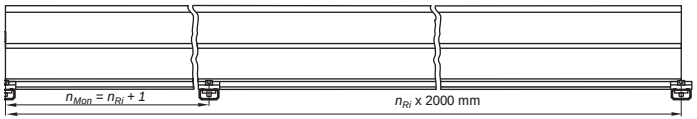
For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	30	upon request	960.30.125
.025	40	upon request	960.30.150
.038	53	upon request	960.30.150
.050	65	960.30.125	960.30.175
.5	80	960.30.125	960.30.175
.6	98	960.30.150	960.30.200
.7	117	960.30.175	960.30.225



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 10.5.038.0 with B_{Ri} = 80

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 970.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 970.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.125
Module for the fixed end	
Order text: 1 set	Part No. 970.80



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail ▶ from page 1190

● Trough set ● Installation set ● Glide bar ● C-profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



E2 mini - space-saving, extremely reliable solution. Elevator door application pictured here



Large inner height

When to use the Series 11.031 E2 mini:

- If an e-chain® with an inner height of 23 mm and small bending radii is required
- For inner widths up to 31 mm
- For unsupported lengths up to 1,3 m and fill weights up to 1,5 kg/m
- If a small e-chain® with extra torsional rigity is required
- If a one-piece, non snap-open e-chain® is required

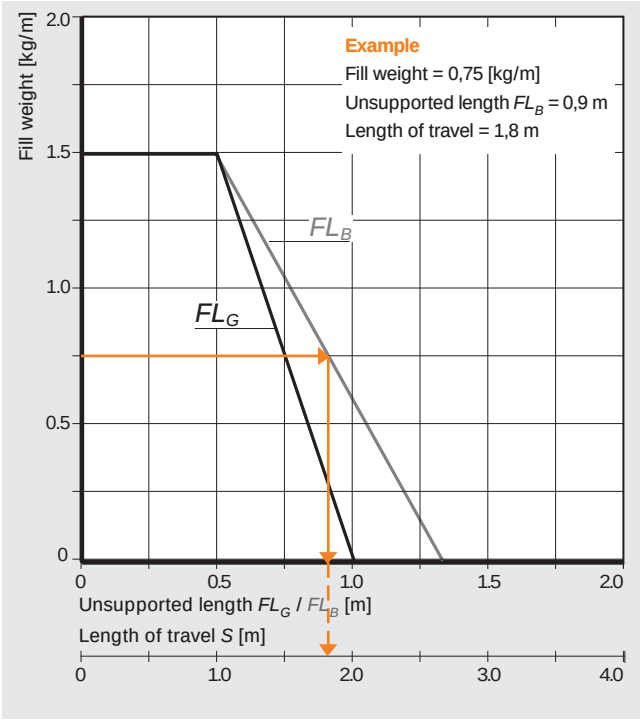
When to use a different igus® Series:

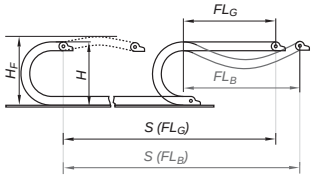
- If extremely quick opening of the links is necessary
- ▶ similar width/height from Series zipper
- If quick insertion of cables with preassembled connectors is required
- ▶ similar width/height from Series easy chain®

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

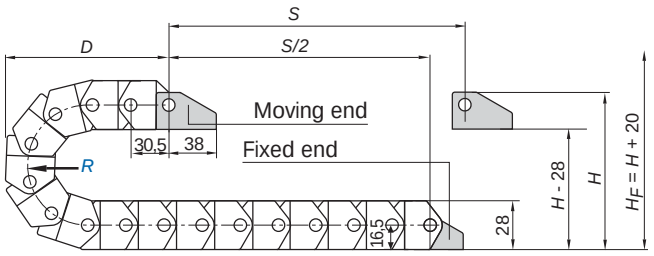
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/11.031





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 352

Pitch = 30,5 mm/link
Links/m = 33 (1.006,5 mm)
Chain length = $S/2 + K$

R	045	070
H	123	173
D	107	132
K	205	285

The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



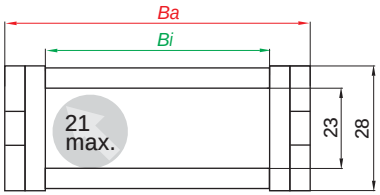
Series 11.031 | One-piece, non snap-open e-chain®

non snap-open	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
11.031.*R*.0	31	41,2	| 045 | 070 |	≈ 0,43

Supplement Part No. with required radius (*R*). Example: 11.031.045.0

Order key
11.031.045.0

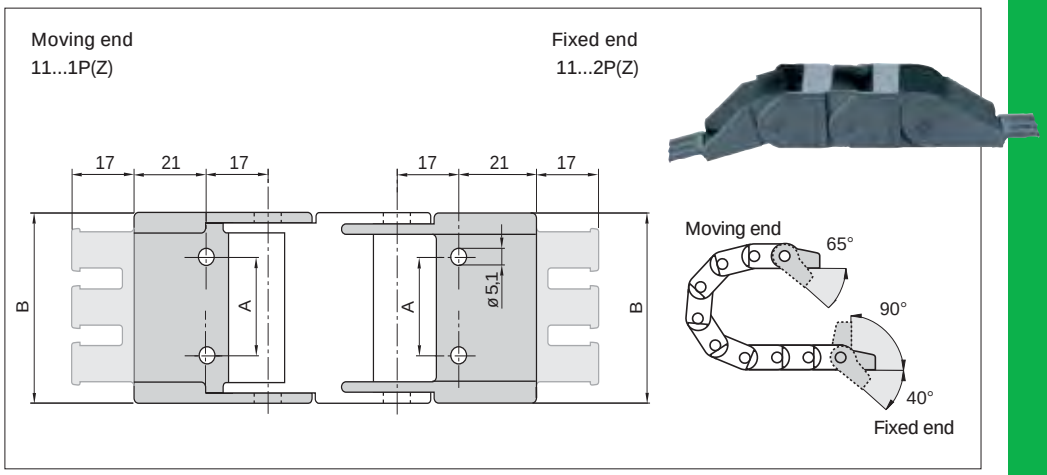
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 353

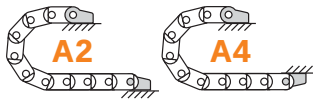
Configuration options and order keys, overview ▶ page 354

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Polymer pivoting, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
031. ▶	11.031.12PZ	11.031.12P	16	42	3



Possible installation conditions:
For the preassembled mode please add index **A2** or **A4**
▶ e.g. 11.031.12PZ**A2**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible

Part No. structure
11.031.12PZ**A2**

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set pivoting = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
11.031.1PZ**A2** (preass. + tiewrap plate)
Mounting bracket Fixed end
11.031.2PZ**A2** (preass. + tiewrap plate)



Large inner height

When to use the Series 11.080 E2 mini:

- If an e-chain® with an inner height of 28 mm and small bending radii is required
- For unsupported lengths up to 1,5 m and fill weights up to 1,5 kg/m
- If a one-piece, non snap-open e-chain® is required

When to use a different igus® Series:

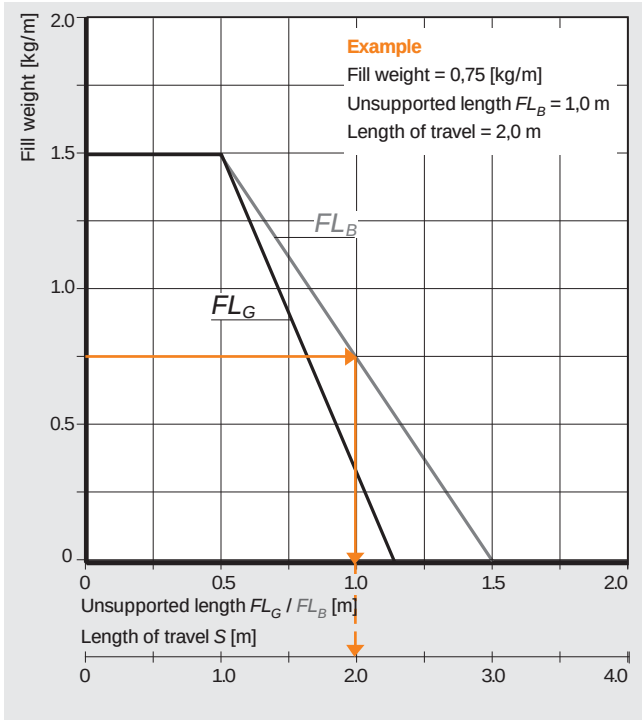
- If extremely quick opening of the links is necessary
- ► similar width/height from Series zipper
- If quick insertion of cables with preassembled connectors is required
- ► similar width/height from Series easy chain®

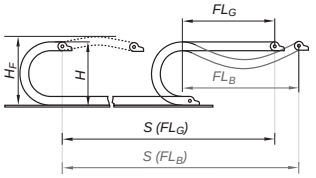


Series 11.080 features a molded-in vertical separation.
More information ► page 370

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

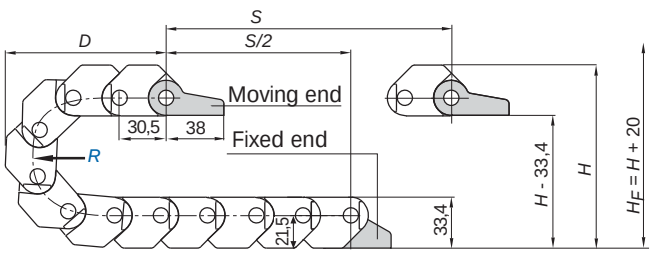
3D-CAD files, configurators, PDF ► www.igus.eu/eu/11.080





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 352

Pitch = 30,5 mm/link
Links/m = 33 (1.006,5 mm)
Chain length = $S/2 + K$

R	038
H	119
D	105
K	185

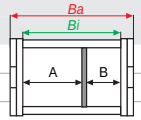
The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series 11.080 | non snap-open e-chain® with molded-in vertical separation

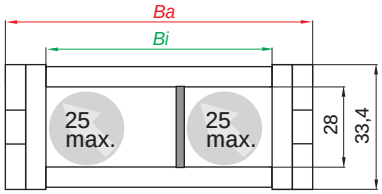
non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Dim. A [mm]	Dim. B [mm]	Weight [kg/m]
11. 080 .R.0	80	93	| 038 |	46	32	≈ 0,73



Supplement Part No. with required radius (*R*). Example: 11.080.038.0

Order key
11.080.038.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 353

Configuration options and order keys, overview ▶ page 354

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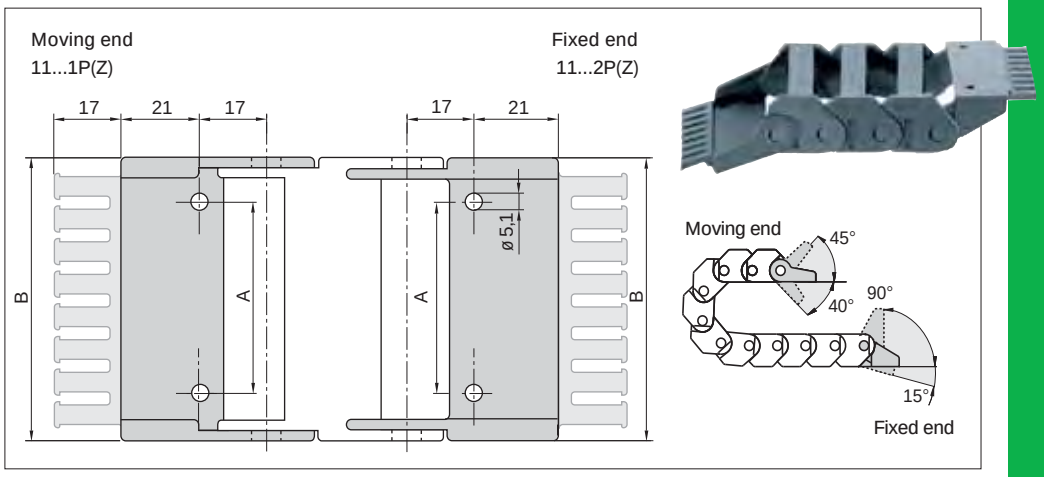
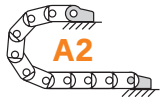
*Delivery time means time until shipping of goods (after technical release)



Polymer pivoting, one-piece | Universal for e-chains®
For unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
080. ▶	11.080.12PZ	11.080.12P	65	93	8



Possible installation conditions for assembled mounting brackets: For the **preassembled** mode please add index **A2**
▶ e.g. 11.080.12PZ**A2**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant

Part No. structure
11.080.12PZ**A2**

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set pivoting = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
11.080.1PZ**A2** (preass. + tiewrap plate)
Mounting bracket Fixed end
11.080.2PZ**A2** (preass. + tiewrap plate)



Very large inner height, small outer width

When to use the Series 11.1·11.2 E2 mini:

- If an e-chain® with an inner height of 41 mm and small bending radii is required
- For inner widths up to 25 mm
- For unsupported lengths up to 1,35 m and fill weights up to 1,5 kg/m
- If space is restricted
- If many cables are arranged vertically adjacent
- If a one-piece, non snap-open e-chain® is required

When to use a different igus® Series:

- If extremely quick opening of the links is necessary
- ► similar width/height from Series zipper
- If quick insertion of cables with preassembled connectors is required
- ► similar width/height from Series easy chain®

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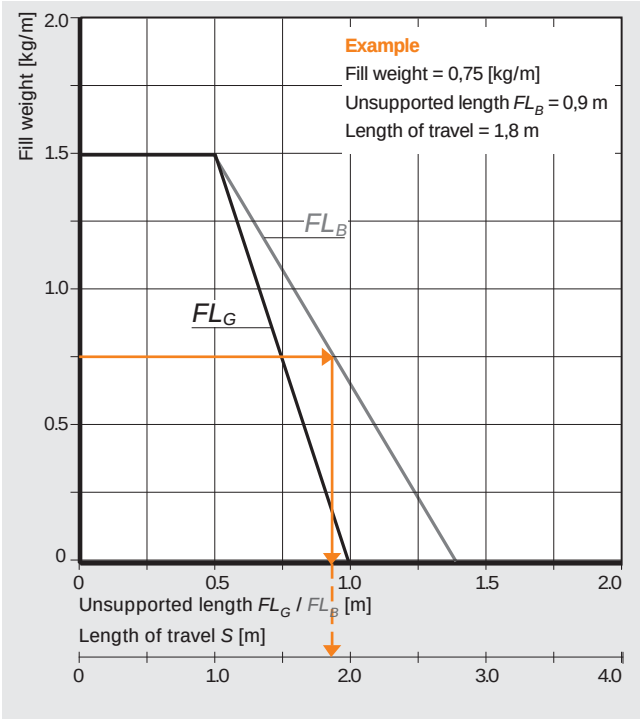
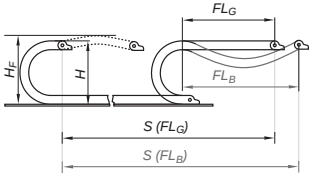
*Delivery time means time until shipping of goods (after technical release)

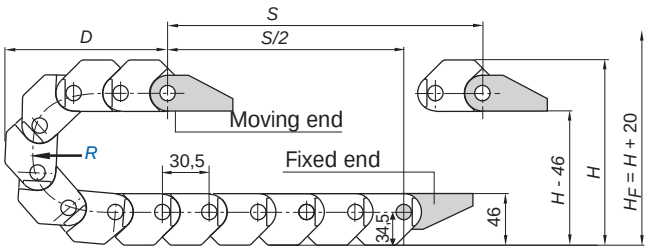
3D-CAD files, configurators, PDF ► www.igus.eu/eu/11.1





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 352

Pitch = 30,5 mm/link
Links/m = 33 (1.006,5 mm)
Chain length = $S/2 + K$

R	040	063	075	100
H	149	195	219	269
D	120	143	155	180
K	190	260	300	380

The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



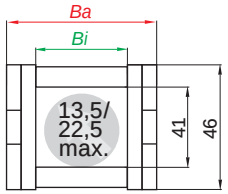
Series 11.1·11.2 | One-piece, non snap-open e-chain®

non snap-open	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
11.1 .R.0	15	25,5	| 040 | 063 | 075 | 100 |	≈ 0,50
11.2 .R.0	25	35,5	| 040 | 063 | 075 | 100 |	≈ 0,53

Supplement Part No. with required radius (*R*). Example: 11.1.040.0

Order key
11.1.040.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ►page 353

Configuration options and order keys, overview ►page 354

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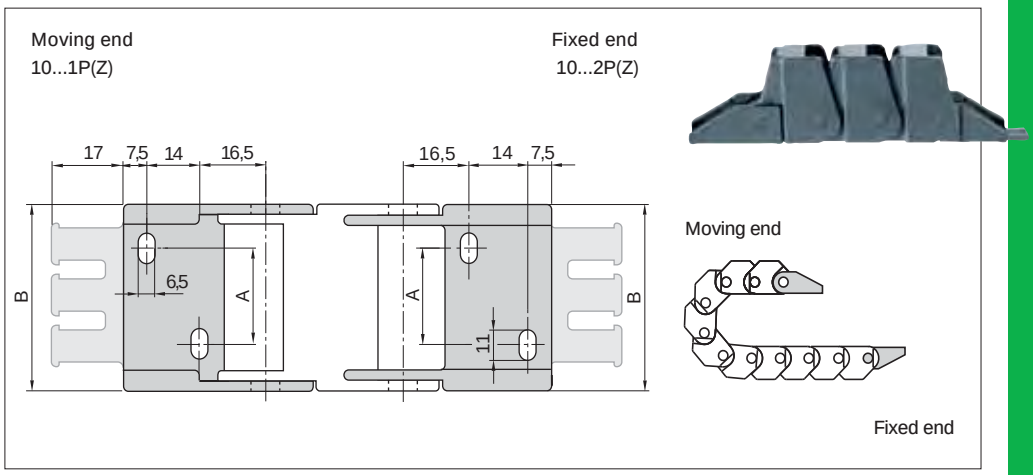
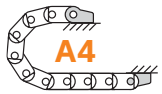
*Delivery time means time until shipping of goods (after technical release)



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
1. ▶	101.12PZ	101.12P	–	26	2
2. ▶	102.12PZ	102.12P	10	36	3



Possible installation conditions for assembled mounting brackets: For the preassembled mode please add index **A4**
►e.g. 101.12PZ**A4**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant

Part No. structure
101. 12 PZ A4

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
101. 1PZA4 (preass. + tiewrap plate)
Mounting bracket Fixed end
101. 2PZA4 (preass. + tiewrap plate)



Snap-open along inner radius

When to use the Series 14 E2 mini:

- If an e-chain® with an inner height of 20 mm and small bending radii is required
- For inner widths up to 50 mm
- For unsupported lengths up to 0,65 m and fill weights up to 0,5 kg/m
- If snap-open mechanism with film-hinge is required

When to use a different igus® Series:

- For gliding applications
- ► Series 15 zipper, page 260
- For long unsupported travels
- ► Series 15 zipper, page 260

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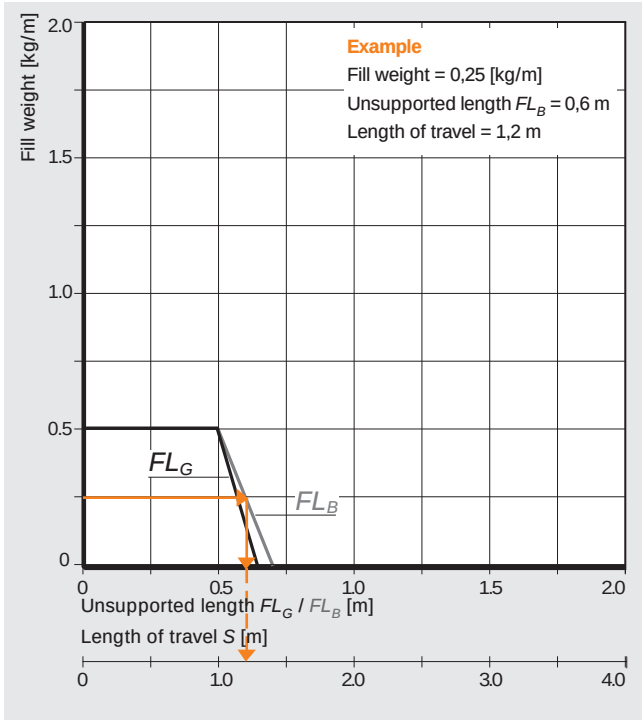
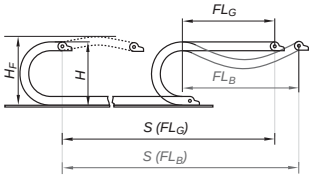
*Delivery time means time until shipping of goods (after technical release)

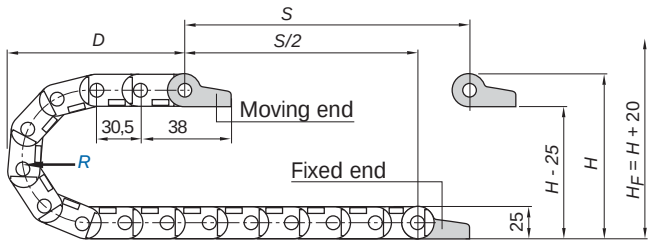
3D-CAD files, configurators, PDF ► www.igus.eu/eu/14





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 352

Pitch = 30,5 mm/link
Links/m = 33 (1.006,5 mm)
Chain length = $S/2 + K$

R	028	038	048	075	100	125
H	81	101	121	175	225	275
D	86	96	106	133	158	183
K	150	185	215	300	380	455

The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



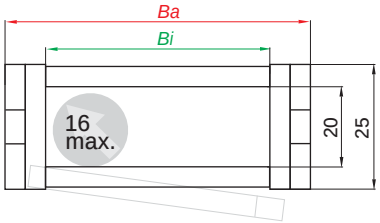
Series 14 | One-piece, snap-open along inner radius with film-hinge

Snap-open along inner radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
14.1.*R*.0	15	26	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,31
14.2.*R*.0	25	36	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,32
14.3.*R*.0	38	49	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,40
14.4.*R*.0	50	61	| 028 | 038 | 048 | 075 | 100 | 125 |	≈ 0,41

Supplement Part No. with required radius (*R*). Example: 14.2.038.0

Order key
14.2.038.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶page 353

Configuration options and order keys, overview ▶page 354

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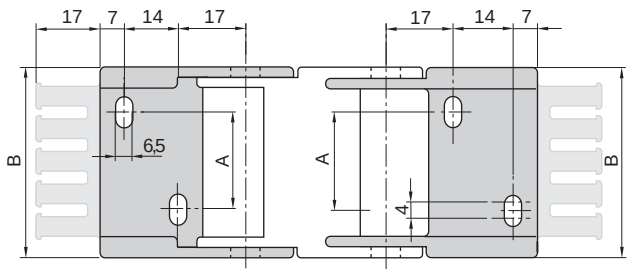
*Delivery time means time until shipping of goods (after technical release)

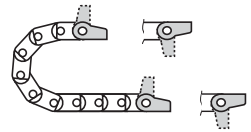
Moving end
114...1P(Z)

Fixed end
114...2P(Z)





Moving end

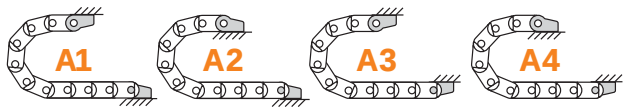


Fixed end

Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
1. ▶	114.1.12PZ	114.1.12P	–	26,3	2
2. ▶	114.2.12PZ	114.2.12P	10	36,3	3
3. ▶	114.3.12PZ	114.3.12P	23	49,3	4
4. ▶	114.4.12PZ	114.4.12P	35	61,3	5

Material mounting bracket - igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ▶e.g. 114.2.12PZ**A1**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible

Part No. structure
114.2.12PZ**A1**

- A...must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order
Mounting bracket Moving end
114.2.1PZ**A1** (preass. + tiewrap plate)
Mounting bracket Fixed end
114.2.2PZ**A1** (preass. + tiewrap plate)

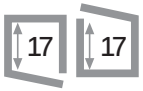
Additional Features

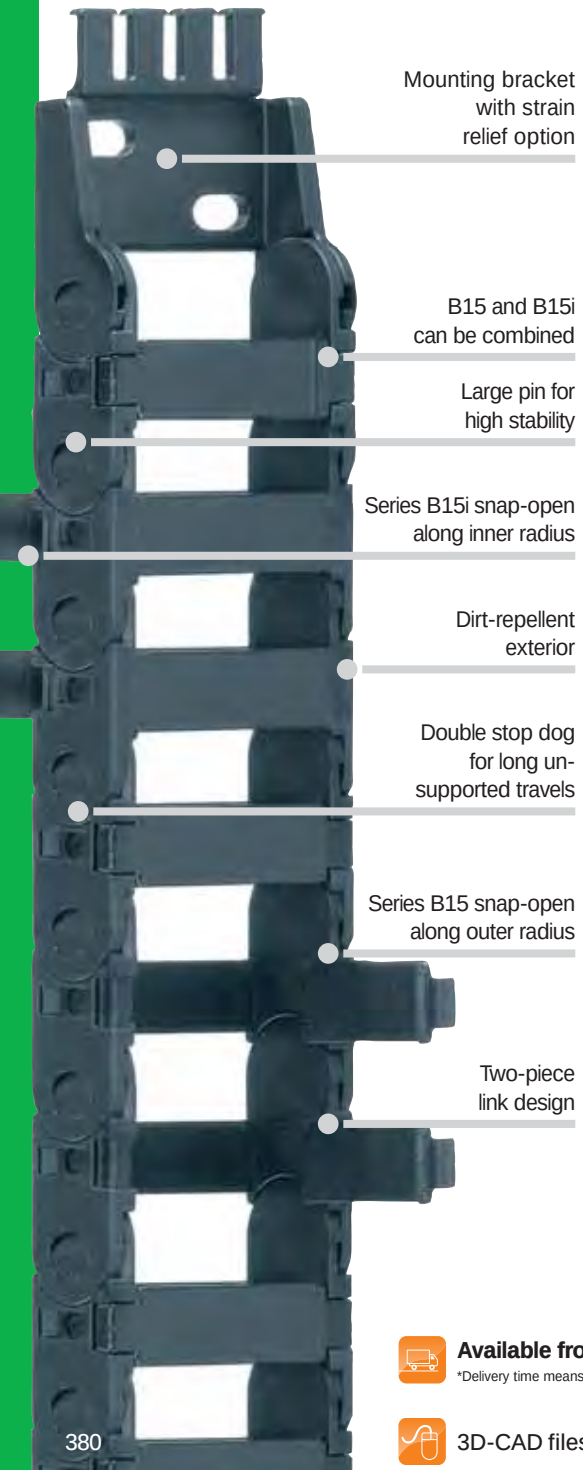


Quicksnap - the complete, detachable mounting unit, available upon request



Quickfix - mounting bracket with dowel, available upon request





Snap-open along inner and outer radius

When to use the Series B15i·B15 E2 mini:

- If an e-chain® with an inner height of 17 mm and small bending radii is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,2 m and fill weights up to 1,5 kg/m
- If a small but very stable e-chain® is required
- If a two-piece, snap-open e-chain® is required
- If an interior separation is required

When to use a different igus® Series:

- If snap-open links are not necessary
  ▶ Series 10 E2 mini, page 356
- If torsion occurs
  ▶ Series E14 easy chain®, page 180

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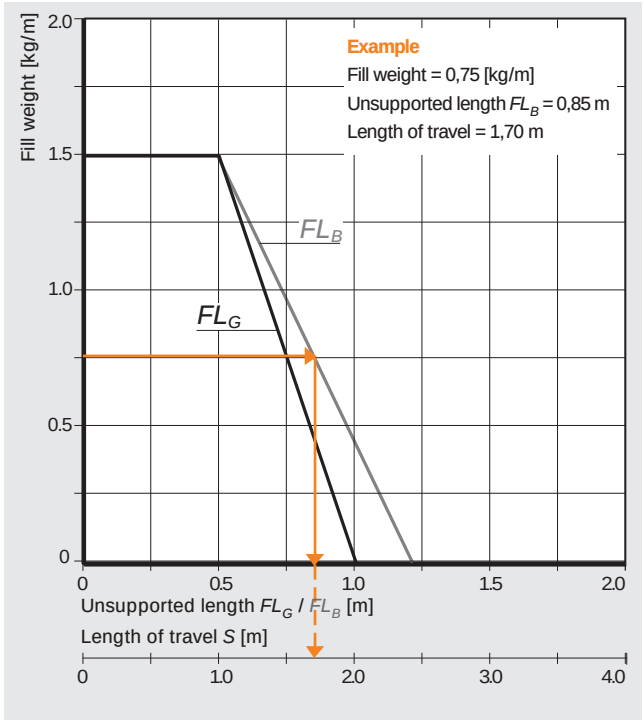
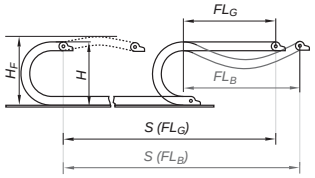
*Delivery time means time until shipping of goods (after technical release)

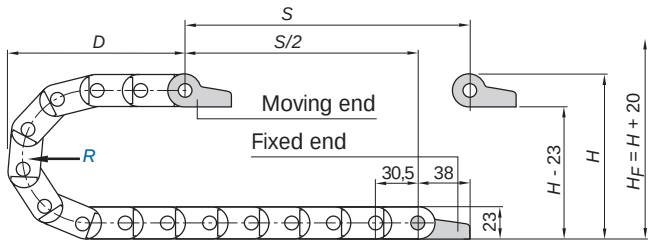
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/B15





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 352

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	038	048	075	100	110	125	145	180
H	99	119	173	223	243	273	313	383
D	95	105	132	157	167	182	202	237
K	185	215	300	380	410	455	520	630

The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

Before using this Series on long travels please consult igus®.

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series B15i snap-open along inner radius | Series B15 along outer radius | Standard

Snap-open along inner radius	Snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	B15i [kg/m]	B15 [kg/m]
B15i.015.R.0	B15.015.R.0	15	26	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,35	≈ 0,35
B15i.025.R.0	B15.025.R.0	25	36	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,40	≈ 0,40
B15i.038.R.0	B15.038.R.0	38	49	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,46	≈ 0,46
B15i.050.R.0	B15.050.R.0	50	61	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,52	≈ 0,52
B15i.5.R.0	B15.5.R.0	63	76	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,63	≈ 0,63
B15i.6.R.0	B15.6.R.0	80	94	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,70	≈ 0,70
B15i.7.R.0	B15.7.R.0	100	113	| 038 | 048 | 075 | 100 | 110 | 125 | 145 | 180	≈ 0,76	≈ 0,76

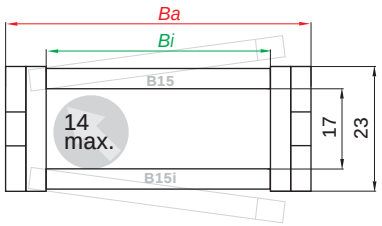
Supplement Part No. with required radius (*R*). Example: B15.025.038.0

Before using this Series on long travels please consult igus®.

Order key

B15. 025. 038. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

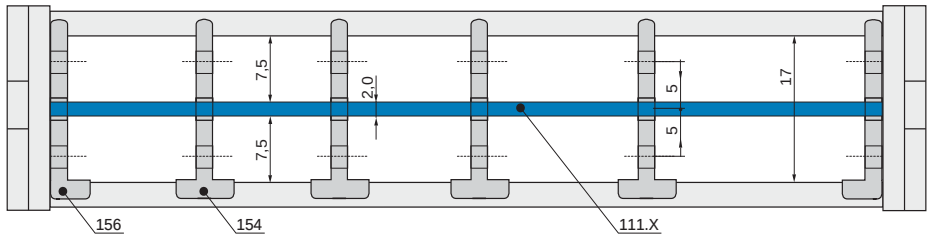


e-chain® links as single parts, overview ▶ page 353

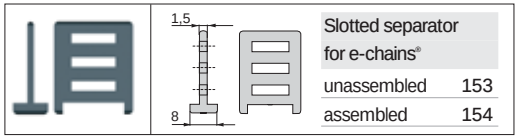
Configuration options and order keys, overview ▶ page 354

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



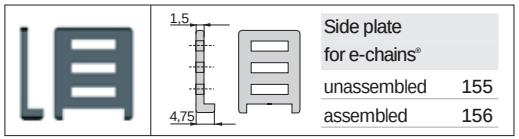
Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	153
assembled	154

Slotted separator 153

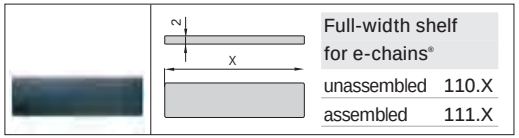
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Side plate for e-chains®	
unassembled	155
assembled	156

Side plate 155

Side plate for use with full-width shelf 110.X and slotted separator153.



Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

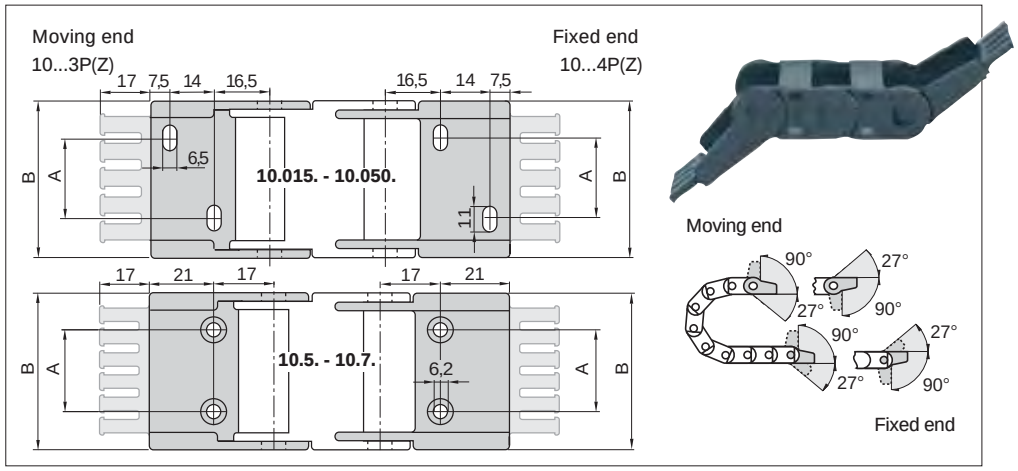
this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	110.15	111.15	050	110.50	111.50	100	110.100	111.100
025	110.25	111.25	063	110.63	111.63			
038	110.38	111.38	080	110.80	111.80			

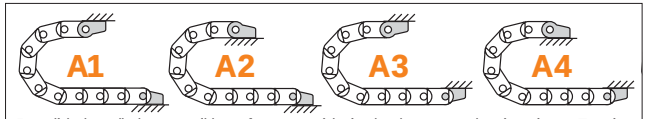
E2 mini | Series B15i·B15 | Mounting brackets pivoting

For tight installation conditions

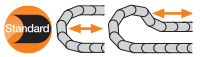


Polymer pivoting, one-piece | Standard
Recommended for unsupported and gliding applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	1015.34PZ	1015.34P	–	25,5	2
025. ▶	1025.34PZ	1025.34P	10	35,5	3
038. ▶	1038.34PZ	1038.34P	23	48,5	4
050. ▶	1050.34PZ	1050.34P	35	60,5	5
5. ▶	105. 34PZ	105. 34P	48	75	6
6. ▶	106. 34PZ	106. 34P	65	92	8
7. ▶	107. 34PZ	107. 34P	85	112	10



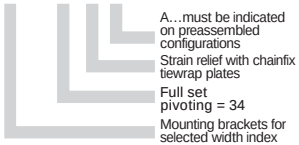
Possible installation conditions for assembled, pivoting mounting brackets. For the preassembled mode please add index A1... A4 ▶ e.g. 1025.34PZA1



- Standard
- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end

Part No. structure

1025. 34 PZ A1



Single-part order

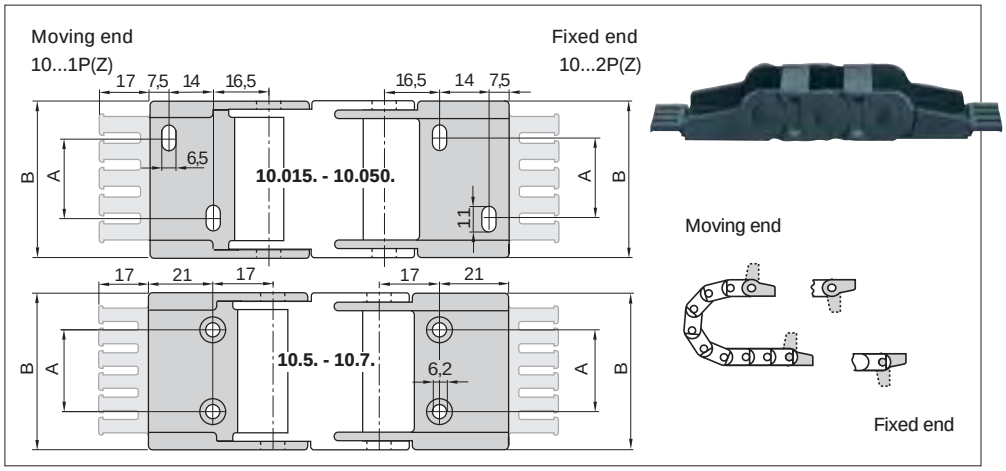
Mounting bracket Moving end

1025. 3 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

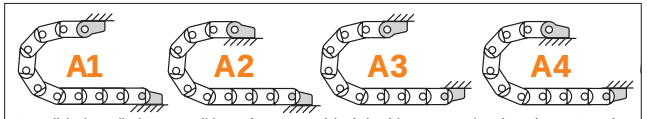
1025. 4 PZ A1 (preass. + tiewrap plate)

For very high speed and acceleration



Polymer locking, one-piece
Recommended for vertical hanging and standing applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015. ▶	1015.12PZ	1015.12P	–	25,5	2
025. ▶	1025.12PZ	1025.12P	10	35,5	3
038. ▶	1038.12PZ	1038.12P	23	48,5	4
050. ▶	1050.12PZ	1050.12P	35	60,5	5
5. ▶	105. 12PZ	105. 12P	48	75	6
6. ▶	106. 12PZ	106. 12P	65	92	8
7. ▶	107. 12PZ	107. 12P	85	112	10



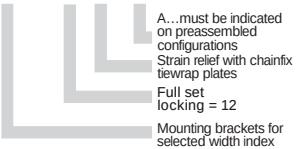
Possible installation conditions for assembled, locking mounting brackets. For the preassembled mode please add index A1... A4 ▶ e.g. 1025.12PZA1



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

1025. 12 PZ A1



Single-part order

Mounting bracket Moving end

1025. 1 PZ A1 (preass. + tiewrap plate)

Mounting bracket Fixed end

1025. 2 PZ A1 (preass. + tiewrap plate)

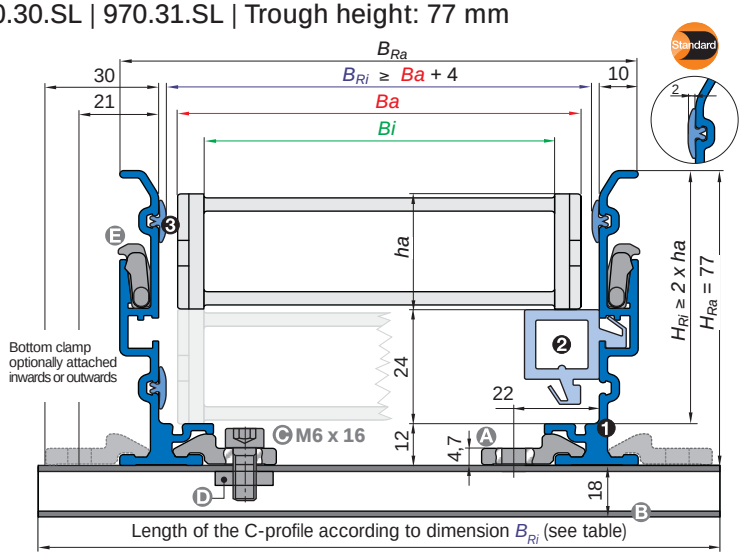
Aluminum SuperTrough | Basic Version

Part No. 970.30.SL | 970.31.SL | Trough height: 77 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

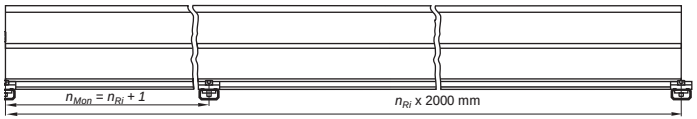
For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	30	upon request	960.30.125
.025	40	upon request	960.30.150
.038	53	upon request	960.30.150
.050	65	960.30.125	960.30.175
.5	80	960.30.125	960.30.175
.6	98	960.30.150	960.30.200
.7	117	960.30.175	960.30.225



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series B15.025.038.0 with B_{Ri} = 40

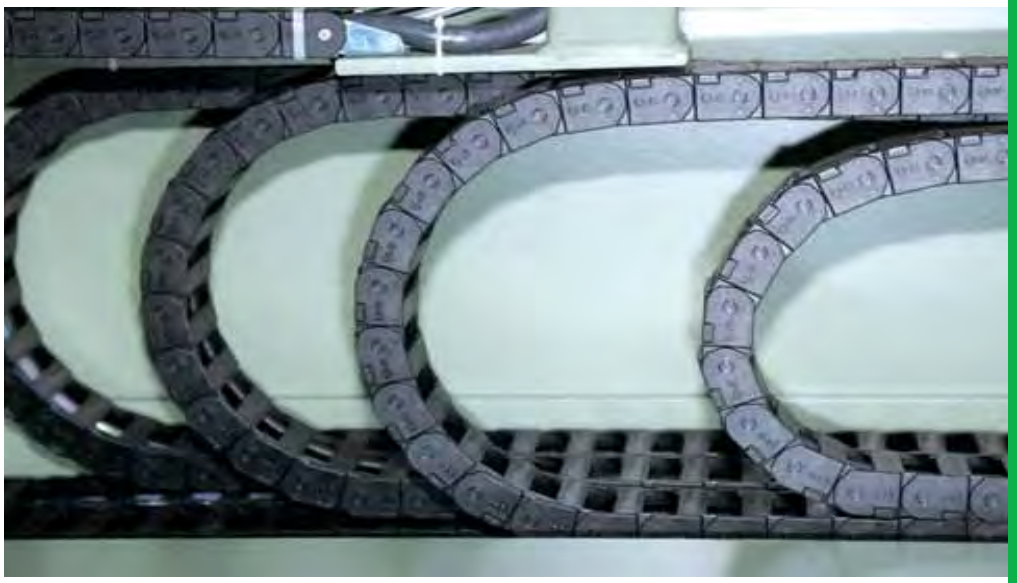
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 970.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 970.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.150
Module for the fixed end	
Order text: 1 set	Part No. 970.80



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

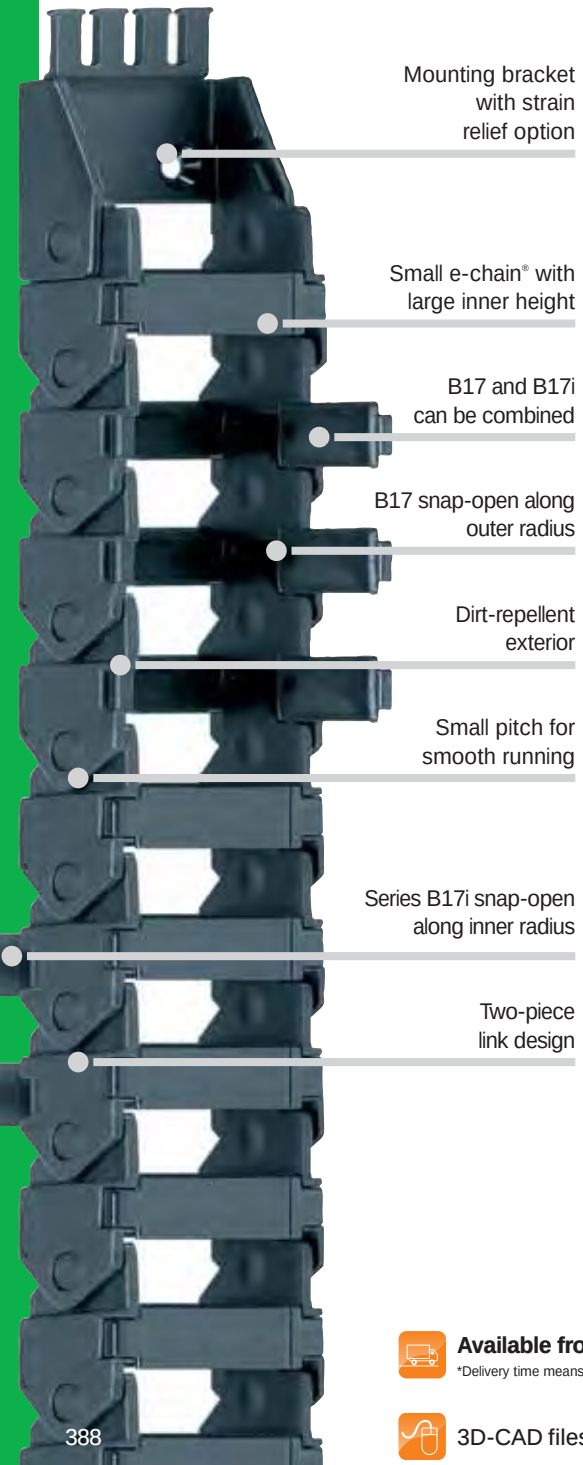
Aluminum SuperTrough "Basic" in detail ▶ from page 1190

● Trough set ● Installation set ● Glide bar ● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Five E2 mini e-chains®, 3 side by side, 2 sets nested - the bending radii are exactly adjusted to one another





Snap-open along inner and outer radius

When to use the Series B17i·B17 E2 mini:

- If an e-chain® with an inner height of 32 mm is required
- For inner widths up to 100 mm
- For unsupported lengths up to 1,0 m and fill weights up to 1,5 kg/m
- If a small e-chain® with a large inner height is required
- If a two-piece, snap-open e-chain® is required
- If quick insertion of cables with preassembled connectors is required
- If an interior separation is required

When to use a different igus® Series:

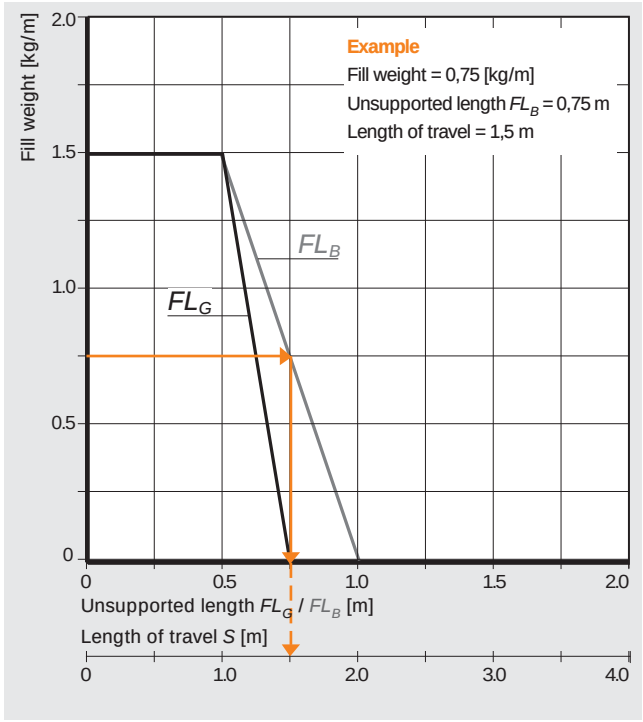
- If quick opening of the links is required

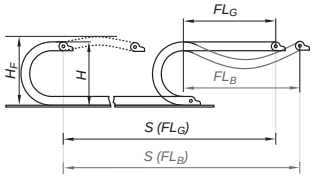
► Series 17 zipper, page 276

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

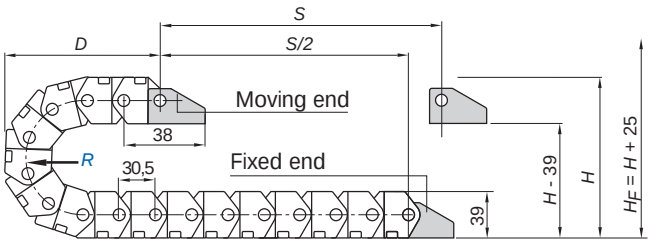
3D-CAD files, configurators, PDF ► www.igus.eu/eu/B17





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 352

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	048	063	075	100	125
H	135	165	189	239	289
D	113	128	140	165	190
K	215	260	300	380	455

The required clearance height: $H_F = H + 25$ mm (with 1,5 kg/m fill weight)

Radii for several widths available upon request (please see delivery programm table).

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series B17i snap-open along inner radius | Series B17 along outer radius | Standard

Snap-open along inner radius	Snap-open along outer radius (Standard)	Bi [mm]	Ba [mm]	R Bending radii [mm]	B17i [kg/m]	B17 [kg/m]
B17i.1.R.0**	B17.1.R.0	15	25,5	| 048[1)] | 063 | 075 | 100 | 125	≈ 0,52	≈ 0,52
B17i.2.R.0	B17.2.R.0	25	35,5	| 048 | 063[1)] | 075[1)] | 100[1)] | 125[1)]	≈ 0,59	≈ 0,59
B17i.3.R.0	B17.3.R.0	38	48,5	| 048 | 063 | 075 | 100 | 125	≈ 0,65	≈ 0,65
B17i.4.R.0	B17.4.R.0	50	60,5	| 048[1)] | 063[1)] | 075 | 100[1)] | 125	≈ 0,70	≈ 0,70
B17i.5.R.0**	B17.5.R.0	63	76	| 048* | 063 | 075 | 100 | 125	≈ 0,83	≈ 0,83
B17i.6.R.0**	B17.6.R.0	80	93	| 048 | 063 | 075 | 100 | 125	≈ 0,92	≈ 0,92
B17i.7.R.0**	B17.7.R.0	100	113	| 048* | 063 | 075 | 100 | 125	≈ 1,06	≈ 1,06

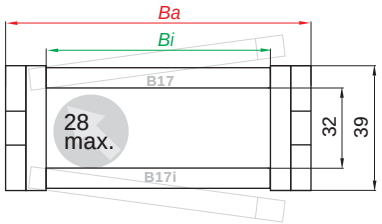
** Width available upon request, please consult igus® for delivery time * Radius available upon request, please consult igus® for delivery time

1) Radius only for Series B17. For Series B17i available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*). Example: B17.3.048.0

Order key
B17. 3. 048. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

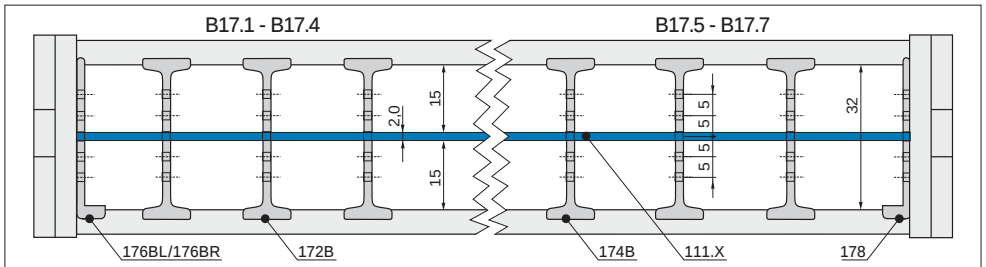


e-chain® links as single parts, overview ▶ page 353

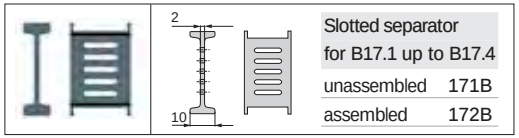
Configuration options and order keys, overview ▶ page 354

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!

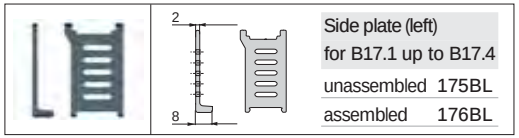


Slotted separator for B17.1 up to B17.4

unassembled	171B
assembled	172B

Slotted separator 171B (B17.1 up to B17.4)

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

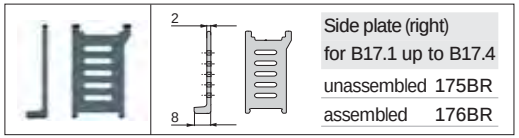


Side plate (left) for B17.1 up to B17.4

unassembled	175BL
assembled	176BL

Side plate 175BL, left (B17.1 up to B17.4)

Side plate (left) for use with full-width shelf 110.X and slotted separator 171B.

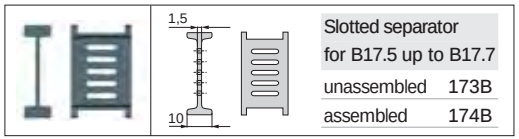


Side plate (right) for B17.1 up to B17.4

unassembled	175BR
assembled	176BR

Side plate 175BR, right (B17.1 up to B17.4)

Side plate (right) for use with full-width shelf 110.X and slotted separator171B.

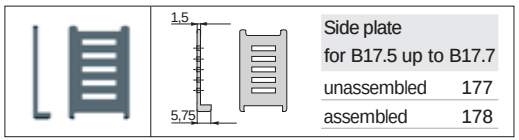


Slotted separator for B17.5 up to B17.7

unassembled	173B
assembled	174B

Slotted separator 173B (B17.5 up to B17.7)

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

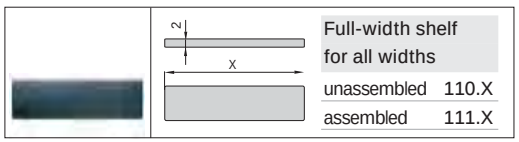


Side plate for B17.5 up to B17.7

unassembled	177
assembled	178

Side plate 177 (B17.5 up to B17.7)

Side plate for use with full-width shelf 110.X and slotted separator 173B.



Full-width shelf for all widths

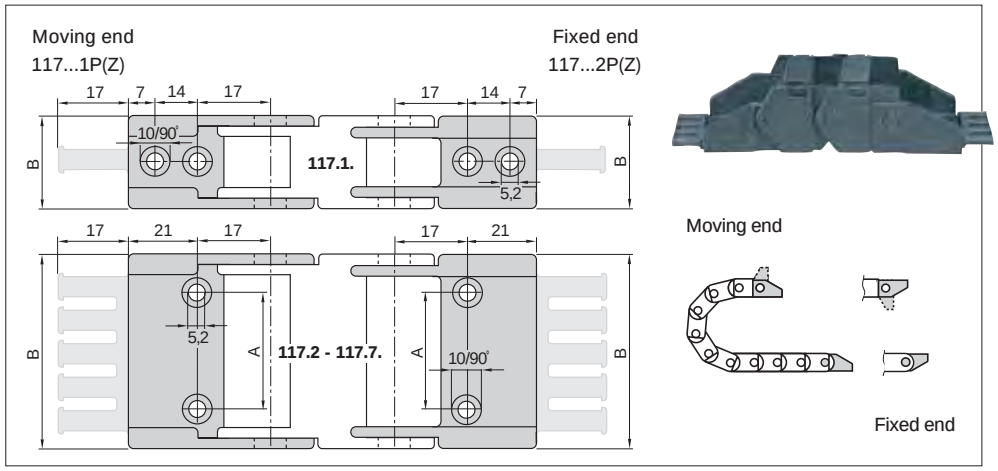
unassembled	110.X
assembled	111.X

Full-width shelf 110.X (for all widths)

this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

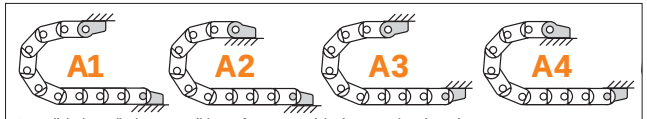
Full-width shelves (for all widths)

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	110.15	111.15	050	110.50	111.50	100	110.100	111.100
025	110.25	111.25	063	110.63	111.63			
038	110.38	111.38	080	110.80	111.80			



Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
1. ▶	117.1.12PZ	117.1.12P	–	25,5	2
2. ▶	117.2.12PZ	117.2.12P	12	35,5	3
3. ▶	117.3.12PZ	117.3.12P	25	48,5	4
4. ▶	117.4.12PZ	117.4.12P	37	60,5	5
5. ▶	117.5.12PZ	117.5.12P	48	76	6
6. ▶	117.6.12PZ	117.6.12P	65	93	8
7. ▶	117.7.12PZ	117.7.12P	85	113	10



Possible installation conditions for assembled mounting brackets:
For the preassembled mode please add index **A1**... **A4** ▶ e.g. 117.2.12 PZ **A1**

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible

Part No. structure

117.2.12 PZ **A1**

- A…must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

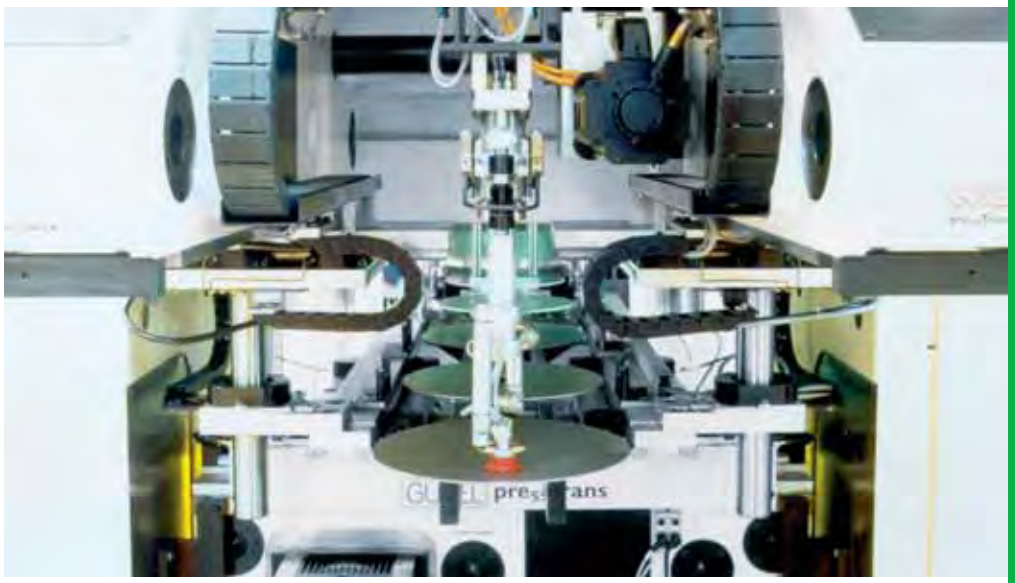
Single-part order

Mounting bracket Moving end

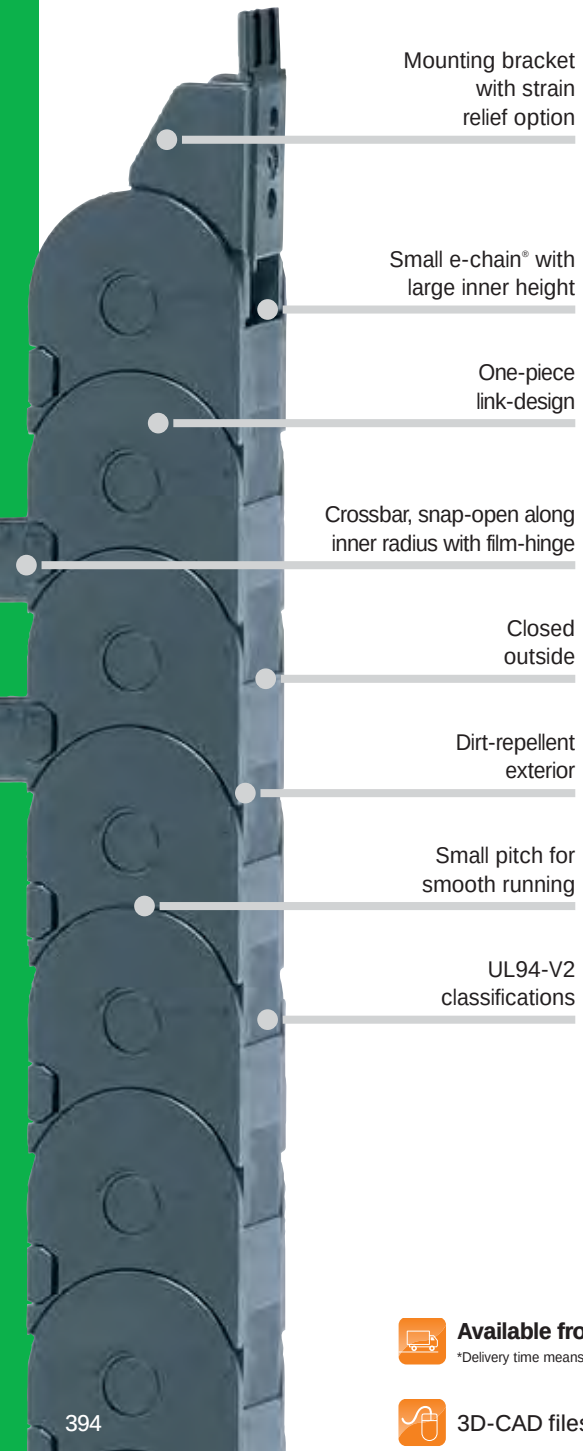
117.2.1 PZ **A1** (preass. + tiewrap plate)

Mounting bracket Fixed end

117.2.2 PZ **A1** (preass. + tiewrap plate)



Short travels and high accelerations with Series E2 mini



Large inner height, small outer width

When to use the Series F17 E2 mini:

- If an e-chain® with an inner height of 32 mm and small bending radii is required
- For unsupported lengths up to 1,20 m and fill weights up to 1,5 kg/m
- If a small e-chain® with a large inner height and small bending radii is required
- If snap-open mechanism with film-hinge is required
- If an interior separation is required

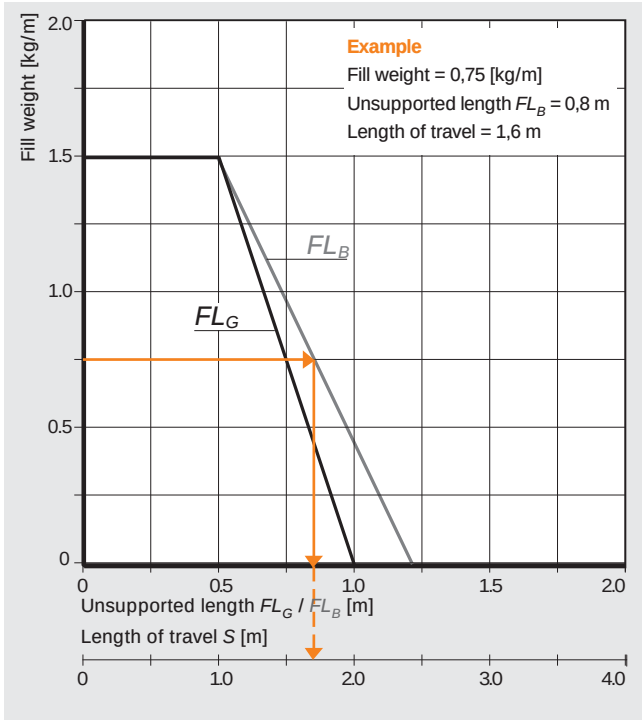
When to use a different igus® Series:

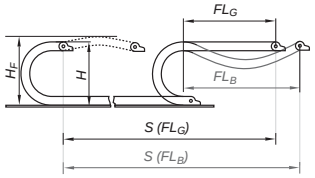
- If quick opening of the links is required
- ▶ Series 17 zipper, page 276
- If extremly quick, zipper-like access to cables is required
- ▶ Series R17 zipper, page 282
- If cable installation without opening lids must be possible
- ▶ Series 11.080 E2 mini, page 368
- For gliding applications
- ▶ Series 2600/2700/2650/2680 E2/000, page 444

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

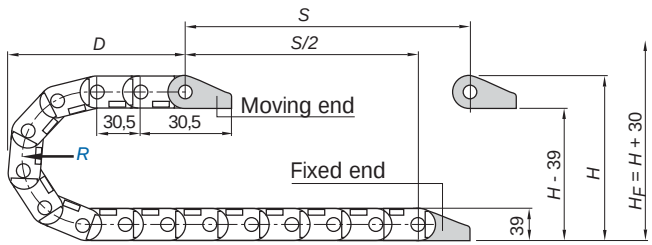
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/F17





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 352

Pitch = 30,5 mm/link
Links/m = 33 (1006,5 mm)
Chain length = $S/2 + K$

R	048	063*	075	100*	125*
H	135	165	189	239	289
D	113	128	140	165	190
K	215	260	300	380	455

The required clearance height: $H_F = H + 30$ mm (with 0,5 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series F17 | One-piece, snap-open along inner radius with film-hinge

Snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
F17.015.R.0	15	26	| 048 | 063*| 075 | 100*| 125*	≈ 0,52

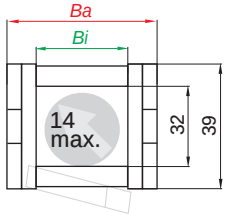
*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*). Example: F17.015.048.0

Order key

F17. 015. 048. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

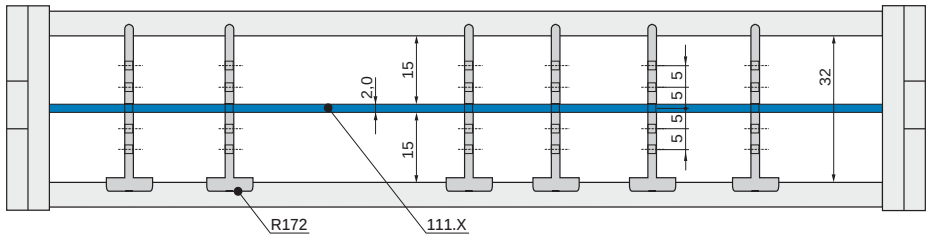


e-chain® links as single parts, overview ▶ page 353

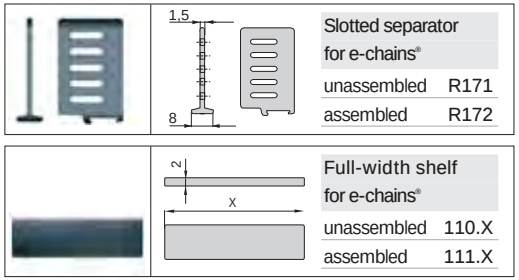
Configuration options and order keys, overview ▶ page 354

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	R171
assembled	R172

Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Slotted separator R171

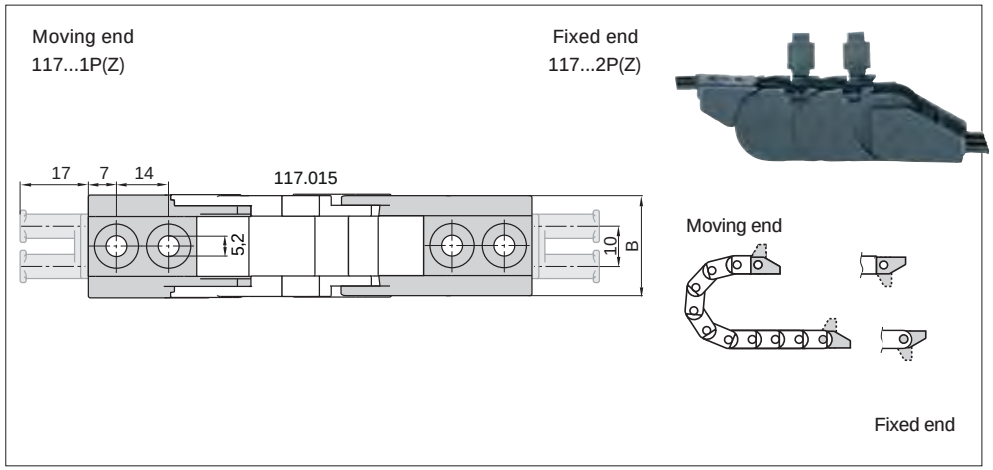
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Full-width shelf 110.X

this option makes sense in applications with many thin cables with similar diameters. For a consequent sub-division. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled
015	110.15	111.15

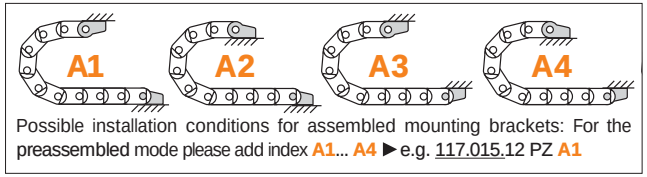


Polymer locking, one-piece | Universal for e-chains®
Recommended for unsupported applications

Width Index		Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
015	▶	117.015.12PZ	117.015.12P	–	27,7	2

Material mounting bracket - igumid G, permitted temp. -40° up to +120° C, VDE 0304 IIC UL94-HB

- One-piece mounting bracket
- Available with or without strain relief tiewrap plates
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end
- Inner and outer attachment possible



Possible installation conditions for assembled mounting brackets: For the preassembled mode please add index **A1**... **A4** ▶ e.g. 117.015.12 PZ **A1**

Order example

117.015.12 PZ **A1**

- A…must be indicated on preassembled configurations
- Strain relief with chainfix tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

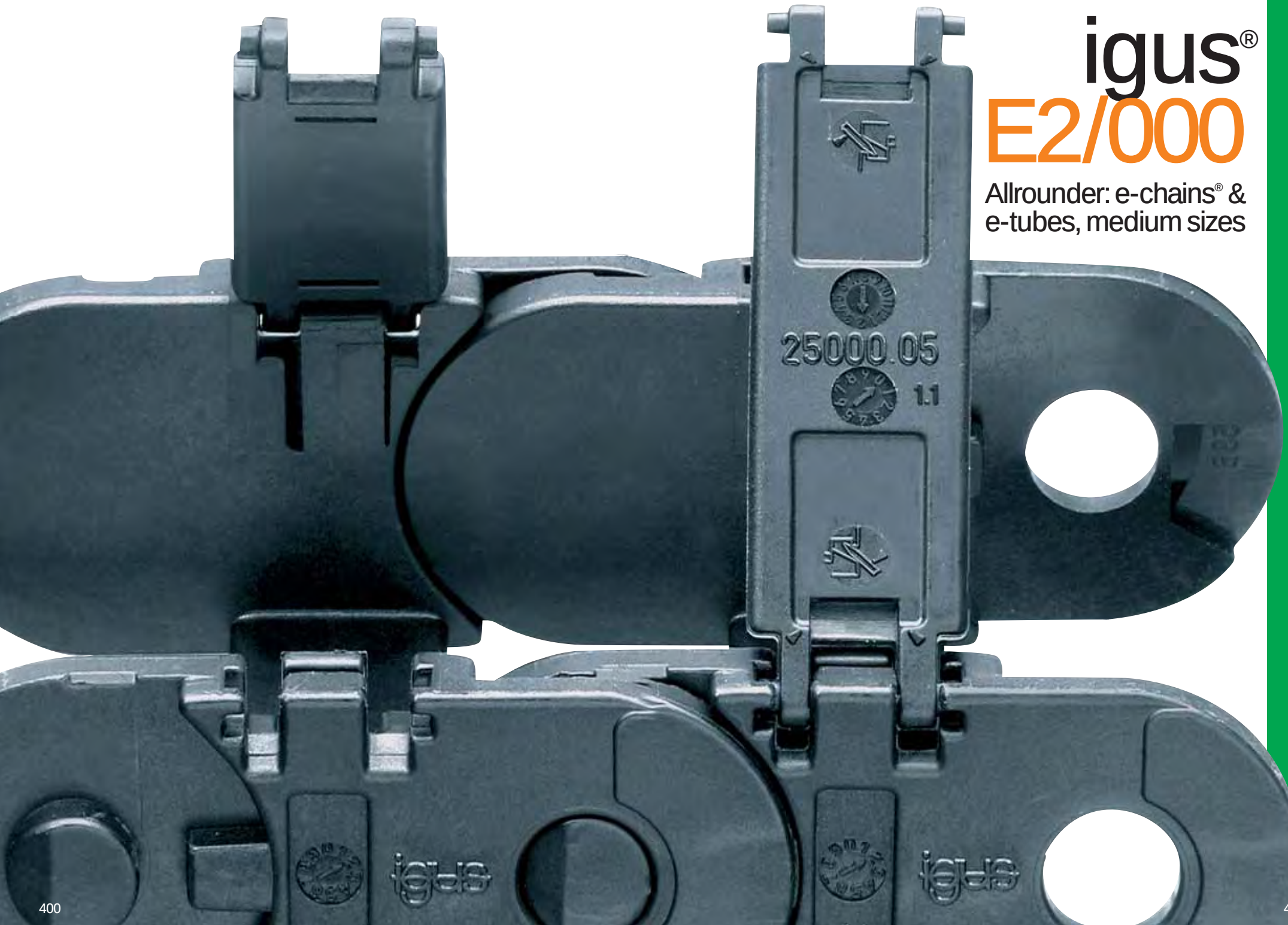
117.015.1 PZ **A1** (preass. + tiewrap plate)

Mounting bracket Fixed end

117.015.2 PZ **A1** (preass. + tiewrap plate)

igus®
E2/000

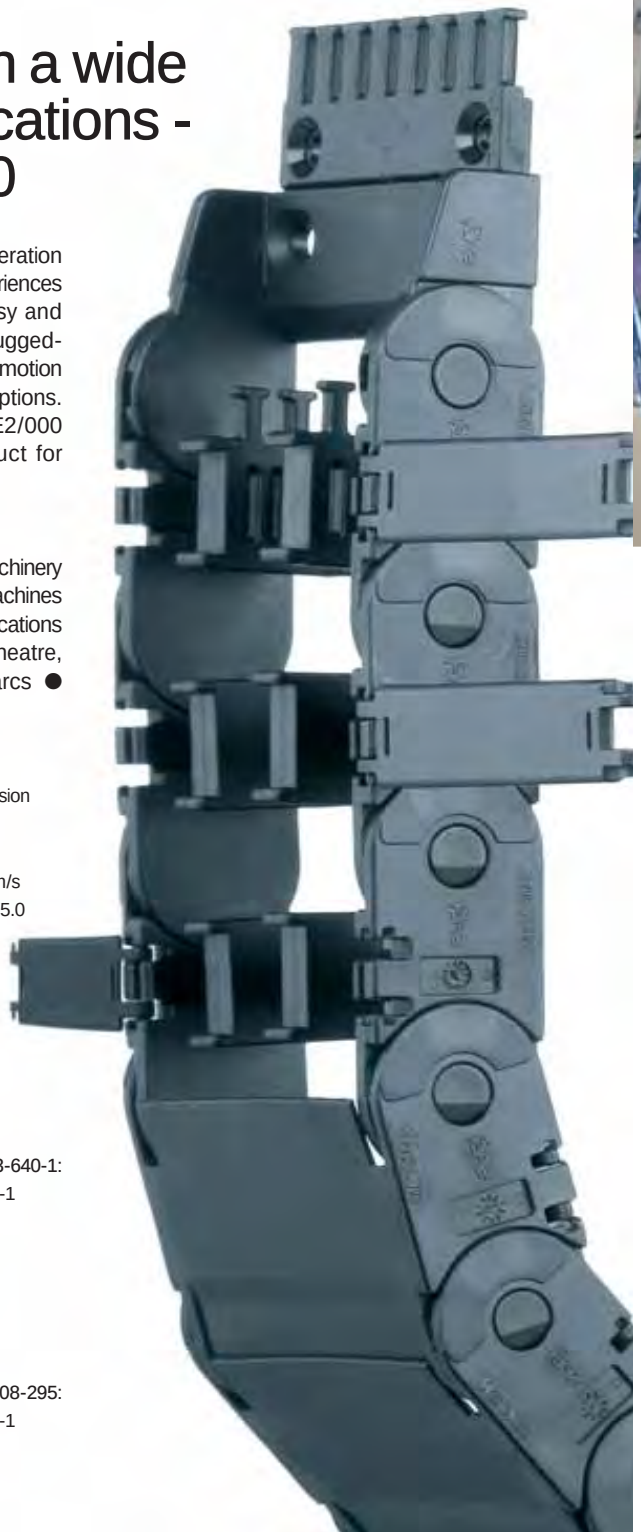
Allrounder: e-chains® & e-tubes, medium sizes



Allrounder with a wide range of applications - System E2/000

The E2/000 Series is igus® fourth generation in this popular size range. All past experiences went into this Millenium Series: easy and versatile assembly combined with ruggedness - high stability paired with quieter motion - long cable life and many fixation options. The design is consistent within all E2/000 variations. It is the standard product for machine builders around the world.

Typical industries and applications
● Material handling ● Construction machinery ● Woodworking machines ● Glass machines ● Plastic machines ● Long travel applications in many industries ● Semicon ● Theatre, entertainment and amusement parcs ● Vehicles ● General machinery



Electrically conductive ESD/ATEX version with PTB-certification upon request

46 dB(A) tested in igus® lab, v = 1,0 m/s unsupported, e.g. Series 2600.05.075.0

UL94-V0 classifications upon request

IPA Qualification Certificate - Report IG 1303-640-1:
ISO Class 2, according to DIN EN ISO 14644-1
for System E2/000, Series 1500.050.038.0
at v = 0,5 / 1,0 / 2,0

IPA Qualification Certificate - Report IG 0308-295:
ISO Class 3, according to DIN EN ISO 14644-1
for System E2/000, Series 2500.05.055.0
at v = 2,0 m/s

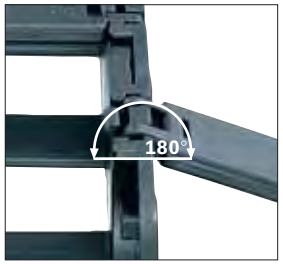


Harnessed E2/000 e-chain® - turnkey solution delivered with cables and sheet metal parts directly to the machine

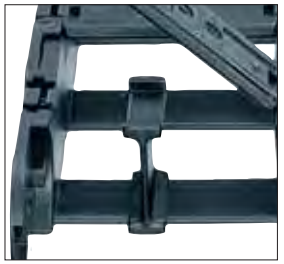
E2/000 features



Innovative snap-open mechanism, choice of snap-open on left or right



Hinged crossbar can be swiveled by more than 180° on both sides



Secure fit of separators and interior separation even when e-chain® is open



Half e-tube - Fully enclosed in outer radius. Choice of swiveling interior radius to the left or right



Lightning-fast closing by the touch of a thumb - secure fit without additional locking devices

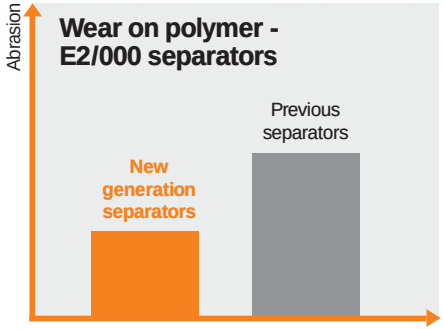


Opening mechanism accessible from above - rapid opening with a screwdriver or the e-chain® opener

Contents, selection table and assembly instructions ► next page

E2/000 | Cables last up to 4 times longer





Wear-optimized separators E2/000
improve service life of cables!



① Standard separator, wide base
② Separator with narrow head
③ Separator, narrow base
④ Separator, asymmetrical
⑤ Full-width shelf, lockable

75% less wear... Increase the service life of cables even further

A new design of interior separators for E2/000 allround e-chain® range. Separators optimally adapted to cable geometry increase the service life of the cables by a factor of 4. A better interior separation can be executed with fewer elements:

Vertical separation - Vertical separators

- Abrasion-optimized, cable-friendly design, long service life
- Mounting-optimized - a simpler and faster assembly
- Non-positive, secure fit
- Easy-to-use interior separation range for all applications

Horizontal separation - Full-width shelves

- Locks at both ends
- Separators can be moved horizontally as needed
- Side plates not required
- Even partial horizontal subdivision is possible

Interior separation single order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

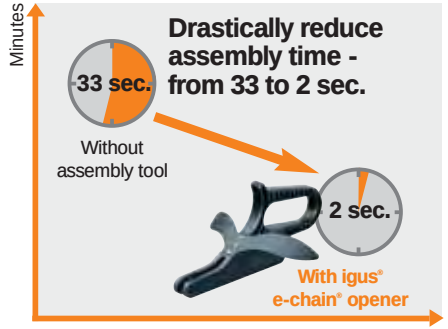
E2/000 | e-chain® opener | Drastically reduce assembly time



Open E2/000 e-chains® in a flash with the igus® **e-chain® opener**

The opening of the links of E2/000 e-chains® at extremely high speed saves significant installation time. Open a long piece of e-chain® in one go. It's the ideal tool when doing your own mounting or assembly lines in order to minimize the processing time significantly. Opening of long e-chain® units in one go and drastically reduce assembly time from 33 to 2 sec. (*tested Series 2700.07)

More information ►
www.igus.eu/E2opener



Reduce installation time to open the e-chain® from 33 sec to 2 sec (tested 1 m, Series 2700.07)

For Series	For widths *Bi* [mm]	Part No.
1400/1500/1450	20, 50, 68, 80, 100	908.254.1400
2400/2500/2450	05, 07, 09	908.254.2400
2600/2700/2650	06, 07, 09, 10	908.254.2600
3400/3500/3450	50, 75, 100, 115	908.254.3400



Compatible mounting tools for each e-chain® size. The ideal tool for your own mounting or assembly lines to minimize the processing time significantly.

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Assembly video available online at ►www.igus.eu/savetime

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	Page
							
E2/000 e-chains® Standard for System E2 Snap-open along outer radius from both sides. For long travels							
1500	21	15 - 125	28,5 - 138,5	28	35 - 180	1,75	412
2500	25	25 - 125	41 - 141	35	55 - 250	2,25	426
2700	35	50 - 175	66 - 194	50	63 - 250	2,75	444
3500	45	50 - 250	70 - 270	64	75 - 300	3,00	462
255	24	38 - 103	54 - 119	35	55 - 250	1,80	480
							
E2/000 e-chains® Snap-open along inner radius from both sides. For long travels please consult igus®							
1400	21	15 - 125	28,5 - 138,5	28	35 - 180	1,75	412
2400	25	25 - 125	41 - 141	35	55 - 250	2,25	426
2600	35	50 - 175	66 - 194	50	63 - 250	2,75	444
3400	45	50 - 250	70 - 270	64	75 - 300	3,00	462
							
Half e-tubes Snap-open along inner radius from both sides. For long travels please consult igus®							
1450	21	15 - 125	28,5 - 138,5	28	75 - 180	1,75	412
2450	25	25 - 125	41 - 141	35	75 - 250	2,25	426
2650	35	50 - 175	66 - 194	50	100 - 250	2,75	444
3450	45	50 - 250	70 - 270	64	125 - 300	3,00	462
							
Full e-tubes Snap-open along inner radius from both sides.For long travels please consult igus®							
1480	21	15 - 125	28,5 - 138,5	28	75 - 180	1,75	412
2480	25	25 - 125	41 - 141	35	75 - 250	2,25	426
2680	35	50 - 175	66 - 194	50	100 - 250	2,75	444
3480	45	50 - 250	70 - 270	64	125 - 300	3,00	462

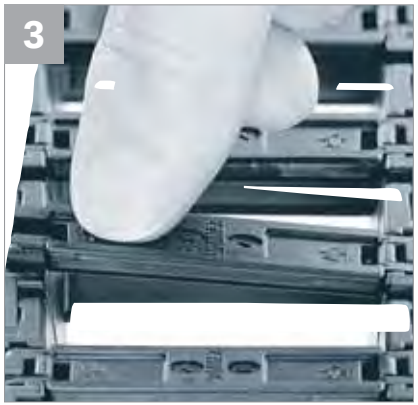
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



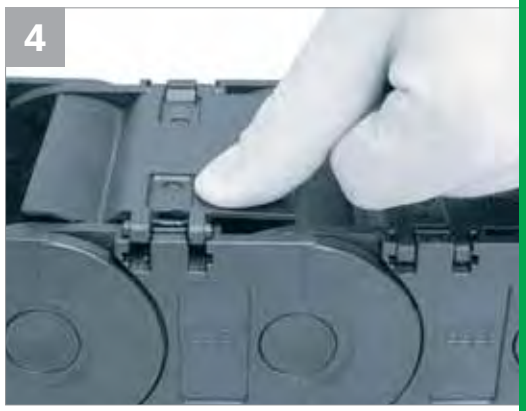
Push and click



Snap in pin



Push and snap crossbars



e-tube: push and snap lid

Open E2/000 e-chains® in a flash with the **e-chain® opener** ► page 405

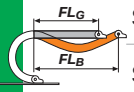
Technical Data, overview ►page 408

e-chain® links as single parts, overview ►page 409

Configuration options and order keys, overview ►page 410

Assembly video available online at ► www.igus.eu/eu/E2000assembly

Technical Data - System E2/000



Gliding[1] speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

1) Note: Before using series snap open along the inner radius for gliding applications, please consult igus®

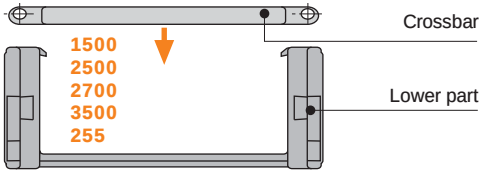
Installation methods overview, maximum travels - System E2/000

e-chain® / e-tube Series	Unsupported application	1) Gliding application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application	Unsupported length lower run
1400/1500/1450/1480	≤ 1,75 m	≤ 75 m	≤ 20 m	≤ 2,0 m	≤ 0,7 m	with rework	upon request	upon request
2400/2500/2450/2480	≤ 2,25 m	≤ 100 m	≤ 40 m	≤ 3,0 m	≤ 1,0 m	with rework	upon request	upon request
2600/2700/2650/2680	≤ 2,70 m	≤ 120 m	≤ 50 m	≤ 3,0 m	≤ 1,0 m	with rework	upon request	upon request
3400/3500/3450/3480	≤ 3,00 m	≤ 150 m	≤ 80 m	≤ 3,0 m	≤ 1,0 m	with rework	upon request	upon request
255	≤ 1,80 m	≤ 100 m	≤ 40 m	≤ 3,0 m	≤ 1,0 m	with rework	upon request	upon request

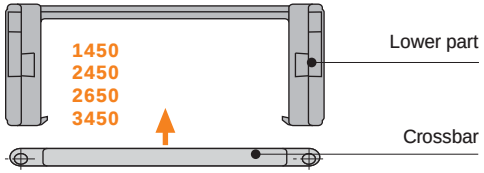
1) Note: Before using series snap open along the inner radius for gliding applications, please consult igus®

Part No. two-piece e-chain® links as single parts - System E2/000

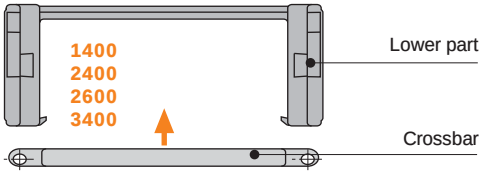
e-chain® snap-open along outer radius



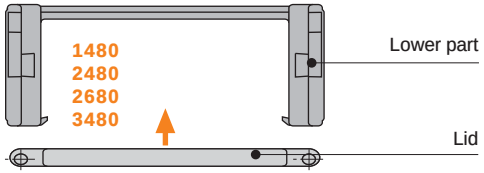
Half e-tube snap-open along inner radius



e-chain® snap-open along inner radius



Full e-tube snap-open along inner radius



e-chain® Series	e-chain® Crossbar*	e-chain® Lower parts**	e-tube Series	e-tube Crossbar/lid*	e-tube Lower parts**
1400	15000.*Bi*	1400.*Bi*00.*R*	1450	15000.*Bi*	1450.*Bi*00.*R*
1500	15000.*Bi*	1500.*Bi*00.*R*	1480	14800.*Bi*	1450.*Bi*00.*R*
2400	25000.*Bi*	2400.*Bi*00.*R*	2450	25000.*Bi*	2450.*Bi*00.*R*
2500	25000.*Bi*	2500.*Bi*00.*R*	2480	24800.*Bi*	2450.*Bi*00.*R*
2600	27000.*Bi*	2600.*Bi*00.*R*	2650	27000.*Bi*	2650.*Bi*00.*R*
2700	27000.*Bi*	2700.*Bi*00.*R*	2680	26800.*Bi*	2650.*Bi*00.*R*
3400	35000.*Bi*	3400.*Bi*00.*R*	3450	35000.*Bi*	3450.*Bi*00.*R*
3500	35000.*Bi*	3500.*Bi*00.*R*	3480	34800.*Bi*	3450.*Bi*00.*R*
255	2550.*Bi*	255.*Bi*00.*R*	–	–	–

* Crossbar / Lid / bottom - supplement Part No. with required width index (*Bi*). Example: 25000.100

** Lower parts - supplement Part No. with required width index (*Bi*) and radius (*R*). Example: 2500.10000.100

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E2/000 | Configuration options and order key

(based on Series 2400·2450·2480·2500)

Standard	*Additional noise dampening with pads*	*NC-Version - (no camber) without pretension*	*Reverse bending radius for circular movements*
Part No. **Standard**	Part No. **Low noise (with pads)**	Part No. **NC-Material**	Part No. **RBR**
2400.03.*R*.0 e-chain® snap-open along inner radius[1)]	S2400.03.*R*.0 e-chain® snap-open along inner radius[1)]	2400.03.*R*.0.NC e-chain® snap-open along inner radius[1)]	2400.03.*R1/R2*.0 e-chain® snap-open along inner radius[1)]
2500.03.*R*.0 e-chain® snap-open along outer radius	S2450.03.*R*.0 Half e-tube snap-open along inner radius[1)]	2500.03.*R*.0.NC e-chain® snap-open along outer radius	2500.03.*R1/R2*.0 e-chain® snap-open along outer radius
2450.03.*R*.0 Half e-tube snap-open along inner radius[1)]	S2480.03.*R*.0 e-tube snap-open along inner radius[1)]	2450.03.*R*.0.NC Half e-tube snap-open along inner radius[1)]	*RBR* for e-tubes - please consult igus
2480.03.*R*.0 e-tube snap-open along inner radius[1)]		2480.03.*R*.0.NC e-tube snap-open along inner radius[1)]	*RBR* for e-tubes - please consult igus
Delivery time* 24h or today!	Delivery time* 3-5 work days	Delivery time* 2-5 work days	Delivery time* - Several widths from stock

*Delivery time means time until shipping of goods (after technical release)

[1)] for gliding applications please consult igus®

E2/000 | Configuration options and order key

(based on Series 2400·2450·2480·2500)

Unsupported lengths +25% possible	*No burning-in of hot chips up to 850°C (1562° F)*	*ATEX / ESD classified e-chains® Ex II 2 GD*	*Magnetically detectable plastic e-chains®* *for the food- and tobacco industry*
Part No. **XXL-Material** [03)]	Part No. **HT-Material** only for e-tubes	Part No. **ESD-Material**	Part No. **igumid DT-Material**
2400.03.*R*.0.XXL e-chain® snap-open along inner radius[1)]	2480.03.*R*.0.HT Complete e-tube**	2400.03.*R*.0.ESD e-chain® snap-open along inner radius[1)]	2400.03.*R*.0.DT e-chain® snap-open along inner radius[1)]
2500.03.*R*.0.XXL e-chain® snap-open along outer radius	2480.03HT.*R*.0 Bottom only	2500.03.*R*.0.ESD e-chain® snap-open along outer radius	2500.03.*R*.0.DT e-chain® snap-open along outer radius
2450.03.*R*.0.XXL Half e-tube snap-open along inner radius[1)]		2450.03.*R*.0.ESD Half e-tube snap-open along inner radius[1)]	2450.03.*R*.0.DT Half e-tube snap-open along inner radius[1)]
2480.03.*R*.0.XXL e-tube snap-open along inner radius[1)]		2480.03.*R*.0.ESD e-tube snap-open along inner radius[1)]	2480.03.*R*.0.DT e-tube snap-open along inner radius[1)]
Delivery time* 5 work days	Delivery time* 7-10 work days	Delivery time* - Several widths from stock	Delivery time upon request

3) Lower part made of XXL-material

Combination possibilities | Examples

	Low-noise option	NC-Version	RBR-Version	XXL-Material	HT-Material*	ESD-Material
Low-noise option		S2400.03.*R*.0.NC	–	S2400.03.*R*.0.XXL	S2480.03.*R*.0.HT	S2400.03.*R*.0.ESD
NC-Version	S2400.03.*R*.0.NC		–	–	2480.30.*R*.0.HT.NC	2400.03.*R*.0.ESD.NC
RBR-Version	–	–		–	2480.03.*R1/R2*.0.HT	2400.03.*R1/R2*.0.ESD
XXL-Material	S2400.03.*R*.0.XXL	–	–		–	–
HT-Material*	S2480.03.*R*.0.HT	2480.30.*R*.0.HT.NC	2480.30.*R1/R2*.0.HT	–		–
ESD-Material	S2400.03.*R*.0.ESD	2400.03.*R*.0.ESD.NC	2400.03.*R1/R2*.0.ESD	–	–	

*for gliding applications please consult igus®

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 22 links	2500.03.100.0
+ Mounting brackets	1 set (with tiewrap plates)	2030.34PZB+
+ Interior separation	with 2 separators assembled every 2nd link	2 x 211

Order text: 1,0 m 2500.03.100.0 + 2030.34PZB+ + 2 x Part No. 211

Order key
2500.03.100.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

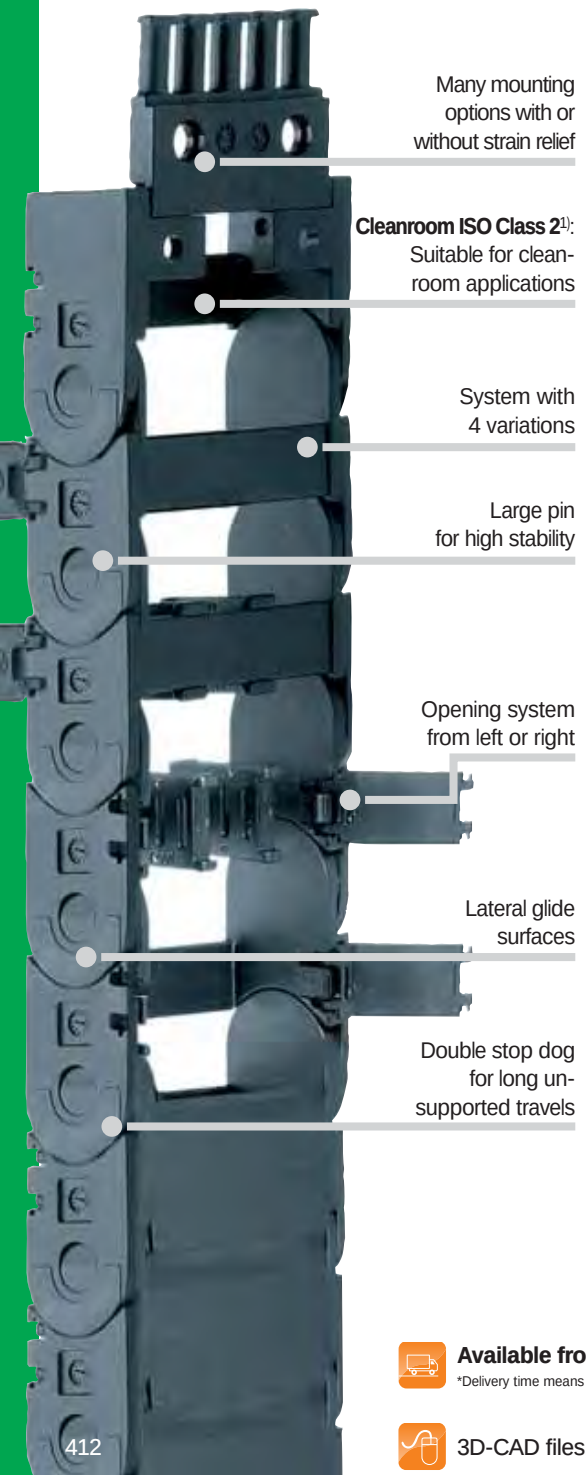
Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Small radii, high stability

When to use Series 1400·1450·1480·1500:

- If a medium-sized, stable system with an inner height of 21 mm is required (e-chains®, half and full e-tubes)
- If inner widths up to 125 mm are required
- For unsupported lengths up to 1,75 m and fill weights up to 2,0 kg/m
- For long travels up to 75 m
- If an optimized system for quick opening of crossbars from left or right is required

1) Cleanroom - Series 1500.050.038.0, more details ▶ page 132

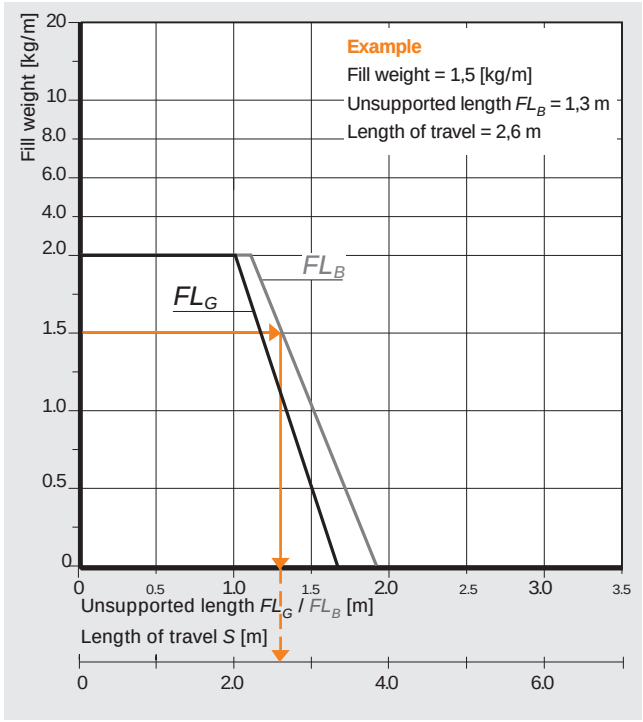
When to use a different igus® Series:

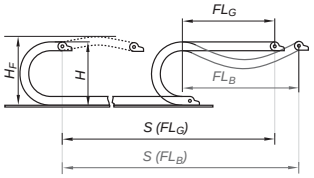
- If more stability is required
  ▶ System E4.1, Series E4.21, page 626
- For simple applications and easy filling
  ▶ easy chain®, Series E14, page 180
- If e-tubes with smaller bending radii are required
  ▶ e-tubes E2, Series R117, page 502

Open E2/000 e-chains® in a flash with the **e-chain® opener** ▶ page 405

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E2000



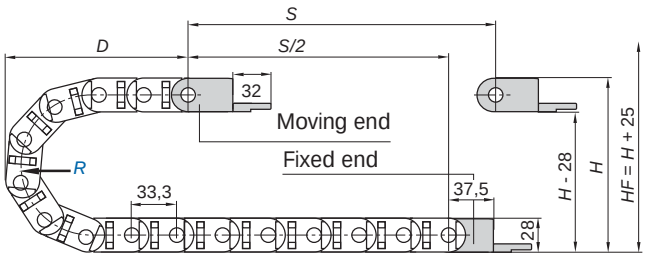


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Long travels up to 75 m.
More information ▶ page 424



Technical Data

Speed, material, temperature and flammability class ▶ page 408

Pitch = 33,3 mm/link
Links/m = 30 (1000 mm)
Chain length = $S/2 + K$

R	035*	038*	048*	075	100	125	145	180
H	98	104	124	178	228	278	318	388
D	99	102	112	139	164	189	209	244
K	180	190	220	305	385	460	525	635

The required clearance height: $H_F = H + 25$ mm (with 0,5 kg/m fill weight)

*Radius for Series 1450/1480 available upon request, please consult igus® for delivery time. Note: Before using Series 1400/1450/1480 on long travels, please consult igus®!

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



e-chains® | Series 1400 snap-open along inner radius
e-chains® | Series 1500 snap-open along outer radius | Standard

e-chains® snap-open along inner radius	e-chains® snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	1400 [kg/m]	1500 [kg/m]
1400.015.R.0	1500.015.R.0	15	28,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,46	≈ 0,46
1400.020.R.0	1500.020.R.0	20	33,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,47	≈ 0,47
1400.025.R.0	1500.025.R.0	25	38,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,49	≈ 0,49
1400.038.R.0	1500.038.R.0	38	51,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,53	≈ 0,53
1400.050.R.0	1500.050.R.0	50	63,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,56	≈ 0,56
1400.068.R.0	1500.068.R.0	68	81,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,63	≈ 0,63
1400.080.R.0	1500.080.R.0	80	93,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,67	≈ 0,67
1400.100.R.0	1500.100.R.0	100	113,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,74	≈ 0,74
1400.125.R.0	1500.125.R.0	125	138,5	| 035 | 038 | 048 | 075 | 100 | 125 | 145 | 180	≈ 0,83	≈ 0,83

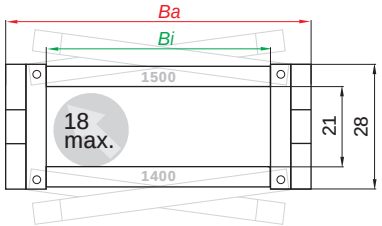
Supplement Part No. with required radius. Example: 1500.038.100.0

Note: Before using Series 1400/1450/1480 on long travels (gliding), please consult igus®!

Order key

1400. 038. 100. 0 e-chain®
1500. 038. 100. 0 e-chain®

- Standard color black
- Bending radius R
- Width index
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Half e-tubes | Series 1450 snap-open along inner radius, closed along outer radius
Full e-tubes | Series 1480 snap-open along inner radius, fully enclosed

Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	1450 [kg/m]	1480 [kg/m]
1450.015.R.0	1480.015.R.0	15	28,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,48	≈ 0,50
1450.020.R.0**	1480.020.R.0**	20	33,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,51	≈ 0,51
1450.025.R.0	1480.025.R.0	25	38,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,54	≈ 0,57
1450.038.R.0	1480.038.R.0	38	51,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,59	≈ 0,61
1450.050.R.0	1480.050.R.0	50	63,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,65	≈ 0,67
1450.068.R.0	1480.068.R.0	68	81,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,74	≈ 0,77
1450.080.R.0	1480.080.R.0	80	93,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,80	≈ 0,84
1450.100.R.0	1480.100.R.0	100	113,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 0,90	≈ 0,95
1450.125.R.0	1480.125.R.0	125	138,5	| 035* | 038* | 048* | 075 | 100 | 125 | 145 | 180	≈ 1,03	≈ 1,08

**Width available upon request, please consult igus® for delivery time *Radius available upon request, please consult igus® for delivery time

For radii 035, 038, 048 the e-tube is not fully enclosed. Please consult igus®.

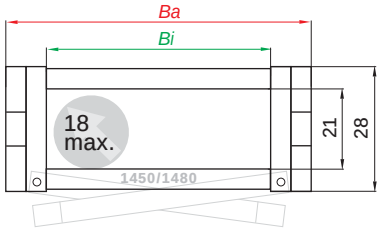
Supplement Part No. with required radius. Example: 1450.038.100.0

Note: Before using Series 1400/1450/1480 on long travels (gliding), please consult igus®!

Order key

1450. 038. 100. 0 Half e-tube
1480. 038. 100. 0 Full e-tube

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | Noise reduction ≈ 5 dB(A)

e-chains® snap-open along inner radius	Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	*R* Bending radii [mm]									*Bi* [mm]
S1400.015.	S1450.015.	S1480.015.	*R*.0	| 035*	038*	048*	075	100	125	145	180	15
S1400.020.	S1450.020.**	S1480.020.**	*R*.0	| 035*	038*	048*	075	100	125	145	180	20
S1400.025.	S1450.025.	S1480.025.	*R*.0	| 035*	038*	048*	075	100	125	145	180	25
S1400.038.	S1450.038.	S1480.038.	*R*.0	| 035*	038*	048*	075	100	125	145	180	38
S1400.050.	S1450.050.	S1480.050.	*R*.0	| 035*	038*	048*	075	100	125	145	180	50
S1400.068.	S1450.068.	S1480.068.	*R*.0	| 035*	038*	048*	075	100	125	145	180	68
S1400.080.	S1450.080.	S1480.080.	*R*.0	| 035*	038*	048*	075	100	125	145	180	80
S1400.100.	S1450.100.	S1480.100.	*R*.0	| 035*	038*	048*	075	100	125	145	180	100
S1400.125.	S1450.125.	S1480.125.	*R*.0	| 035*	038*	048*	075	100	125	145	180	125

**Width available upon request, please consult igus® for delivery time *Radius for Series 1450/1480 available upon request, please consult igus® for delivery time

For radii 035, 038, 048 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: S1400.038.100.0

Note: Before using Series 1400/1450/1480 on long travels (gliding), please consult igus®!

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

ESD/ATEX permanently conductive e-chains® - 1500 several widths with delivery from stock:
Inner widths *Bi* 15 - 80, radii *R* 038 - 145. Full ESD product range ▶ www.igus.eu/ESD

Magnetically detectable plastic e-chains®

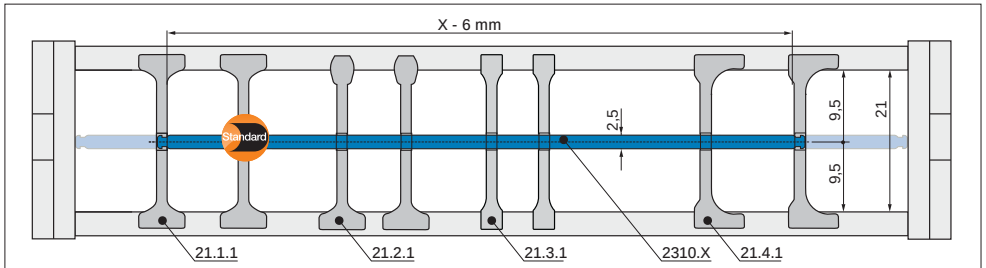
For the food- and tobaccoindustry | New in this catalog

● The material igumid DT is detected to the tiniest fragment all common metal detection systems and can therefore be selected automatically ● Particles as small as 1.0 mm can be recognized for fragments passing at speeds of 20 m/min

More information ▶ www.igus.eu/eu/detectable-chain

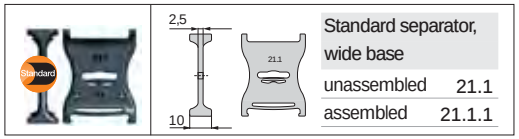


New generation of interior separation - for e-chains®



In the standard configuration separators are assembled every 2nd e-chain® link

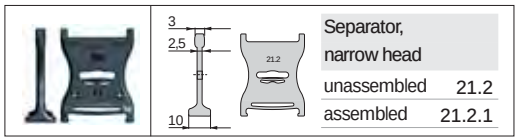
Note: Only suitable for e-chain® Series 1400/1500! Interior separation for e-tubes ▶ see next page



Standard separator, wide base	
unassembled	21.1
assembled	21.1.1

Standard - for all applications

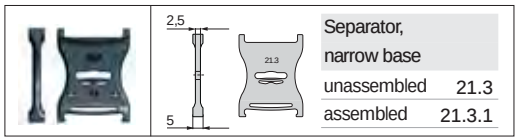
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	21.2
assembled	21.2.1

For even faster installation

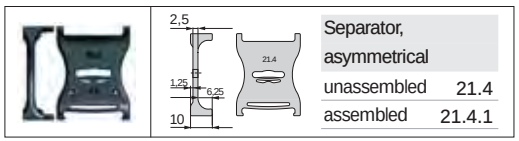
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	21.3
assembled	21.3.1

For many thin cables

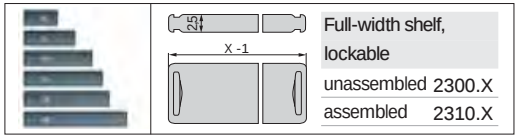
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Separator, asymmetrical	
unassembled	21.4
assembled	21.4.1

For side-mounted applications

Asymmetrical separator, for defined distance.
No additional spacers necessary.



Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

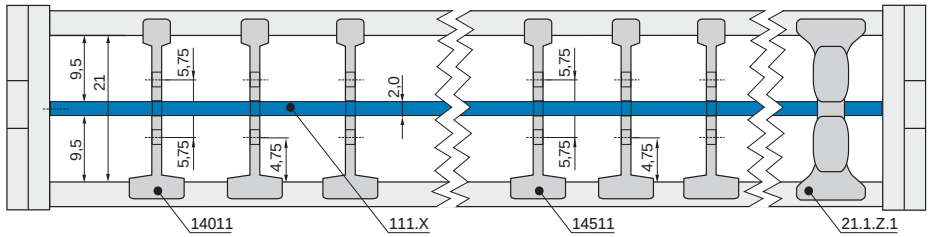


Lockable full-width shelves - for the standard interior separation

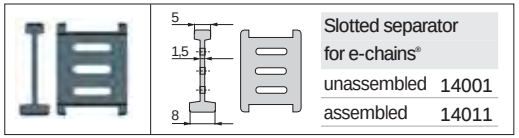
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.87	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.90	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

1400·1450·1480·1500 | Interior separation | Options

Previous interior separation - for e-chains® and e-tubes



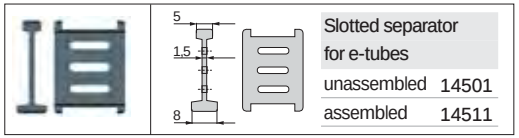
Separators, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link



Slotted separator for e-chains®	
unassembled	14001
assembled	14011

Slotted separator 14001 (e-chains® only)

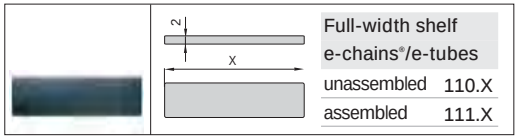
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Slotted separator for e-tubes	
unassembled	14501
assembled	14511

Slotted separator 14501 (e-tubes only)

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



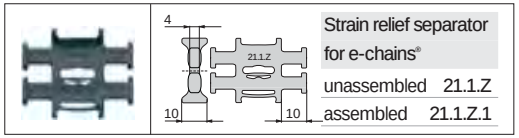
Full-width shelf e-chains®/e-tubes	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X (e-chains®/e-tubes)

this option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 3 different heights (in 5,75 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	110.15	111.15	038	110.38	111.38	080	110.80	111.80
020	110.20	111.20	050	110.50	111.50	100	110.100	111.100
025	110.25	111.25	068	110.68	111.68	125	110.125	111.125



Strain relief separator for e-chains®	
unassembled	21.1.Z
assembled	21.1.Z.1

Additional elements for interior separation

Strain relief separator 21.1.Z (e-chains® only)

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.



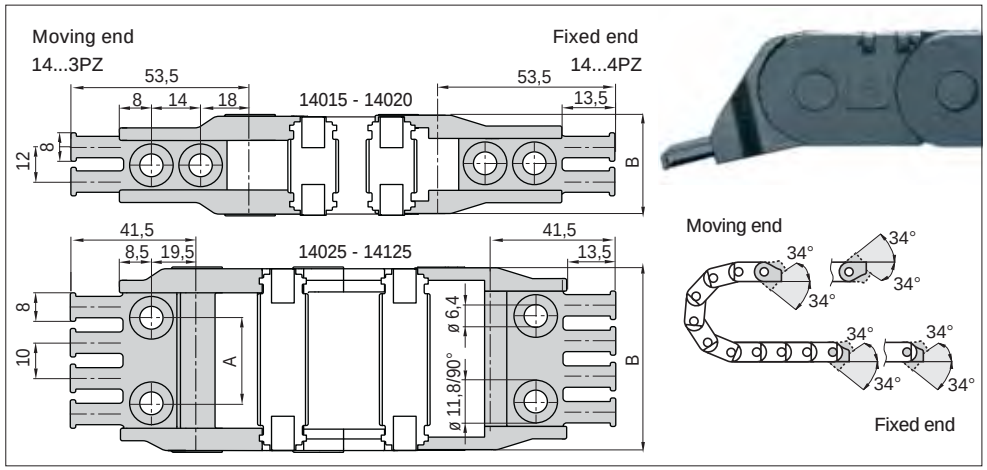
E2/000 Series 1400 in aircraft refuelling truck; telescopic crane with six sections

Optional: Support tray tool kit.
For support of the lower run.
Simple one-piece support trays according to your requirements and specification. Available upon request.
The complete range with order options ►from page 1258



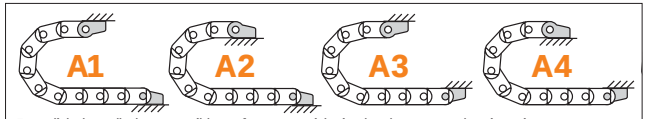
1400·1450·1480·1500 | Mounting brackets pivoting

For tight installation conditions

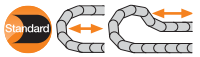


Polymer pivoting, one-piece | Standard - Universal for e-chains® and e-tubes
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.015. ▶	14015.34PZ	–	28,5	2
.020. ▶	14020.34PZ	–	33,5	2
.025. ▶	14025.34PZ	13	38,5	2
.038. ▶	14038.34PZ	24	51,5	4
.050. ▶	14050.34PZ	36	63,5	5
.068. ▶	14068.34PZ	54	81,5	7
.080. ▶	14080.34PZ	66	93,5	8
.100. ▶	14100.34PZ	86	113,5	10
.125. ▶	14125.34PZ	111	138,5	13



Possible installation conditions for assembled, pivoting mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 14038.34PZA1



- Standard
- For tight installation conditions
- One-piece, stable mounting brackets
- Integrated molded strain relief
- Corrosion resistant
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

14038. 34 PZ A1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set pivoting = 34
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

14038. 3 PZ A1 (preassembled + tiewrap plate)

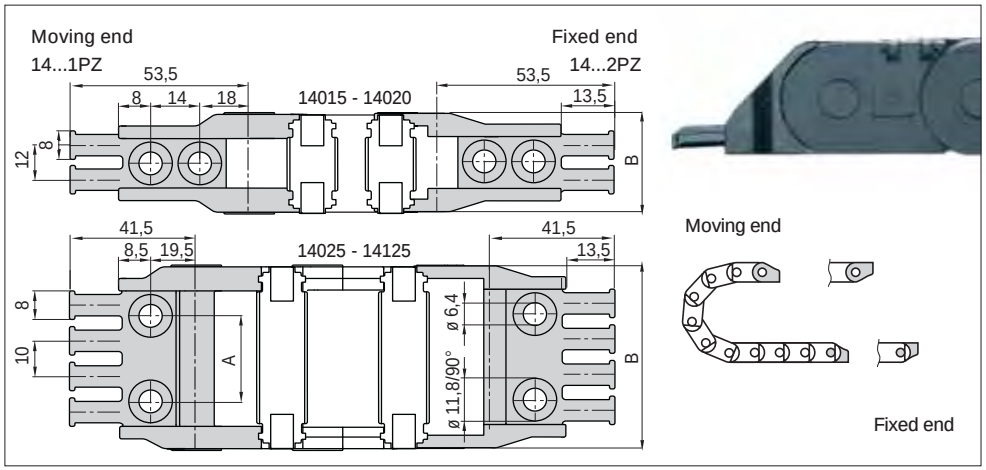
Mounting bracket Fixed end

14038. 4 PZ A1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

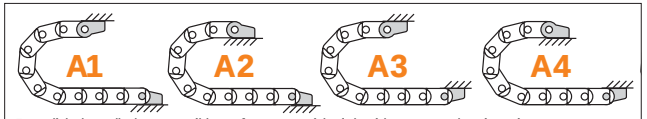
1400·1450·1480·1500 | Mounting brackets locking

For very high speed and acceleration

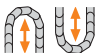


Polymer locking, one-piece | Universal for e-chains® and e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.015. ▶	14015.12PZ	–	28,5	2
.020. ▶	14020.12PZ	–	33,5	2
.025. ▶	14025.12PZ	13	38,5	2
.038. ▶	14038.12PZ	24	51,5	4
.050. ▶	14050.12PZ	36	63,5	5
.068. ▶	14068.12PZ	54	81,5	7
.080. ▶	14080.12PZ	66	93,5	8
.100. ▶	14100.12PZ	86	113,5	10
.125. ▶	14125.12PZ	111	138,5	13



Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 14038.12PZA1



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

14038. 12 PZ A1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

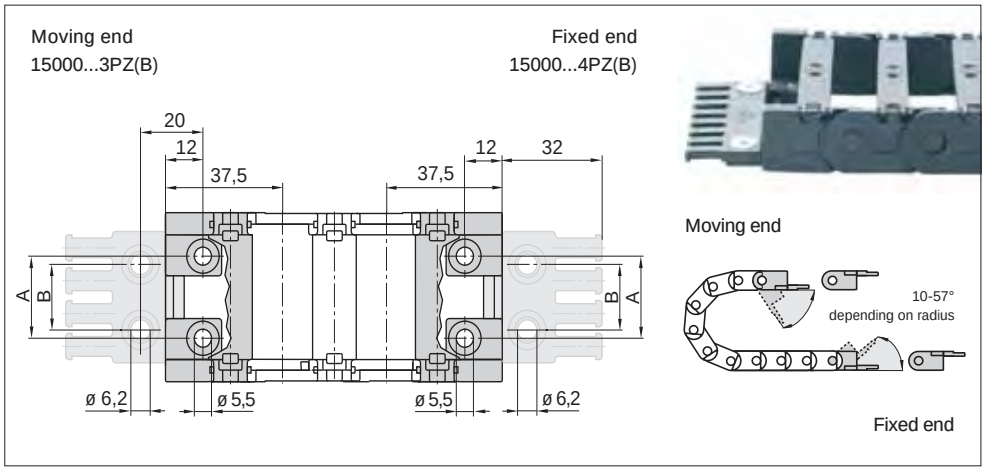
14038. 1 PZ A1 (preassembled + tiewrap plate)

Mounting bracket Fixed end

14038. 2 PZ A1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

1400·1450·1480·1500 | Mounting brackets pivoting

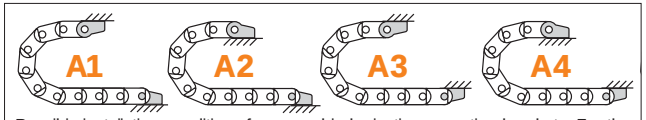


Polymer pivoting | Universal for e-chains® and e-tubes
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Part No. full set **without** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.015. ▶	–	–	–	–	–
.020. ▶	–	–	–	–	–
.025. ▶	15000.025.34PZB	15000.025.34PZ	12	15	3
.038. ▶	15000.038.34PZB	15000.038.34PZ	25	20	4
.050. ▶	15000.050.34PZB	15000.050.34PZ	37	30	5
.068. ▶	15000.068.34PZB	15000.068.34PZ	55	40	6
.080. ▶	15000.080.34PZB	15000.080.34PZ	67	60	8
.100. ▶	15000.100.34PZB	15000.100.34PZ	87	80	10
.125. ▶	15000.125.34PZB*	15000.125.34PZ*	112	100	12

*Tiewrap plate (consists of 2x2050.ZB) does not snap on but needs to be bolted down separately

Note: Mounting brackets not to assemble at the gable end



Possible installation conditions for assembled, pivoting mounting brackets. For the preassembled mode please add index A1... A4 ▶ e.g. 15000.038.34PZBA1

- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Variable traverse angle for flexible assembly
- Corrosion resistant
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

15000.038.34PZA1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set pivoting = 34
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

15000.038.3PZA1 (preassembled + tiewrap plate)

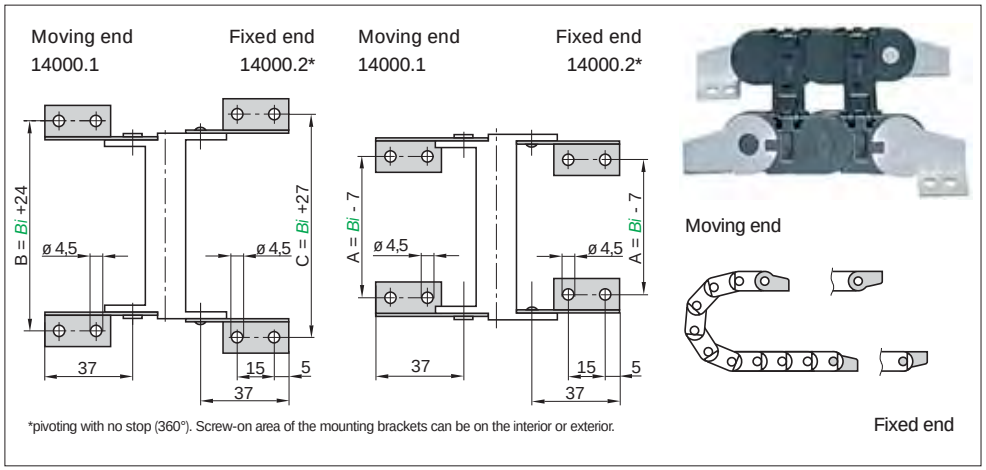
Mounting bracket Fixed end

15000.038.4PZA1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

1400
1450
1480
1500

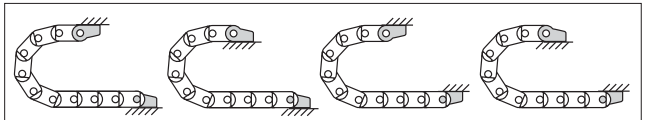
1400·1450·1480·1500 | Steel mounting brackets locking



*pivoting with no stop (360°). Screw-on area of the mounting brackets can be on the interior or exterior.

Steel locking | - For e-chains® and e-tubes
Recommended for unsupported, vertical hanging and standing applications

For width index	Part No. full set	Part No. full set stainless steel**	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]
.015. ▶	14000.12	14000.12.E	8	39	42
.020. ▶	14000.12	14000.12.E	13	44	47
.025. ▶	14000.12	14000.12.E	18	49	52
.038. ▶	14000.12	14000.12.E	31	62	65
.050. ▶	14000.12	14000.12.E	43	74	77
.068. ▶	14000.12	14000.12.E	61	92	95
.080. ▶	14000.12	14000.12.E	73	104	107
.100. ▶	14000.12	14000.12.E	93	124	127
.125. ▶	14000.12	14000.12.E	118	149	152



Possible installation conditions - further installation angles ▶ installation sketch

- Locked connections
- One part (2-piece) for all e-chain® widths
- Electrically conductive
- Bolted connection outside of chain cross-section possible
- Stainless steel version available (**Material: stainless steel 1.4301 / AISI 304)

Part no. structure

14000. 12.E

- Optional stainless steel
- Full set, 4 parts 2 with pin / 2 with bore
- Mounting bracket

Single-part order

Mounting bracket Moving end

14000. 1 (1 part left / right)

Mounting bracket Fixed end

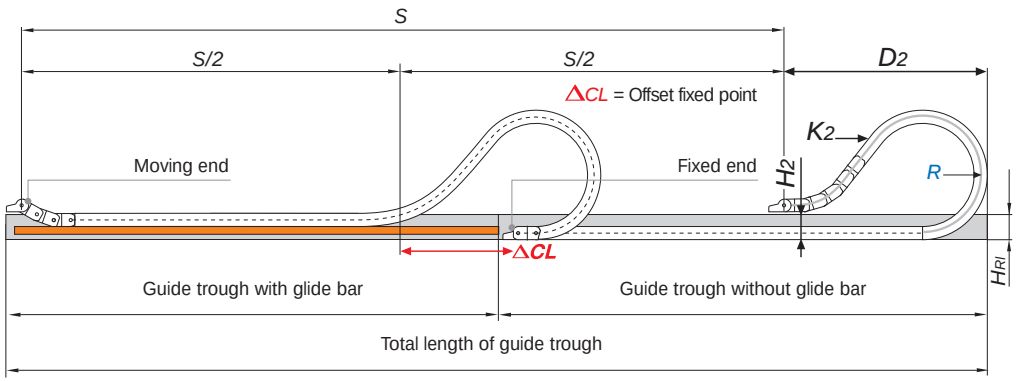
14000. 2 (1 part left / right)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

1400·1450·1480·1500 | Dimensions | Long travels

Gliding applications | For long travels from 10 m to max. 75 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. **Please note:** For using Series 1400/1450/1480 for long travels (gliding), please consult igus® first. For long travels, igus® specifies Series 1500 that snaps open along the outer radius. In case of travels between 4 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 33,3 mm/link · Links/m = 30 (1000 mm) · Chain length = $S/2 + K_2$

R	035*	038*	048*	075	100	125	145	180
H_2	70	76	96	150	100	100	100	100
D_2^{+25}	99	102	112	139	340	495	540	690
K_2	180	190	220	305	600	800	940	1170
ΔCL	–	–	–	–	179	305	340	445

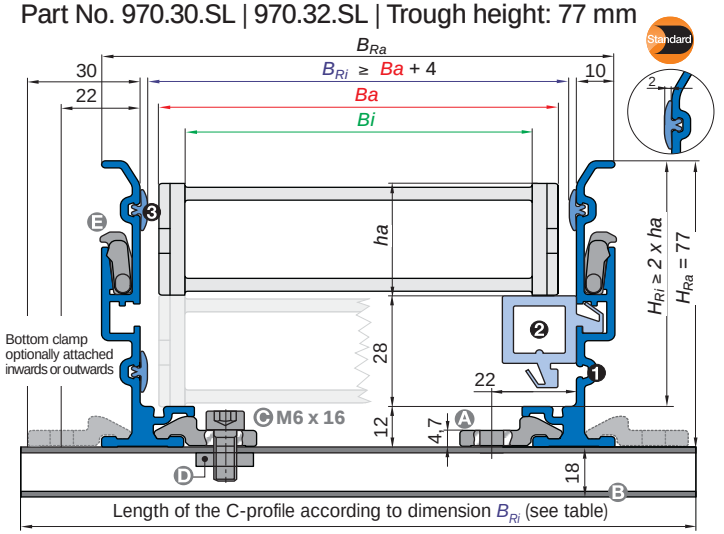
*Radius for Series 1450/1480 available upon request, please consult igus® for delivery time. Note: Before using Series 1400/1450/1480 on long travels, please consult igus®!

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height $S/2$ = Half length of travel

Aluminum SuperTrough | Basic Version

Part No. 970.30.SL | 970.32.SL | Trough height: 77 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

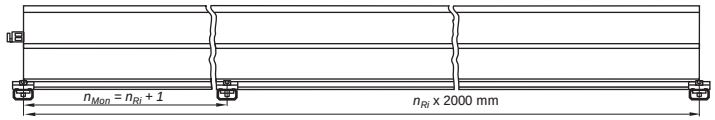
Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	33	upon request	960.30.125
.020	38	upon request	960.30.125
.025	43	upon request	960.30.150
.038	56	upon request	960.30.150
.050	68	960.30125	960.30.175
.068	86	960.30.150	960.30.175
.080	98	960.30.150	960.30.200
.100	118	960.30.175	960.30.225
.125	143	960.30.200	960.30.250

Order example: Length of travel 30 m - Center mounted for Series 1500.050.035.0 with B_{Ri} = 68

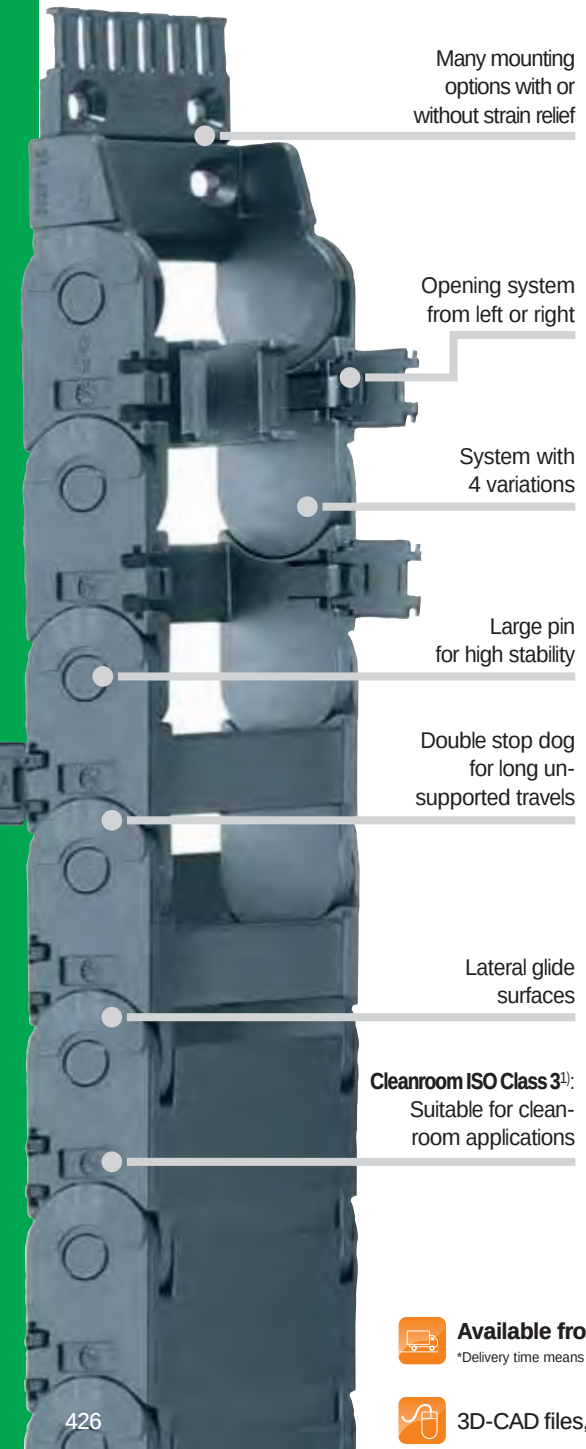
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 970.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 970.32.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.125
Module for the fixed end	
Order text: 1 set	Part No. 970.80



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail ▶ from page 1192

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Allrounder, high stability

When to use Series 2400·2450·2480·2500:

- If a medium-sized, stable system with an inner height of 25 mm is required (e-chains®, half and full e-tubes)
- If inner widths up to 125 mm are required
- For unsupported lengths up to 2,25 m and fill weights up to 4,8 kg/m
- For long travels up to 100 m
- If an optimized system for quick opening of crossbars from left or right is required

1) Cleanroom - Series 2500.05.055.0, more details ▶ page 132

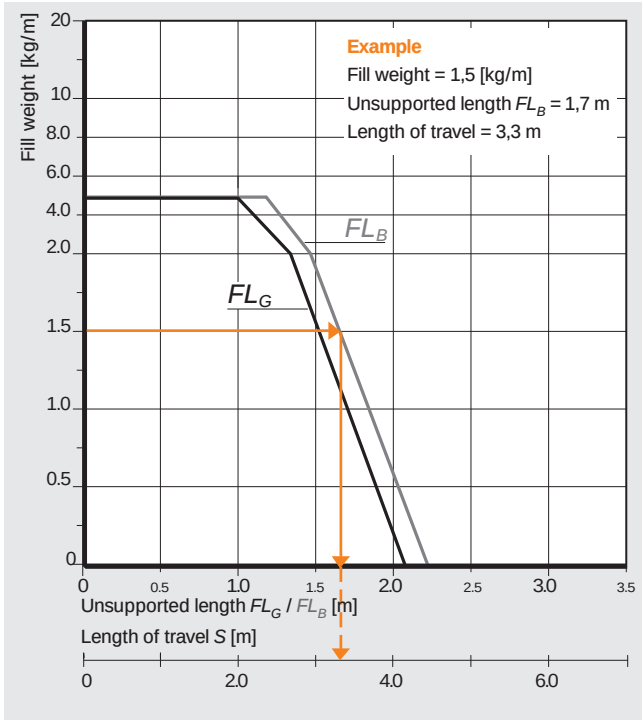
When to use a different igus® Series:

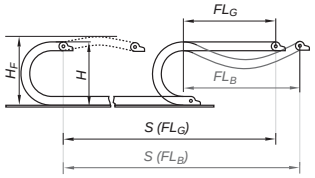
- If more stability is required
  ▶ System E4.1, Series E4.28, page 634
- For simple applications and easy filling
  ▶ easy chain®, Series E200, page 184
- If e-tubes with smaller bending radii are required
  ▶ e-tubes E2, Series R48, page 540

Open E2/000 e-chains® in a flash with the **e-chain® opener** ▶ page 405

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E2000



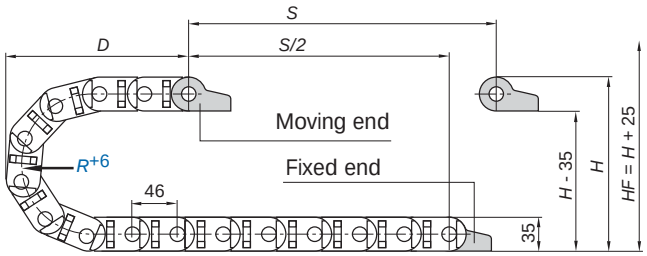


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Long travels up to 100 m.
More information ▶ page 442



Technical Data

Speed, material, temperature and flammability class ▶ page 408

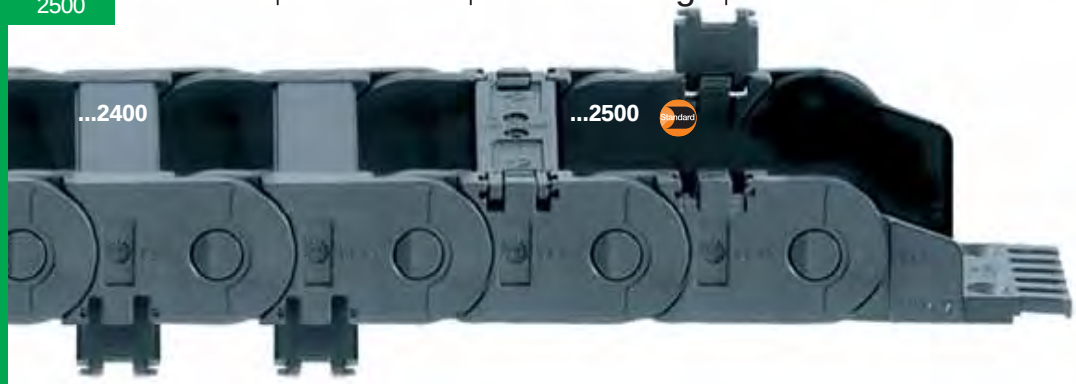
Pitch = 46 mm/link
Links/m = 22 (1012 mm)
Chain length = $S/2 + K$

R	055*	075	100	125	150	175	200	225	250
H	145	185	235	285	335	385	435	485	535
D	142	162	187	212	237	262	287	312	337
K	265	330	410	485	565	645	725	800	880

The required clearance height: $H_F = H + 25$ mm (with 1,5 kg/m fill weight)

*Radius for Series 2450/2480 available upon request, please consult igus® for delivery time. Note: Before using Series 2400/2450/2480 on long travels, please consult igus®!

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series 2400 snap-open along inner radius
e-chains® | Series 2500 snap-open along outer radius | Standard

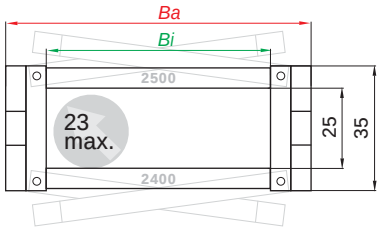
e-chains® snap-open along inner radius	e-chains® snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	2400 [kg/m]	2500 [kg/m]
2400. 02 .R.0	2500. 02 .R.0	25	41	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,77	≈ 0,77
2400. 03 .R.0	2500. 03 .R.0	38	54	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,83	≈ 0,83
2400. 05 .R.0	2500. 05 .R.0	57	73	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,91	≈ 0,91
2400. 07 .R.0	2500. 07 .R.0	77	93	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,01	≈ 1,01
2400. 09 .R.0	2500. 09 .R.0	89	105	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,08	≈ 1,08
2400. 10 .R.0	2500. 10 .R.0	103	119	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,15	≈ 1,15
2400. 12 .R.0	2500. 12 .R.0	125	141	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,22	≈ 1,22

Supplement Part No. with required radius. Example: 2500.03.100.0

Note: Before using Series 2400/2450/2480 on long travels (gliding), please consult igus®!

Order key
2400. 03. 100. 0 e-chain®
2500. 03. 100. 0 e-chain®

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Half e-tubes | Series 2450 snap-open along inner radius, closed along outer radius
Full e-tubes | Series 2480 snap-open along inner radius, fully enclosed

Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	2450 [kg/m]	2480 [kg/m]
2450. 02 .R.0	2480. 02 .R.0	25	41	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,80	≈ 0,82
2450. 03 .R.0	2480. 03 .R.0	38	54	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,88	≈ 0,92
2450. 05 .R.0	2480. 05 .R.0	57	73	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,99	≈ 1,03
2450. 07 .R.0	2480. 07 .R.0	77	93	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,12	≈ 1,17
2450. 09 .R.0	2480. 09 .R.0	89	105	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,20	≈ 1,26
2450. 10 .R.0	2480. 10 .R.0	103	119	| 055* | 075* | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,27	≈ 1,34
2450. 12 .R.0	2480. 12 .R.0	125	141	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,35	≈ 1,43

*Radius available upon request, please consult igus® for delivery time

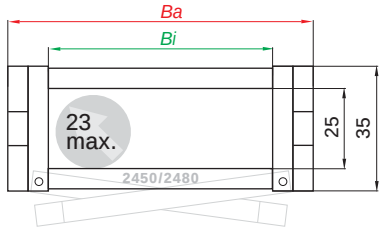
For radii 055 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: 2450.03.100.0

Note: Before using Series 2400/2450/2480 on long travels (gliding), please consult igus®!

Order key
2450. 03. 100. 0 Half e-tube
2480. 03. 100. 0 Full e-tube

- Standard color black
- Bending radius R
- Width index
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Noise dampening | Noise reduction ≈ 5 dB(A)

e-chains® snap-open along inner radius	Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	*R* Bending radii [mm]									*Bi* [mm]
S2400.02	S2450.02	S2480.02	R.0	055*	075	100	125	150	175	200	225	250	25
S2400.03	S2450.03	S2480.03	R.0	055*	075	100	125	150	175	200	225	250	38
S2400.05	S2450.05	S2480.05	R.0	055*	075	100	125	150	175	200	225	250	57
S2400.07	S2450.07	S2480.07	R.0	055*	075	100	125	150	175	200	225	250	77
S2400.09	S2450.09	S2480.09	R.0	055*	075	100	125	150	175	200	225	250	89
S2400.10	S2450.10	S2480.10	R.0	055*	075	100	125	150	175	200	225	250	103
S2400.12	S2450.12	S2480.12	R.0	055*	075	100	125	150	175	200	225	250	125

*Radius for series 2450/2480 available upon request, please consult igus® for delivery time

For radii 055 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: S2400.03.100.0

Note: Before using Series 2400/2450/2480 on long travels (gliding), please consult igus®!

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

ESD/ATEX permanently conductive e-chains® - 2500 several widths with delivery from stock: Inner widths *Bi* 25 - 125, radii *R* 055 - 175. Full ESD product range ► www.igus.eu/ESD

Magnetically detectable plastic e-chains®

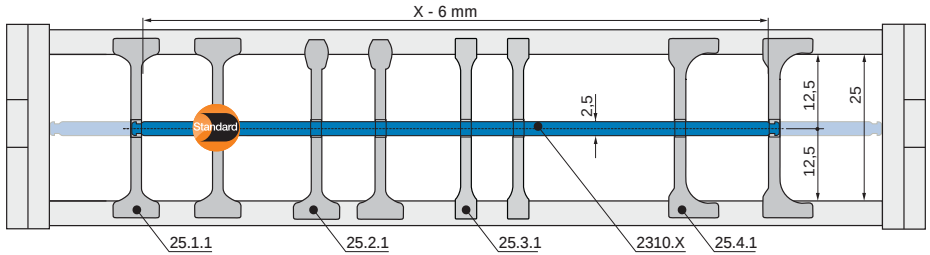
For the food- and tobaccoindustry | New in this catalog

● The material igumid DT is detected to the tiniest fragment all common metal detection systems and can therefore be selected automatically ● Particles as small as 1.0 mm can be recognized for fragments passing at speeds of 20 m/min

More information ►www.igus.eu/eu/detectable-chain



New generation of interior separation - for e-chains®



In the standard configuration separators are assembled every 2nd e-chain® link

Note: Only suitable for e-chain® Series 2400/2500! Interior separation for e-tubes ▶ see next page



Standard separator, wide base
unassembled 25.1
assembled 25.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head
unassembled 25.2
assembled 25.2.1

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base
unassembled 25.3
assembled 25.3.1

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Separator, asymmetrical
unassembled 25.4
assembled 25.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary.



Full-width shelf, lockable
unassembled 2300.X
assembled 2310.X

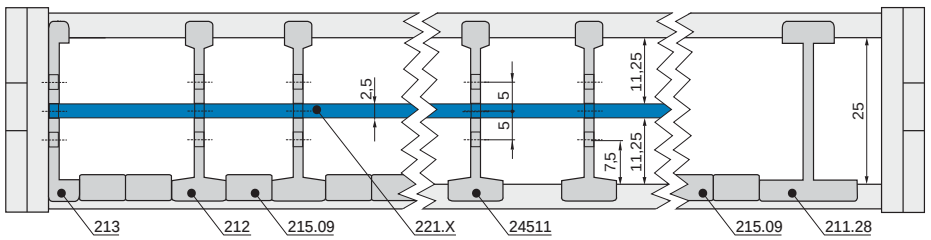
Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

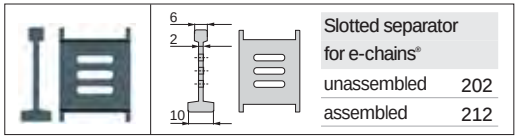


Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125



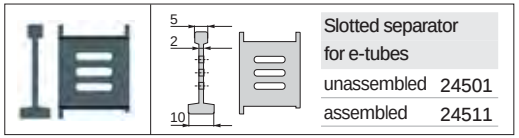
Separators, spacers, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	202
assembled	212

Slotted separator 202 (e-chains® only)

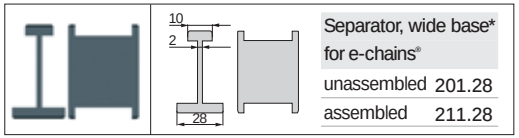
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Slotted separator for e-tubes	
unassembled	24501
assembled	24511

Slotted separator 24501 (e-tubes only)

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

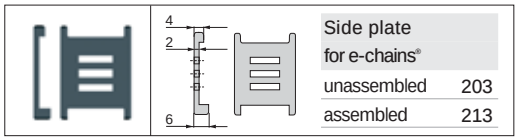


Separator, wide base* for e-chains®	
unassembled	201.28
assembled	211.28

Separator, wide base* 201.28 (e-chains® only)

If a wide space between the separators has to be kept or separators have to be fixed in their position.

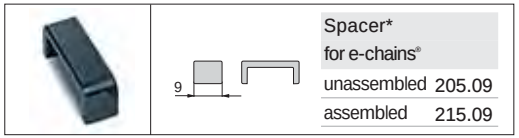
(*for side-mounted applications)



Side plate for e-chains®	
unassembled	203
assembled	213

Side plate 203 (e-chains® only)

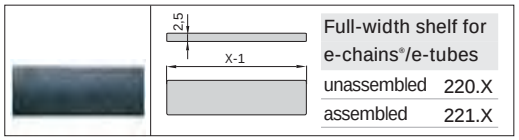
Side plate for use with full-width shelf 220.X and slotted separator 202.



Spacer* for e-chains®	
unassembled	205.09
assembled	215.09

Spacer* 205.09 (e-chains® only)

Separators can be fixed in position. Only mountable onto the fixed crossbar. (*for side-mounted applications)



Full-width shelf for e-chains®/e-tubes	
unassembled	220.X
assembled	221.X

Full-width shelf 220.X (e-chains® and e-tubes)

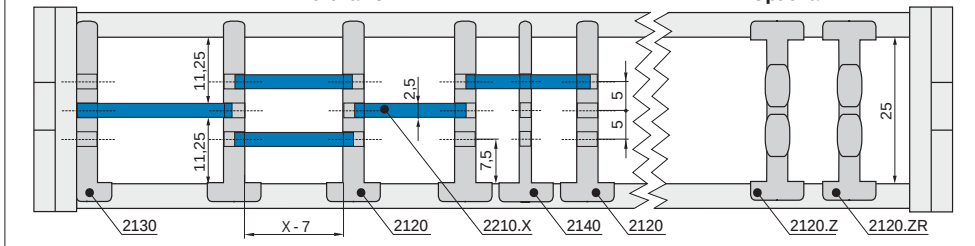
This option makes sense in applications with many thin cables with similar diameters. For a consequent sub-division. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelves

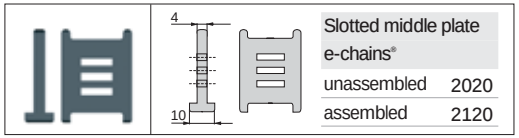
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
025	220.25	221.25	077	220.77	221.77	125	220.125	221.125
038	220.38	221.38	090	220.90	221.90			
057	220.57	221.57	103	220.103	221.103			

2400·2450·2480·2500 | Interior separation | Options

Previous interior separation - for e-chains® and e-tubes



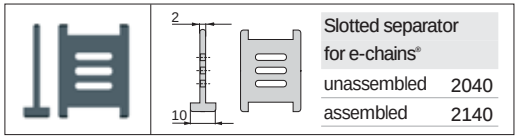
Shelves - in the standard configuration separators are assembled every 2nd e-chain® link



Slotted middle plate e-chains®	
unassembled	2020
assembled	2120

Middle plate 2020 (e-chains® only)

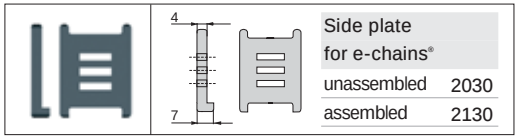
To achieve a modular shelving by shelf 2200.X arranged at 3 different heights (in 5 mm increments)



Slotted separator for e-chains®	
unassembled	2040
assembled	2140

Slotted separator 2040 (e-chains® only)

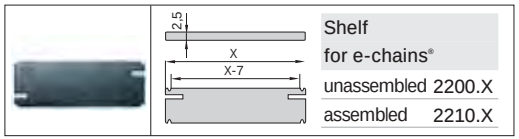
For a very fine subdivision.
No snap-in option for shelves, freely movable.



Side plate for e-chains®	
unassembled	2030
assembled	2130

Side plate 2030 (e-chains® only)

Side plate for use with middle plate 2020, slotted separator 2040 and shelf 2200.X.



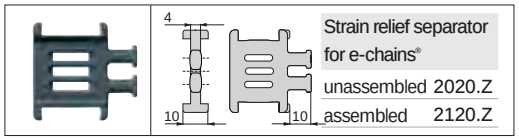
Shelf for e-chains®	
unassembled	2200.X
assembled	2210.X

Shelf 2200 (e-chains® only)

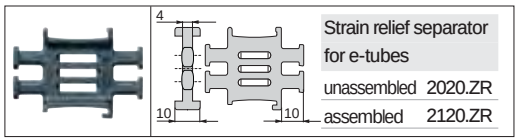
For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 3 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	038	2200.38	2210.38	068	2200.68	2210.68
023	2200.23	2210.23	043	2200.43	2210.43	073	2200.73	2210.73
028	2200.28	2210.28	048	2200.48	2210.48	088	2200.88	2210.88
033	2200.33	2210.33	058	2200.58	2210.58	099	2200.99	2210.99



Strain relief separator for e-chains®	
unassembled	2020.Z
assembled	2120.Z



Strain relief separator for e-tubes	
unassembled	2020.ZR
assembled	2120.ZR

Additional elements for interior separation

Strain relief separator 2020.Z (e-chains® only)

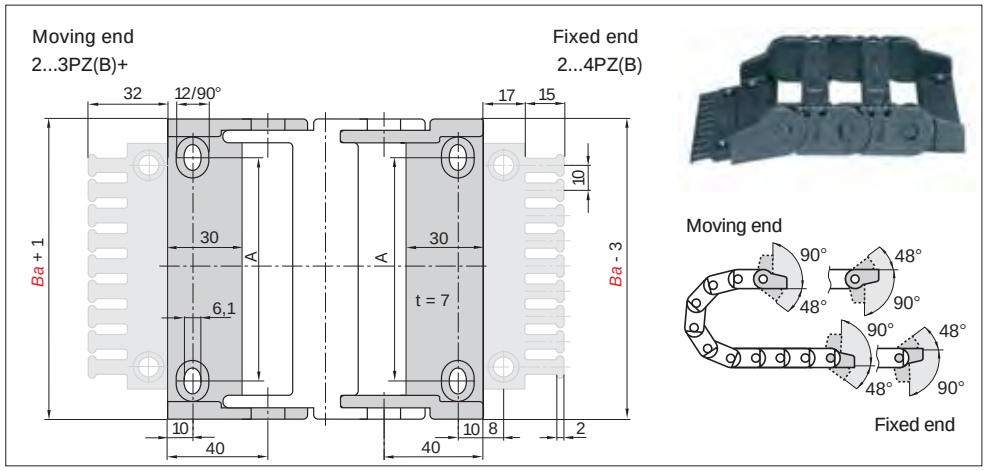
Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

Strain relief separator 2020.ZR (e-tubes only)

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

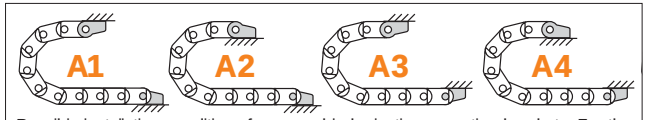
2400·2450·2480·2500 | Mounting brackets pivoting

For tight installation conditions

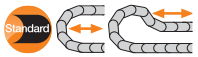


Polymer pivoting | Standard - Universal for e-chains® and e-tubes
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Number of teeth
.02. ▶	2020.34PZB+	2020.34PZBK1+	2020.34PZ+	12	3
.03. ▶	2030.34PZB+	2030.34PZBK1+	2030.34PZ+	25	4
.05. ▶	2050.34PZB+	2050.34PZBK1+	2050.34PZ+	44	6
.07. ▶	2070.34PZB+	2070.34PZBK1+	2070.34PZ+	64	8
.09. ▶	2090.34PZB+	2090.34PZBK1+	2090.34PZ+	77	9
.10. ▶	2100.34PZB+	2100.34PZBK1+	2100.34PZ+	90	10
.12. ▶	2125.34PZB+	2125.34PZBK1+	2125.34PZ+	112	12



Possible installation conditions for assembled, pivoting mounting brackets. For the preassembled mode please add index A1... A4 ▶ e.g. 2020.34PZB+A1



- Standard
- For tight installation conditions
- Strain relief with detachable chainfix tiewrap plates
- Corrosion resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

2020. 34 PZB+ A1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set pivoting = 34
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

2020. 3 PZB+ A1 (preassembled + tiewrap plate)

Mounting bracket Fixed end

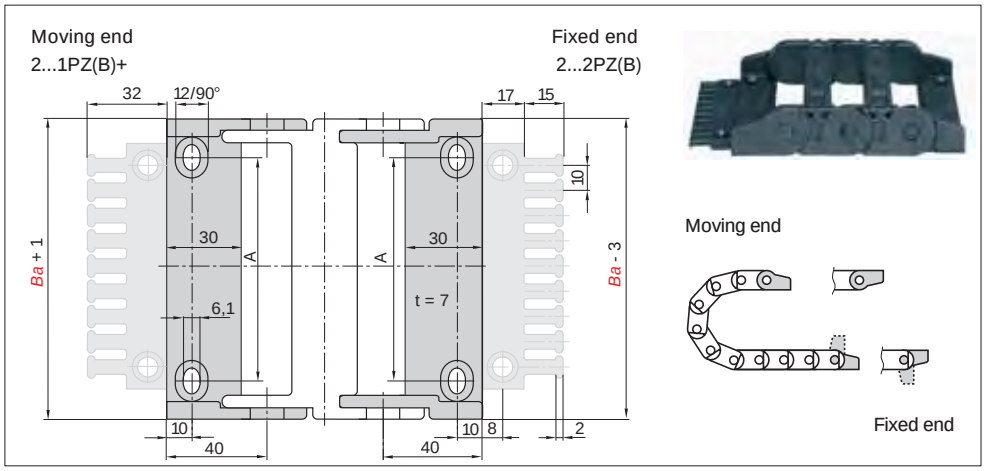
2020. 4 PZB A1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

2400
2450
2480
2500

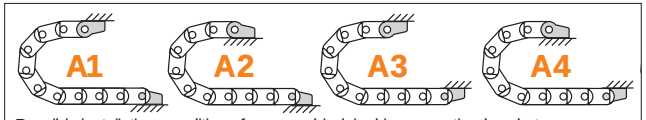
2400·2450·2480·2500 | Mounting brackets locking

For very high speed and acceleration



Polymer locking | Universal for e-chains® and e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Number of teeth
.02. ▶	2020.12PZB+	2020.12PZBK1+	2020.12PZ+	12	3
.03. ▶	2030.12PZB+	2030.12PZBK1+	2030.12PZ+	25	4
.05. ▶	2050.12PZB+	2050.12PZBK1+	2050.12PZ+	44	6
.07. ▶	2070.12PZB+	2070.12PZBK1+	2070.12PZ+	64	8
.09. ▶	2090.12PZB+	2090.12PZBK1+	2090.12PZ+	77	9
.10. ▶	2100.12PZB+	2100.12PZBK1+	2100.12PZ+	90	10
.12. ▶	2125.12PZB+	2125.12PZBK1+	2125.12PZ+	112	12



Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 2020.12PZB+A1



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

2020. 12PZB+ A1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index

Single-part order

Mounting bracket Moving end

2020. 1PZB+ A1 (preassembled + tiewrap plate)

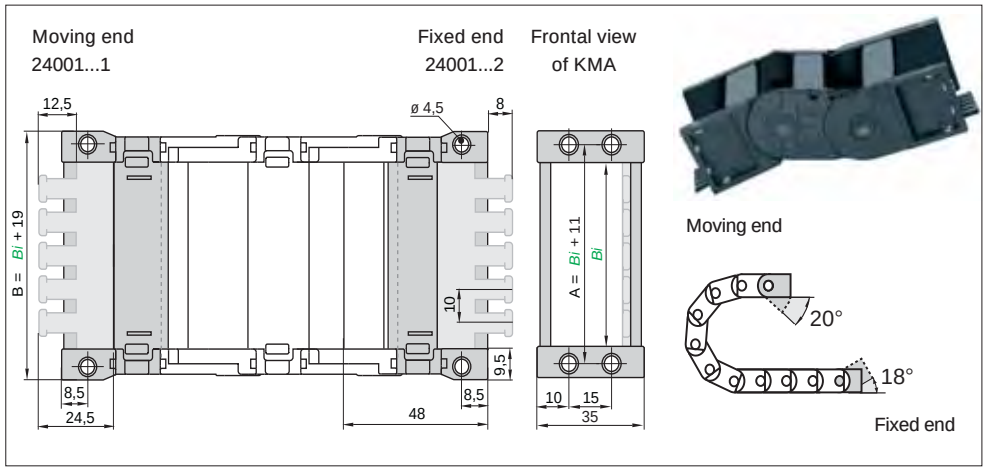
Mounting bracket Fixed end

2020. 2PZB A1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-chains® | 2400·2500 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment - Universal for e-chains® (Series 2400·2500)

Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Part No. full set **without** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.02. ▶	24001.02.12ZB	24001.02.12	36	44	2
.03. ▶	24001.03.12ZB	24001.03.12	49	57	4
.05. ▶	24001.05.12ZB	24001.05.12	68	76	6
.07. ▶	24001.07.12ZB	24001.07.12	88	96	7
.09. ▶	24001.09.12ZB	24001.09.12	100	108	9
.10. ▶	24001.10.12ZB	24001.10.12	114	122	10
.12. ▶	24001.12.12ZB	24001.12.12	136	144	12

- Bolted connection outside of chain cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides
- Pluggable strain relief tiewrap plate, adjustable to 3 heights
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting) - e-chain®

24001. 02. 12ZB**A**

- A…must be indicated on preassembled configurations
- Full set with strain relief tiewrap plates
- Width index
- KMA pivoting

Single-part order

Mounting bracket Moving end

24001.02. 1ZB**A** (preassembled + tiewrap plate)

Mounting bracket Fixed end

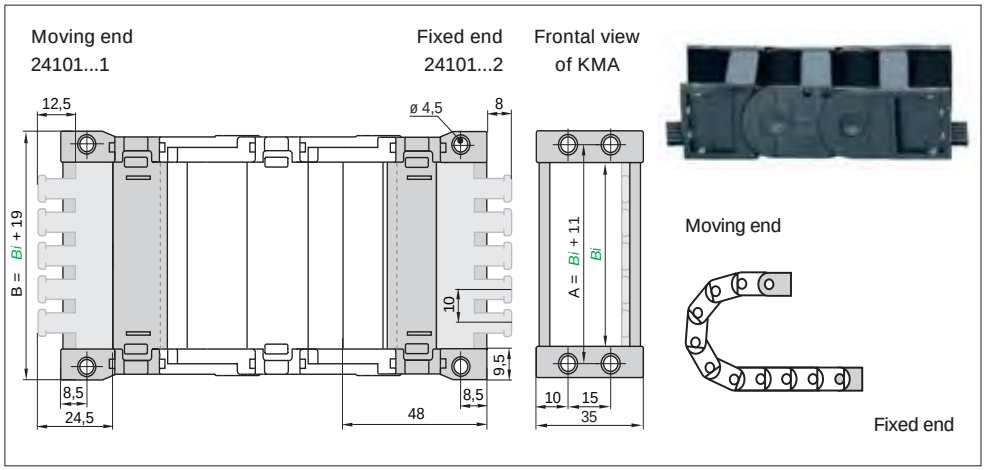
24001.02. 2ZB**A** (preassembled + tiewrap plate)

A These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 24001. 02. 12ZB**A**

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-chains® | 2400·2500 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment - Universal for e-chains® (Series 2400·2500)

Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Part No. full set **without** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.02. ▶	24101.02.12ZB	24101.02.12	36	44	2
.03. ▶	24101.03.12ZB	24101.03.12	49	57	4
.05. ▶	24101.05.12ZB	24101.05.12	68	76	6
.07. ▶	24101.07.12ZB	24101.07.12	88	96	7
.09. ▶	24101.09.12ZB	24101.09.12	100	108	9
.10. ▶	24101.10.12ZB	24101.10.12	114	122	10
.12. ▶	24101.12.12ZB	24101.12.12	136	144	12

- Bolted connection outside of chain cross-section possible
- At very high speed and/or acceleration
- Universally mountable
- Pluggable strain relief tiewrap plate, adjustable to 3 heights
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking) - e-chain®

24101. 02. 12ZB**A**

- A…must be indicated on preassembled configurations
- Full set with strain relief tiewrap plates
- Width index
- KMA locking

Single-part order

Mounting bracket Moving end

24101.02. 1ZB**A** (preassembled + tiewrap plate)

Mounting bracket Fixed end

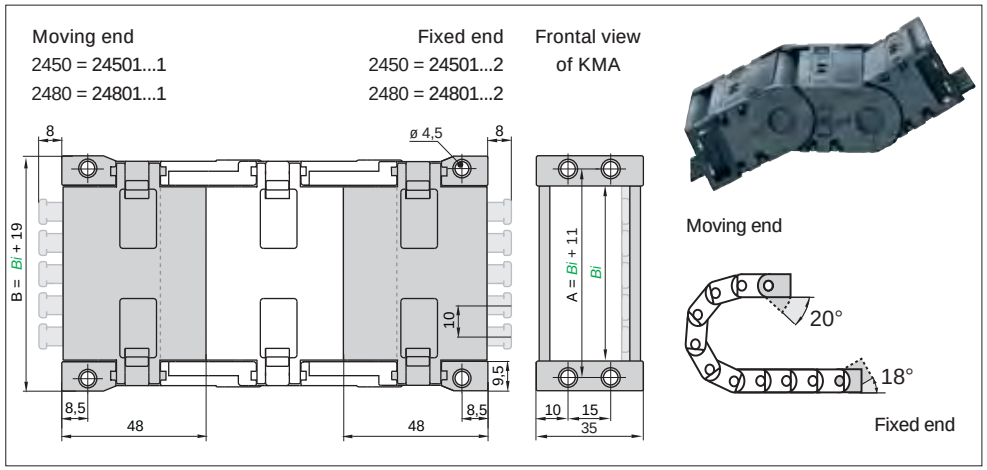
24101.02. 2ZB**A** (preassembled + tiewrap plate)

A These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 24101. 02. 12ZB**A**

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-tubes | 2450·2480 | KMA mounting brackets pivoting

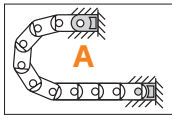
For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment - Universal for e-chains® (Series 2450·2480)
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Part No. full set **without** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.02. ▶	24501 | 24801 .02.12ZB	24501 | 24801 .02.12	36	44	2
.03. ▶	24501 | 24801 .03.12ZB	24501 | 24801 .03.12	49	57	4
.05. ▶	24501 | 24801 .05.12ZB	24501 | 24801 .05.12	68	76	6
.07. ▶	24501 | 24801 .07.12ZB	24501 | 24801 .07.12	88	96	7
.09. ▶	24501 | 24801 .09.12ZB	24501 | 24801 .09.12	100	108	9
.10. ▶	24501 | 24801 .10.12ZB	24501 | 24801 .10.12	114	122	10
.12. ▶	24501 | 24801 .12.12ZB	24501 | 24801 .12.12	136	144	12

KMA pivoting Part No. 24501... for half e-tube Series 2450
KMA pivoting Part No. 24801... for full e-tube Series 2480



These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 24501. 02. 12ZB**A**



- Bolted connection outside of chain cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides
- Pluggable strain relief tiewrap plate, adjustable to 3 heights
- Option: threaded sockets upon request
(KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting) - e-tube

24501. 02. 12ZB**A**

- **A**…must be indicated on preassembled configurations
- Full set with strain relief tiewrap plates
- Width index
- KMA pivoting Half e-tube

Single-part order

Mounting bracket Moving end

24501.02. 1ZB**A** (preassembled + tiewrap plate)

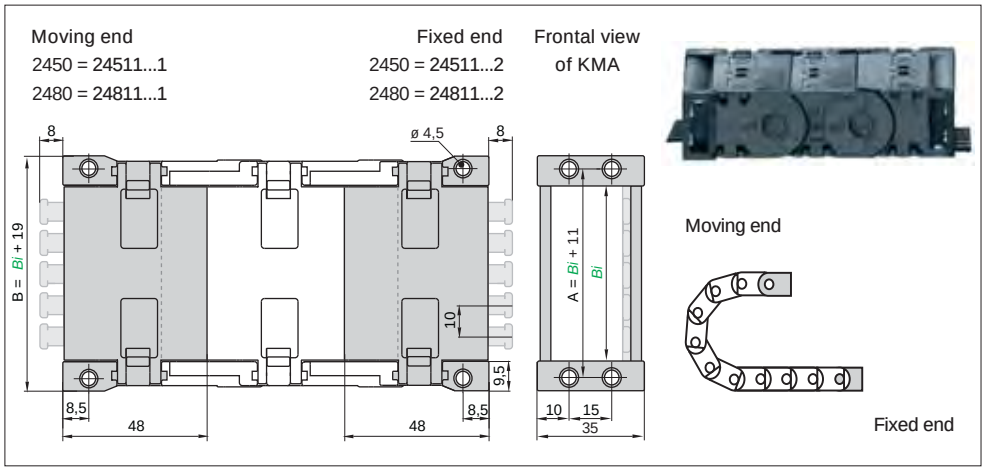
Mounting bracket Fixed end

24501.02. 2ZB**A** (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-tubes | 2450·2480 | KMA mounting brackets locking

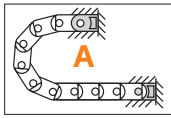
For very high speed and acceleration, all-sides attachment



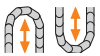
KMA locking | All-sides attachment - Universal for e-chains® (Series 2450·2480)
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Part No. full set **without** tiewrap plate	Dim. A [mm]	Dim. B [mm]	Number of teeth
.02. ▶	24511 | 24811 .02.12ZB	24511 | 24811 .02.12	36	44	2
.03. ▶	24511 | 24811 .03.12ZB	24511 | 24811 .03.12	49	57	4
.05. ▶	24511 | 24811 .05.12ZB	24511 | 24811 .05.12	68	76	6
.07. ▶	24511 | 24811 .07.12ZB	24511 | 24811 .07.12	88	96	7
.09. ▶	24511 | 24811 .09.12ZB	24511 | 24811 .09.12	100	108	9
.10. ▶	24511 | 24811 .10.12ZB	24511 | 24811 .10.12	114	122	10
.12. ▶	24511 | 24811 .12.12.ZB	24511 | 24811 .12.12	136	144	12

KMA locking Part No. 24511... for half e-tube Series 2450
KMA locking Part No. 24811... for full e-tube Series 2480



These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 24511. 02. 12ZB**A**



- Bolted connection outside of chain cross-section possible
- At very high speed and/or acceleration
- Universally mountable
- Pluggable strain relief tiewrap plate, adjustable to 3 heights
- Option: threaded sockets upon request
(KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking) - e-tube

24511. 02. 12ZB**A**

- **A**…must be indicated on preassembled configurations
- Full set with strain relief tiewrap plates
- Width index
- KMA locking Half e-tube

Single-part order

Mounting bracket Moving end

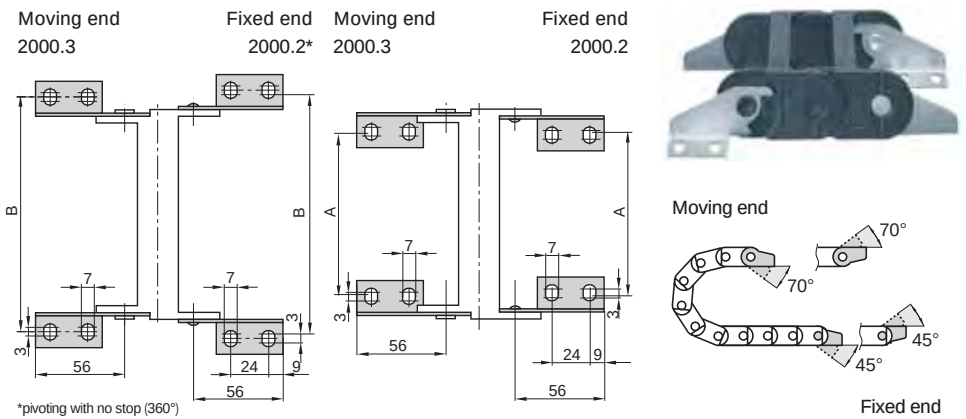
24511.02. 1ZB**A** (preassembled + tiewrap plate)

Mounting bracket Fixed end

24511.02. 2ZB**A** (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

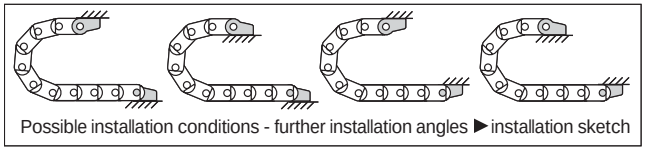
2400·2450·2480·2500 | Steel mounting brackets pivoting



Steel pivoting | For e-chains® and e-tubes
Recommended for unsupported, vertical hanging and standing applications

For width index	Part No. full set	Part No. full set stainless steel**	Dim. A [mm]	Dim. B [mm]
.02. ▶	2000.32	2000.32.E	–	60
.03. ▶	2000.32	2000.32.E	25	73
.05. ▶	2000.32	2000.32.E	44	92
.07. ▶	2000.32	2000.32.E	64	112
.09. ▶	2000.32	2000.32.E	76	124
.10. ▶	2000.32	2000.32.E	90	138
.12. ▶	2000.32	2000.32.E	112	160

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!



- Pivoting connections
- One part (2-piece) for all e-chain® widths
- Electrically conductive
- Bolted connection outside of chain cross-section possible
- Stainless steel version available
  (**Material: stainless steel 1.4301 / AISI 304)

Part no. structure

2000. 32.E

- Optional stainless steel
- Full set, 4 parts
  2 with pin / 2 with bore
- Mounting bracket

Single-part order

Mounting bracket Moving end

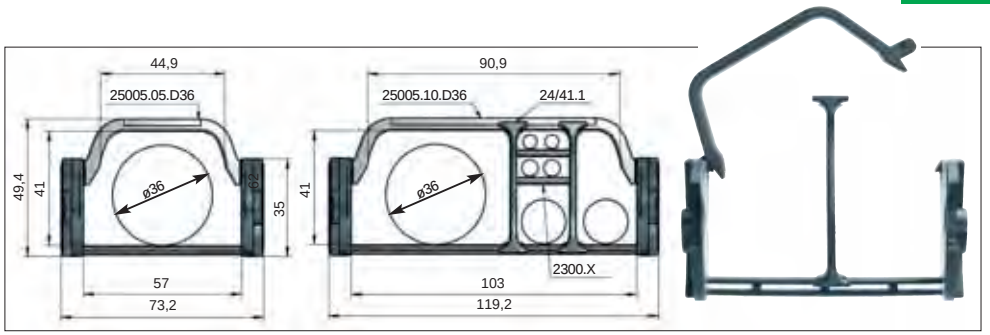
2000. 3 (1 part left / right)

Mounting bracket Fixed end

2000. 2 (1 part left / right)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

2400·2450·2480·2500 | More options and accessories



Extender crossbars Series 2400·2500·2450 - Enormous increase of the interior for the smooth guiding of larger hoses

- Suitable for hoses with an outer diameter of max. 36 mm
- Optionally openable along the inner or outer radius, swivelling
- Modular interior separation Part No. 25/41.1 (not for Series 2450)
- Cable-friendly design of extender crossbar and interior separation
- High holding force of the extender crossbar

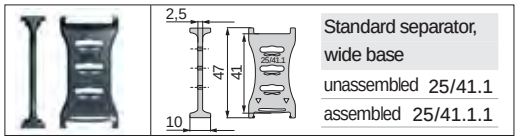
Order example
e-chain® with extender crossbar snap-open along outer radius, *Bi* 57 mm, *R* 100 mm:
Part No. 2500.05D36.100.0

Extender crossbars for e-chains® **snap-open along inner radius**	Extender crossbars for e-chains® **snap-open along outer radius**	Extender crossbars for half e-tubes **snap-open along inner radius**	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]
2400.05D36.*R*.0	2500.05D36.*R*.0	2450.05D36.*R*.0	57	73	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250
2400.10D36.*R*.0	2500.10D36.*R*.0	2450.10D36.*R*.0	103	119	| 055* | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250

*Radius 055 only possible with e-chains® Series 2500 !

Supplement Part No. with required radius. Example: 2500.05D36.100.0

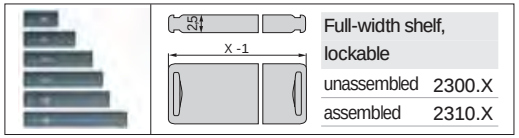
Series 2400·2500 | Interior separation for extender crossbars (not for Series 2450)



Standard separator, wide base

unassembled 25/41.1

assembled 25/41.1.1



Full-width shelf, lockable

unassembled 2300.X

assembled 2310.X

Standard separator, wide base

For maximum locking strength and safe standing. In standard configuration separators are assembled every 2nd link!

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights. Product range ▶ page 431

Note: Only suitable for e-chain® Series 2400/2500!

Optional: Support tray tool kit.
For support of the lower run.

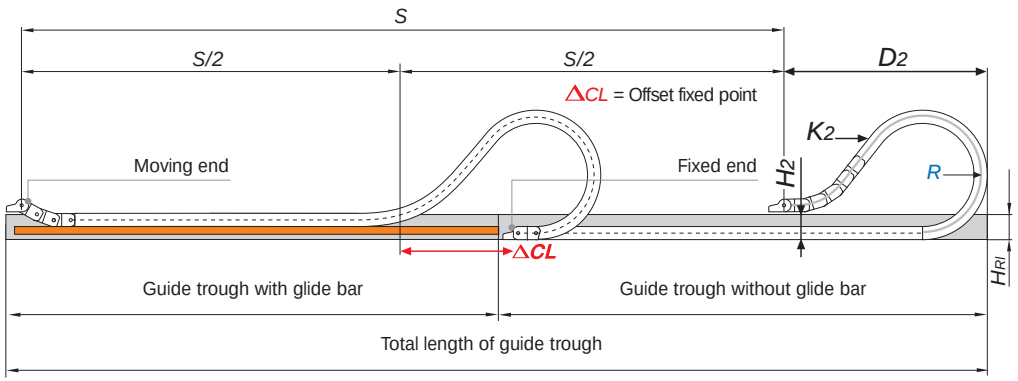
Simple one-piece support trays according to your requirements and specification. Order example - support tray with bracket, length 1,0 m, color black: Part No. S9.011.05.1000.0 The complete range with order options ▶ from page 1258



2400·2450·2480·2500 | Dimensions | Long travels

Gliding applications | For long travels from 10 m to max. 100 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. **Please note:** For using Series 2400/2450/2480 for long travels (gliding), please consult igus® first. For long travels, igus® specifies Series 2500 that snaps open along the outer radius. In case of travels between 4 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 46 mm/link · Links/m = 22 (1012 mm) · Chain length = $S/2 + K_2$

R	055*	075	100	125	150	175	200	225	250
H_2	110	150	100	100	100	100	100	100	100
D_2^{+25}	142	162	380	440	590	755	950	1040	1130
K_2	265	330	644	736	1012	1242	1472	1610	1794
ΔCL	–	–	204	244	364	504	674	754	804

*Radius for Series 2450/2480 available upon request, please consult igus® for delivery time. Note: Before using Series 2400/2450/2480 on long travels, please consult igus®!

More solutions | For long travel applications

autoglide 2400.*Bi*.AG.*R* - self-guiding, no guide troughs - Travel lengths ≤ 50 m — v_{max} 1,5 m/s

Self-guiding e-chainsystems® - no need for guide troughs

guidelok slimline F - Safe vertical guidance for e-chains® - Travels up to 50 m height — v_{max} 7 m/s

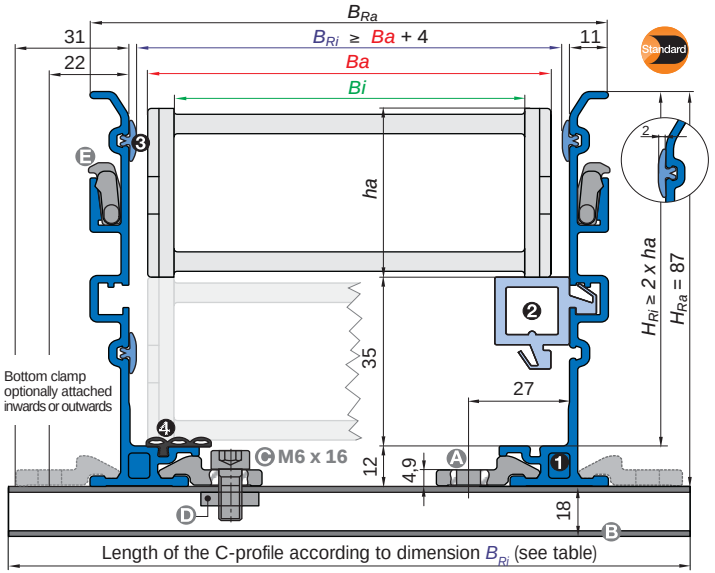
For hanging applications e.g. high-speed rack feeders up to 7 m/s and 10 m/s². No swinging of the e-chain®, high reliability through lever mechanism and guiding rails. Energy and data and all kinds of media in one single system

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

Part No. 971.30 | 971.31 | Trough height: 87 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

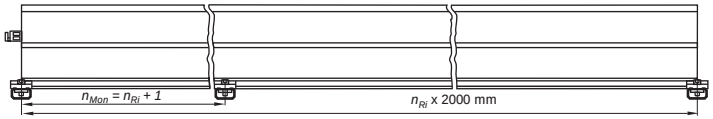
Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.02	45	upon request	960.30.150
.03	58	upon request	960.30.150
.05	77	960.30.125	960.30.175
.07	97	960.30.150	960.30.200
.09	109	960.30.175	960.30.225
.10	123	960.30.175	960.30.225
.12	145	960.30.200	960.30.250

Order example: Length of travel 30 m - Center mounted for Series 2500.05.200.0 with B_{Ri} = 77

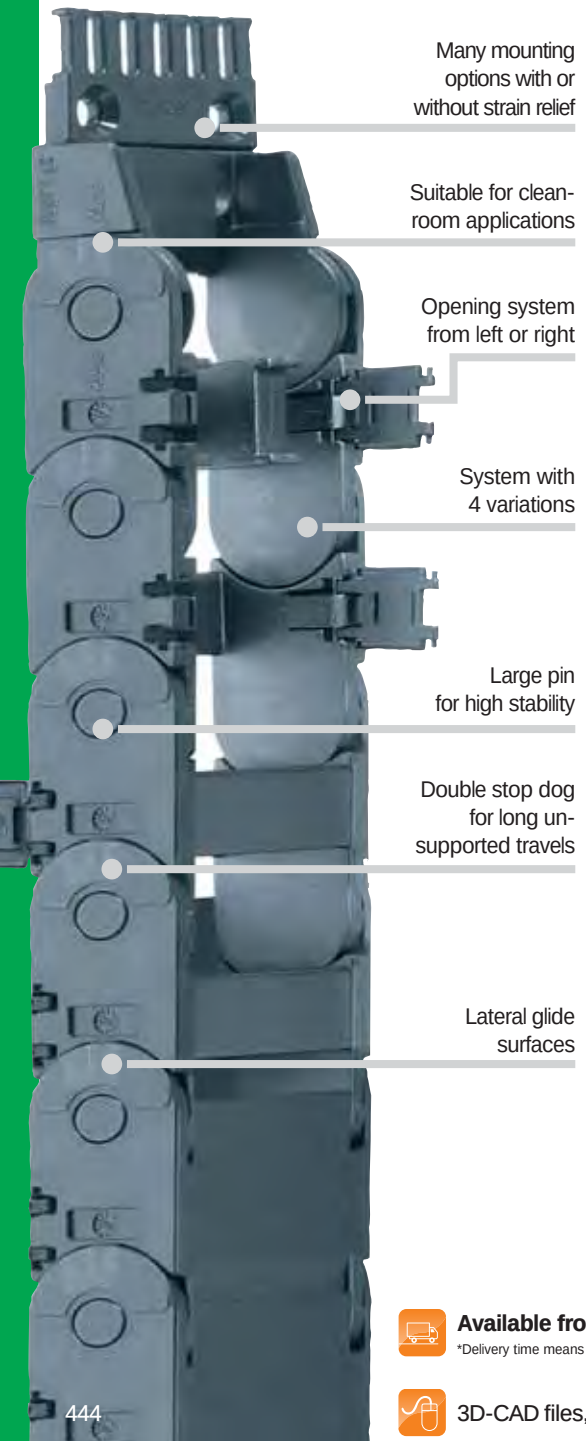
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 971.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 971.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.125
Module for the fixed end	
Order text: 1 set	Part No. 971.80
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 971.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1194

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Optimal height, high stability

When to use Series 2600·2650·2680·2700:

- If a medium-sized, stable system with an inner height of 35 mm is required (e-chains®, half and full e-tubes)
- If inner widths up to 175 mm are required
- For unsupported lengths up to 2,70 m and fill weights up to 8,0 kg/m
- For long travels up to 120 m
- If an optimized system for quick opening of crossbars from left or right is required

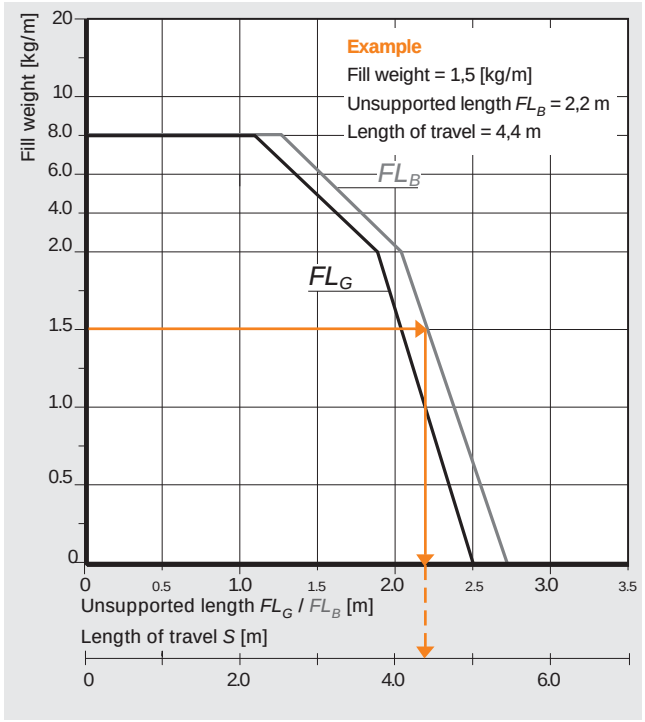
When to use a different igus® Series:

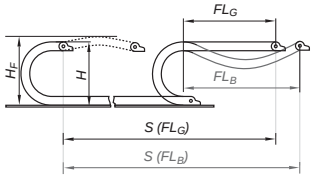
- If more stability is required
  ▶ System E4.1, Series E4.32, page 646
- For simple applications and easy filling
  ▶ easy chain®, Series E26, page 194
- If e-tubes with smaller bending radii are required
  ▶ e-tubes E2, Series R58, page 550

Open E2/000 e-chains® in a flash with the **e-chain® opener** ▶ page 405

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E2000



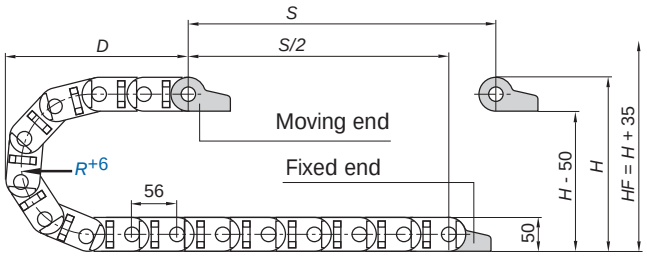


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Long travels up to 120 m.
More information ▶ page 460



Technical Data

Speed, material, temperature and flammability class ▶ page 408

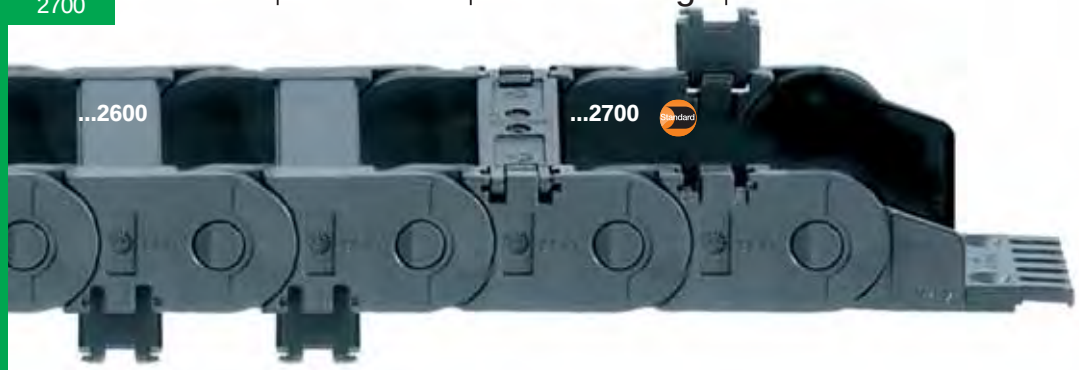
Pitch = 56 mm/link
Links/m = 18 (1008 mm)
Chain length = $S/2 + K$

R	063*	075*	100	125	150	175	200	250
H	176	200	250	300	350	400	450	550
D	172	184	209	234	259	284	309	359
K	310	350	430	505	585	665	745	900

The required clearance height: $H_F = H + 35$ mm (with 2,0 kg/m fill weight)

*Radius for Series 2650/2680 available upon request, please consult igus® for delivery time. Note: Before using Series 2600/2650/2680 on long travels, please consult igus®!

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series 2600 snap-open along inner radius
e-chains® | Series 2700 snap-open along outer radius | Standard

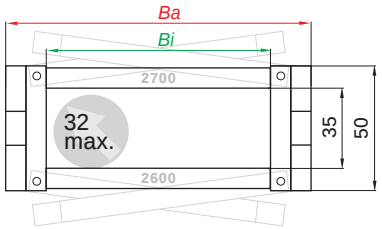
e-chains® snap-open along inner radius	e-chains® snap-open along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	2600 [kg/m]	2700 [kg/m]
2600. 05 .R.0	2700. 05 .R.0	50	66	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,17	≈ 1,17
2600. 06 .R.0	2700. 06 .R.0	65	81	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,24	≈ 1,24
2600. 07 .R.0	2700. 07 .R.0	75	91	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,30	≈ 1,30
2600. 09 .R.0	2700. 09 .R.0	90	106	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,37	≈ 1,37
2600. 10 .R.0	2700. 10 .R.0	100	116	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,39	≈ 1,39
2600. 12 .R.0	2700. 12 .R.0	125	141	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,48	≈ 1,48
2600. 15 .R.0	2700. 15 .R.0	150	166	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,62	≈ 1,62
2600. 17 .R.0	2700. 17 .R.0	175	194	| 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,85	≈ 1,85

Supplement Part No. with required radius. Example: 2700.05.100.0

Note: Before using Series 2600/2650/2680 on long travels (gliding), please consult igus®!

Order key
2600. 05. 100. 0 e-chain®
2700. 05. 100. 0 e-chain®

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Half e-tubes | Series 2650 snap-open along inner radius, closed along outer radius
Full e-tubes | Series 2680 snap-open along inner radius, fully enclosed

Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	2650 [kg/m]	2680 [kg/m]
2650. 05 .R.0	2680. 05 .R.0	50	66	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,25	≈ 1,33
2650. 06 .R.0	2680. 06 .R.0	65	81	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,36	≈ 1,43
2650. 07 .R.0	2680. 07 .R.0	75	91	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,40	≈ 1,51
2650. 09 .R.0	2680. 09 .R.0	90	106	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,55	≈ 1,62
2650. 10 .R.0	2680. 10 .R.0	100	116	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,61	≈ 1,81
2650. 12 .R.0	2680. 12 .R.0	125	141	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,70	≈ 1,99
2650. 15 .R.0	2680. 15 .R.0	150	166	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 1,80	≈ 2,17
2650. 17 .R.0	2680. 17 .R.0	175	194	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	≈ 2,00	≈ 2,35

*Radius available upon request, please consult igus® for delivery time

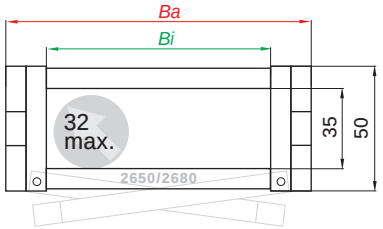
For radii 063, 075 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: 2650.05.100.0

Note: Before using Series 2600/2650/2680 on long travels (gliding), please consult igus®!

Order key
2650. 05. 100. 0 Half e-tube
2680. 05. 100. 0 Full e-tube

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Noise dampening | Noise reduction ≈ 5 dB(A)

e-chains® snap-open along inner radius	Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	*R* Bending radii [mm]	*Bi* [mm]
S2600.05	S2650.05	S2680.05 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	50
S2600.06	S2650.06	S2680.06 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	65
S2600.07	S2650.07	S2680.07 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	75
S2600.09	S2650.09	S2680.09 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	90
S2600.10	S2650.10	S2680.10 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	100
S2600.12	S2650.12	S2680.12 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	125
S2600.15	S2650.15	S2680.15 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	150
S2600.17	S2680.17	S2680.17 .*R*.0	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250	175

*Radius Series 2650/2680 available upon request, please consult igus® for delivery time

For radii 063, 075 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: S2600.05.100.0

Note: Before using Series 2600/2650/2680 on long travels (gliding), please consult igus®!

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

ESD/ATEX permanently conductive e-chains® - 2700 several widths with delivery from stock: Inner widths *Bi* 50 - 125, radii *R* 063 - 150. Full ESD product range ▶ www.igus.eu/ESD

Magnetically detectable plastic e-chains®

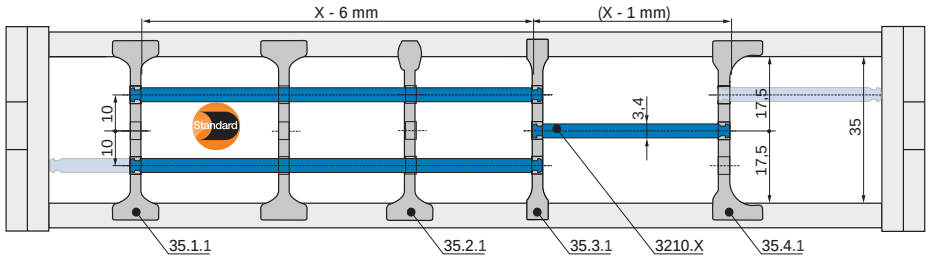
For the food- and tobaccoindustry | New in this catalog

● The material igumid DT is detected to the tiniest fragment all common metal detection systems and can therefore be selected automatically ● Particles as small as 1.0 mm can be recognized for fragments passing at speeds of 20 m/min

More information ▶ www.igus.eu/eu/detectable-chain

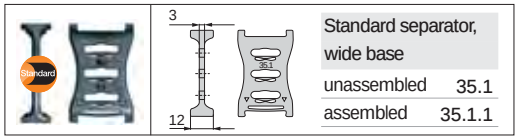


New generation of interior separation - for e-chains®



In the standard configuration separators are assembled every 2nd e-chain® link

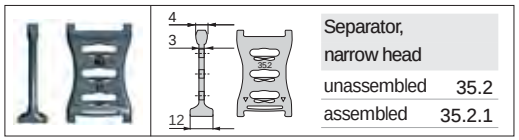
Note: Only suitable for e-chain® Series 2600/2700! Interior separation for e-tubes ▶ see next page



Standard separator, wide base	
unassembled	35.1
assembled	35.1.1

Standard - for all applications

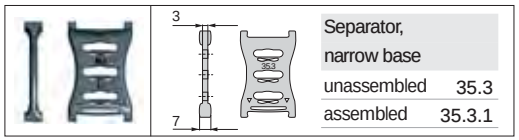
Separator with a wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	35.2
assembled	35.2.1

For even faster installation

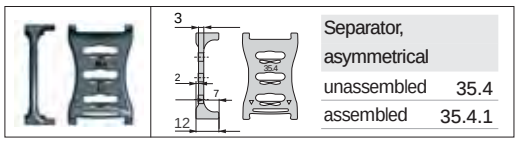
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	35.3
assembled	35.3.1

For many thin cables

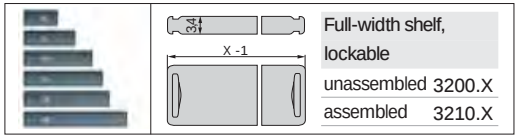
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Separator, asymmetrical	
unassembled	35.4
assembled	35.4.1

For side-mounted applications

Asymmetrical separator, for defined distance.
No additional spacers necessary.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. To be used as full-width shelf for a consequent subdivision or as shelf for a pattern system in 3 levels.

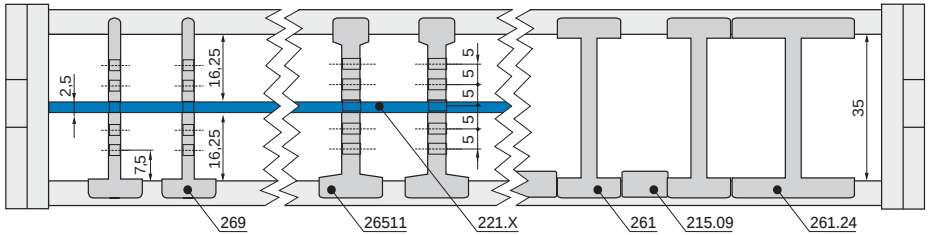


Lockable full-width shelves - for the standard interior separation

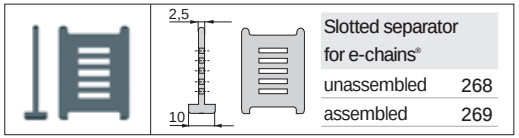
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

2600·2650·2680·2700 | Interior separation | Options

Previous interior separation - for e-chains® and e-tubes



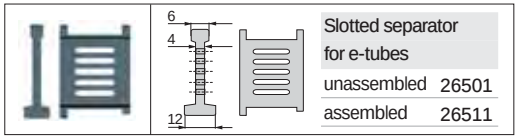
Separators, spacers, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	268
assembled	269

Slotted separator 268 (e-chains® only)

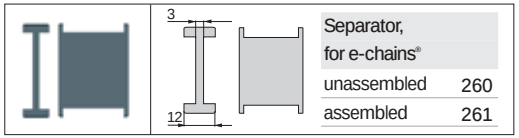
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Slotted separator for e-tubes	
unassembled	26501
assembled	26511

Slotted separator 26501 (e-tubes only)

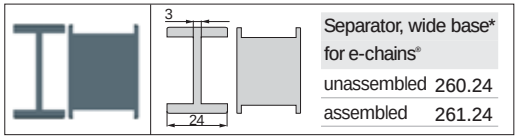
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator, for e-chains®	
unassembled	260
assembled	261

Separator 260 (e-chains® only)

For a simple vertical subdivision on e-chains®.

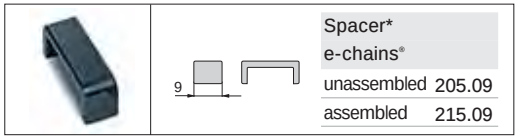


Separator, wide base* for e-chains®	
unassembled	260.24
assembled	261.24

Separator, wide base* 260.24 (e-chains® only)

If a wide space between the separators has to be kept or separators have to be fixed in their position.

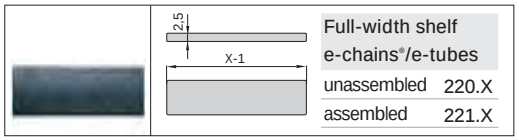
(*for side-mounted applications)



Spacer* e-chains®	
unassembled	205.09
assembled	215.09

Spacer* 205.09 (e-chains® only)

Separators can be fixed in position. Only mountable onto the fixed crossbar. (*for side-mounted applications)



Full-width shelf e-chains®/e-tubes	
unassembled	220.X
assembled	221.X

Full-width shelf 220.X (e-chains® and e-tubes)

This option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

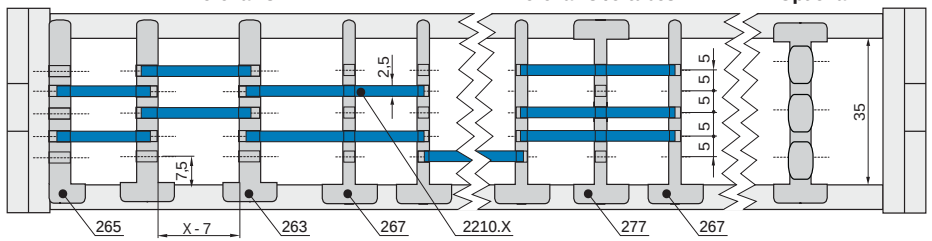
Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	220.50	221.50	090	220.90	221.90	150	220.150	221.150
065	220.65	221.65	100	220.100	221.100	175	220.175	221.175
075	220.75	221.75	125	220.125	221.125			

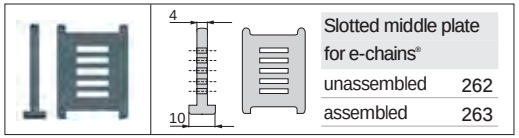
2600
2650
2680
2700

2600·2650·2680·2700 | Interior separation | Options

Previous interior separation - for e-chains® and e-tubes



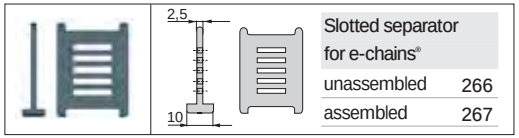
Shelves - In the standard configuration separators are assembled every 2nd e-chain® link



Slotted middle plate for e-chains®	
unassembled	262
assembled	263

Middle plate 262 (e-chains® only)

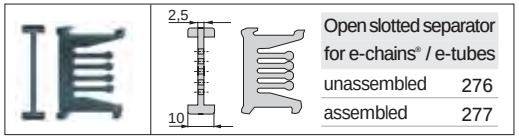
To achieve a modular shelving by shelf 2200.X arranged at 5 different heights (in 5 mm increments)



Slotted separator for e-chains®	
unassembled	266
assembled	267

Slotted separator 266 (e-chains® only)

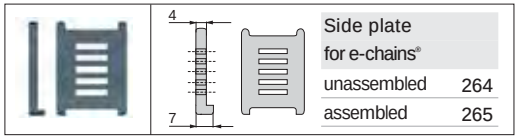
For a very fine subdivision. No retrofitting into an existing separation system without dismantling the interior separators first.



Open slotted separator for e-chains® / e-tubes	
unassembled	276
assembled	277

Open slotted separator 276 (e-chains® and e-tubes)

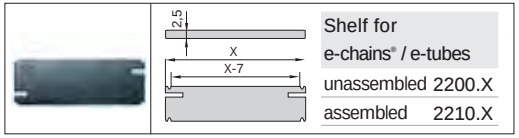
Quick assembly - retrofitting into an existing interior separation system without dismantling.



Side plate for e-chains®	
unassembled	264
assembled	265

Side plate 264 (e-chains® only)

Works like middle plate.
Allows modular shelving close to the side links.



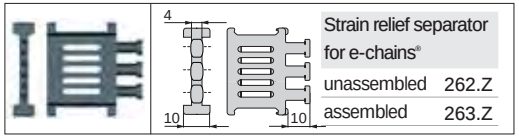
Shelf for e-chains® / e-tubes	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X (e-chains® and e-tubes)

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 5 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			



Strain relief separator for e-chains®	
unassembled	262.Z
assembled	263.Z

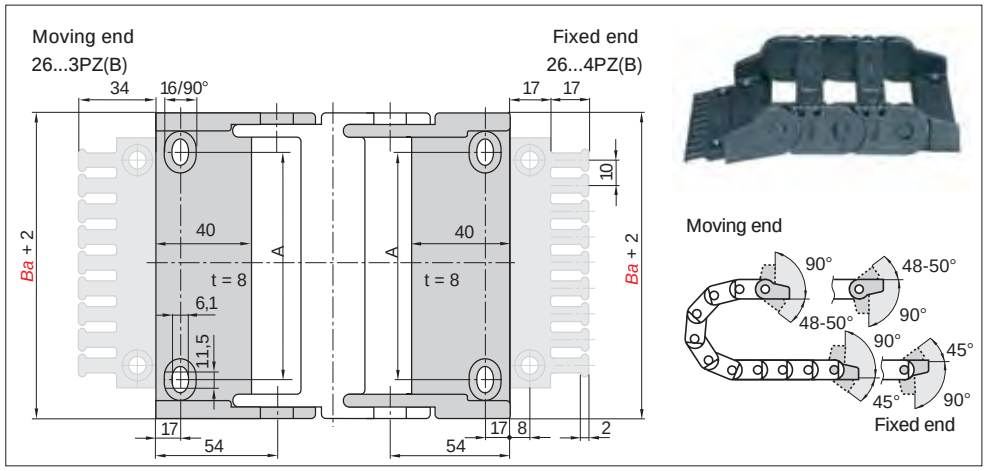
Additional elements for interior separation

Strain relief separator 262.Z (e-chains® only)

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

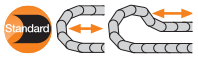
2600·2650·2680·2700 | Mounting brackets pivoting

For tight installation conditions



Polymer pivoting | Standard - Universal for e-chains® and e-tubes
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Number of teeth
.05. ▶	2605.34PZB	2605.34PZBK1	2605.34PZ	30	5
.06. ▶	2606.34PZB	2606.34PZBK1	2606.34PZ	45	5
.07. ▶	2607.34PZB	2607.34PZBK1	2607.34PZ	55	7
.09. ▶	2609.34PZB	2609.34PZBK1	2609.34PZ	70	9
.10. ▶	2610.34PZB	2610.34PZBK1	2610.34PZ	80	10
.12. ▶	2612.34PZB	2612.34PZBK1	2612.34PZ	105	12
.15. ▶	2615.34PZB	2615.34PZBK1	2615.34PZ	130	15
.17. ▶	2617.34PZB	2617.34PZBK1	2617.34PZ	155	17

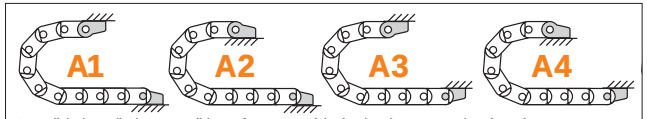


- Standard
- For tight installation conditions
- Strain relief with detachable chainfix tiewrap plates
- Corrosion resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

2605. 34 PZB **A1**

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set pivoting = 34
- Mounting brackets for selected width index



Possible installation conditions for assembled, pivoting mounting brackets.
For the preassembled mode please add index **A1**... **A4** ▶ e.g. 2605.34PZB**A1**

Single-part order

Mounting bracket Moving end

2605. 3 PZB **A1** (preassembled + tiewrap plate)

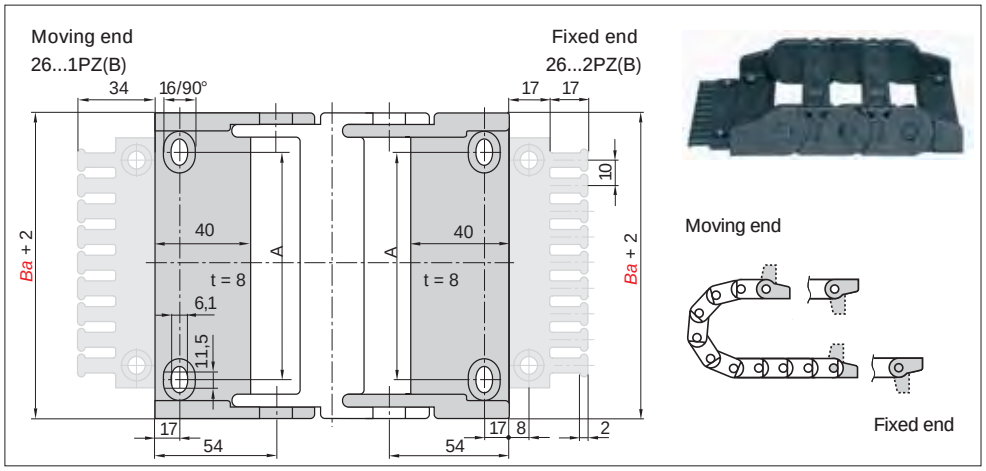
Mounting bracket Fixed end

2605. 4 PZB **A1** (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

2600·2650·2680·2700 | Mounting brackets locking

For very high speed and acceleration



Polymer locking | Universal for e-chains® and e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Number of teeth
.05. ▶	2605.12PZB	2605.12PZBK1	2605.12PZ	30	5
.06. ▶	2606.12PZB	2606.12PZBK1	2606.12PZ	45	5
.07. ▶	2607.12PZB	2607.12PZBK1	2607.12PZ	55	7
.09. ▶	2609.12PZB	2609.12PZBK1	2609.12PZ	70	9
.10. ▶	2610.12PZB	2610.12PZBK1	2610.12PZ	80	10
.12. ▶	2612.12PZB	2612.12PZBK1	2612.12PZ	105	12
.15. ▶	2615.12PZB	2615.12PZBK1	2615.12PZ	130	15
.17. ▶	2617.12PZB	2617.12PZBK1	2617.12PZ	155	17

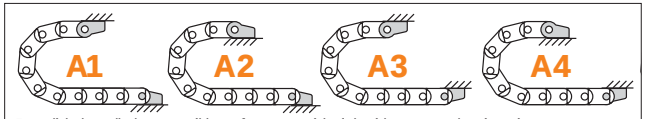


- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

2605. 12 PZB **A1**

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index



Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index **A1**... **A4** ▶ e.g. 2605.12PZB**A1**

Single-part order

Mounting bracket Moving end

2605. 1 PZB **A1** (preassembled + tiewrap plate)

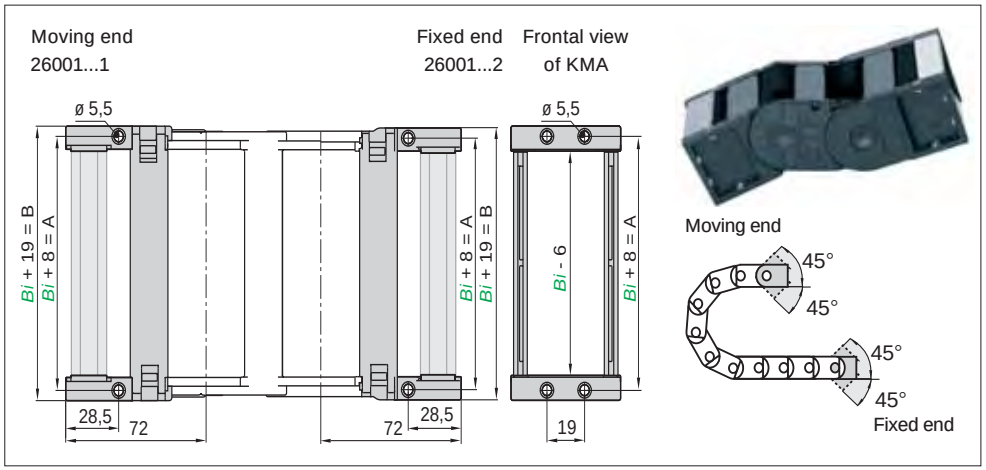
Mounting bracket Fixed end

2605. 2 PZB **A1** (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-chains® | 2600·2700 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment - Universal for e-chains® (Series 2600·2700)

Recommended for unsupported and gliding applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.05. ▶	26001.05.12.C	26001.05.12	58	69
.06. ▶	26001.06.12.C	26001.06.12	73	84
.07. ▶	26001.07.12.C	26001.07.12	83	94
.09. ▶	26001.09.12.C	26001.09.12	98	109
.10. ▶	26001.10.12.C	26001.10.12	108	119
.12. ▶	26001.12.12.C	26001.12.12	133	144
.15. ▶	26001.15.12.C	26001.15.12	158	169
.17. ▶	26001.17.12.C	26001.17.12	183	194

KMA pivoting to one side: Moving end 26101...1 / Fixed end 26101...2

- Bolted connection outside of chain cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting) - e-chain®

26001. 05. 12.C A

- A…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA pivoting

Single-part order

Mounting bracket Moving end

26001. 05. 1.C A (preassembled + C-profile)

Mounting bracket Fixed end

26001. 05. 2.C A (preassembled + C-profile)

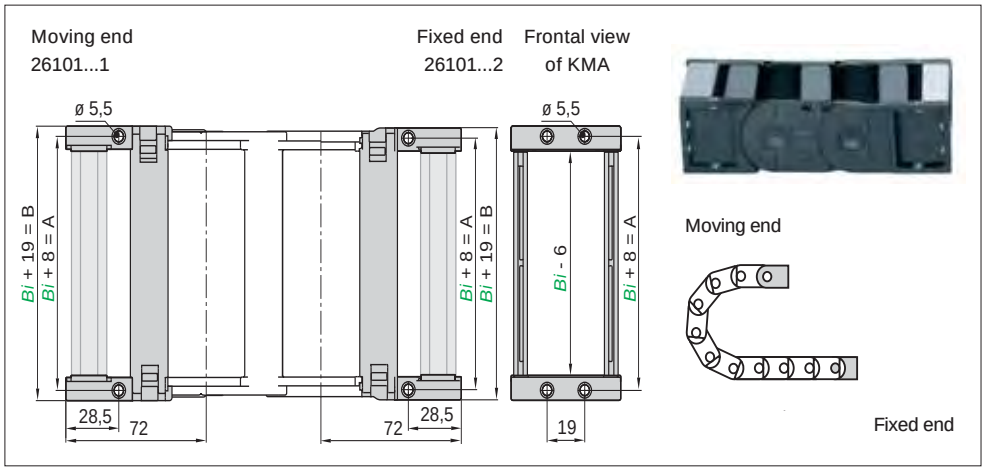
A

These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A ▶ e.g. 26001.05.12.C A

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-chains® | 2600·2700 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment - Universal for e-chains® (Series 2600·2700)

Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.05. ▶	26101.05.12.C	26101.05.12	58	69
.06. ▶	26101.06.12.C	26101.06.12	73	84
.07. ▶	26101.07.12.C	26101.07.12	83	94
.09. ▶	26101.09.12.C	26101.09.12	98	109
.10. ▶	26101.10.12.C	26101.10.12	108	119
.12. ▶	26101.12.12.C	26101.12.12	133	144
.15. ▶	26101.15.12.C	26101.15.12	158	169
.17. ▶	26101.17.12.C	26101.17.12	183	194

- Bolted connection outside of chain cross-section possible
- At very high speed and/or acceleration
- Universally mountable
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking) - e-chain®

26101. 05. 12.C A

- A…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA locking

Single-part order

Mounting bracket Moving end

26101. 05. 1.C A (preassembled + C-profile)

Mounting bracket Fixed end

26101. 05. 2.C A (preassembled + C-profile)

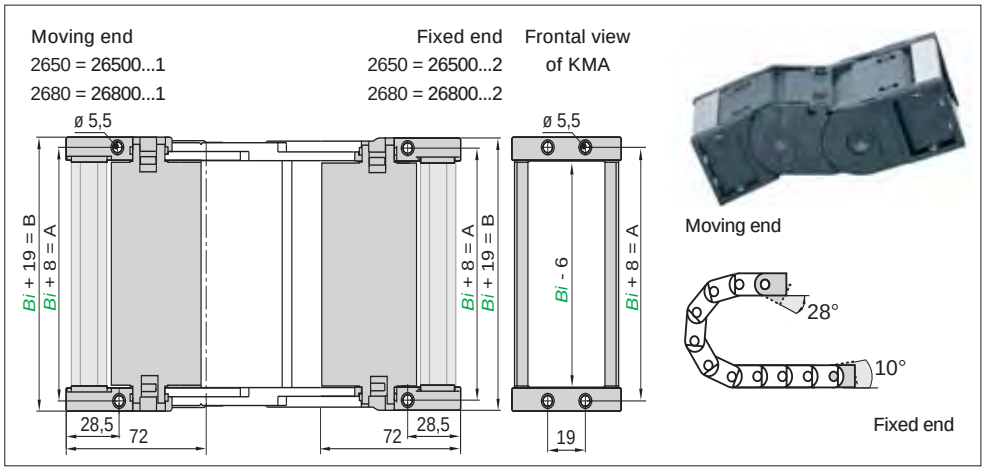
A

These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A ▶ e.g. 26101.05.12.C A

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-tubes | 2650·2680 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment - Universal for e-chains® (Series 2650·2680)

Recommended for unsupported and gliding applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.05. ▶	26500 | 26800 .05.12.C	26500 | 26800 .05.12	58	69
.06. ▶	26500 | 26800 .06.12.C	26500 | 26800 .06.12	73	84
.07. ▶	26500 | 26800 .07.12.C	26500 | 26800 .07.12	83	94
.09. ▶	26500 | 26800 .09.12.C	26500 | 26800 .09.12	98	109
.10. ▶	26500 | 26800 .10.12.C	26500 | 26800 .10.12	108	119
.12. ▶	26500 | 26800 .12.12.C	26500 | 26800 .12.12	133	144
.15. ▶	26500 | 26800 .15.12.C	26500 | 26800 .15.12	158	169
.17. ▶	26500 | 26800 .17.12.C	26500 | 26800 .17.12	183	194

KMA pivoting Part No. 26500... for half e-tube Series 2650
KMA pivoting Part No. 26800... for full e-tube Series 2680

- Bolted connection outside of chain cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting) - e-tube

26500. 05. 12.C A

- A…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA pivoting Half e-tube

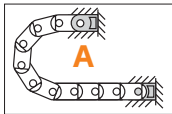
Single-part order

Mounting bracket Moving end

26500. 05. 1.C A (preassembled + C-profile)

Mounting bracket Fixed end

26500. 05. 1.C A (preassembled + C-profile)

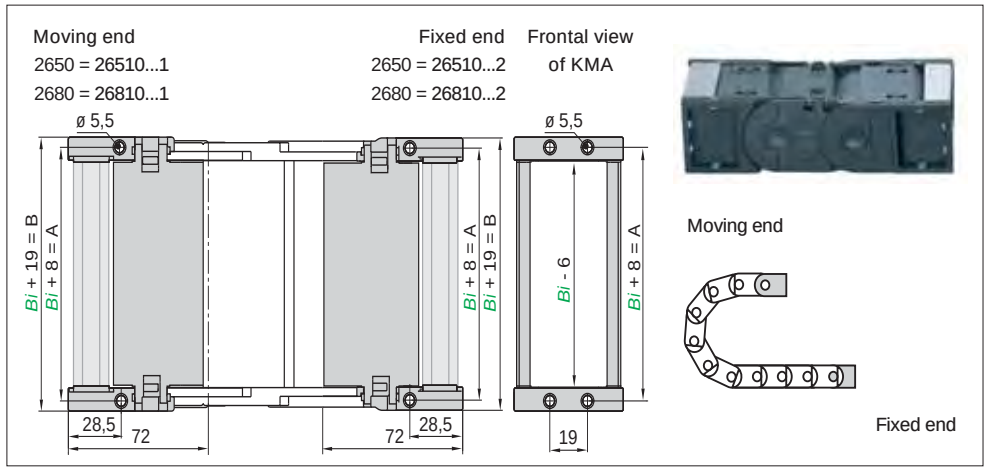


These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A ▶ e.g. 26500.05.12.CA

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

e-tubes | 2650·2680 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment - Universal for e-chains® (Series 2650·2680)

Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.05. ▶	26510 | 26810 .05.12.C	26510 | 26810 .05.12	58	69
.06. ▶	26510 | 26810 .06.12.C	26510 | 26810 .06.12	73	84
.07. ▶	26510 | 26810 .07.12.C	26510 | 26810 .07.12	83	94
.09. ▶	26510 | 26810 .09.12.C	26510 | 26810 .09.12	98	109
.10. ▶	26510 | 26810 .10.12.C	26510 | 26810 .10.12	108	119
.12. ▶	26510 | 26810 .12.12.C	26510 | 26810 .12.12	133	144
.15. ▶	26510 | 26810 .15.12.C	26510 | 26810 .15.12	158	169
.17. ▶	26510 | 26810 .17.12.C	26510 | 26810 .17.12	183	194

KMA locking Part No. 26510... for half e-tube Series 2650
KMA locking Part No. 26810... for full e-tube Series 2680

- Bolted connection outside of chain cross-section possible
- At very high speed and/or acceleration
- Universally mountable
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking) - e-tube

26510. 05. 12.C A

- A…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA locking Half e-tube

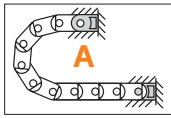
Single-part order

Mounting bracket Moving end

26510. 05. 1.C A (preassembled + C-profile)

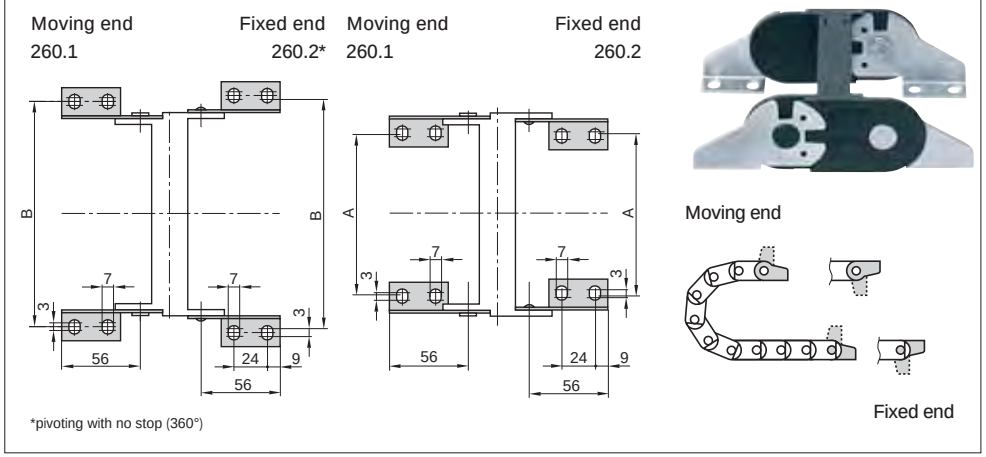
Mounting bracket Fixed end

26510. 05. 2.C A (preassembled + C-profile)



These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A ▶ e.g. 26510.05.12.CA

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

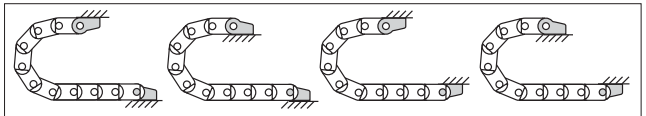


*pivoting with no stop (360°)

Steel locking | For e-chains® and e-tubes
Recommended for unsupported, vertical hanging and standing applications

For width index	Part No. full set	Part No. full set stainless steel**	Dim. A [mm]	Dim. B [mm]
.05. ▶	260.12	260.12.E	37	83
.06. ▶	260.12	260.12.E	52	98
.07. ▶	260.12	260.12.E	62	108
.09. ▶	260.12	260.12.E	77	123
.10. ▶	260.12	260.12.E	87	133
.12. ▶	260.12	260.12.E	112	158
.15. ▶	260.12	260.12.E	137	183
.17. ▶	260.12	260.12.E	163	209

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!

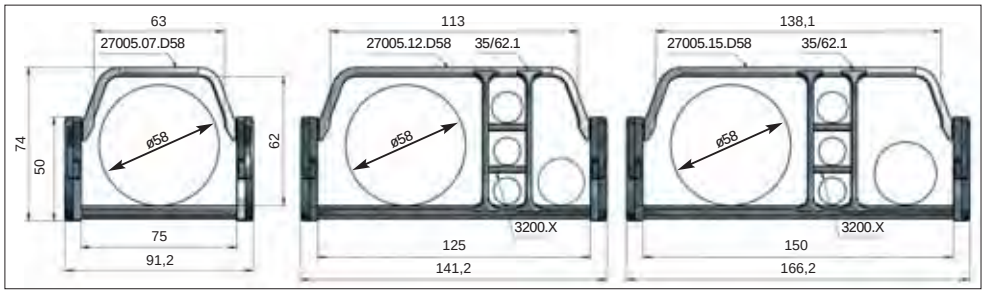

Possible installation conditions - further installation angles ▶ installation sketch

- Locking connections
- One part (2-piece) for all e-chain® widths
- Electrically conductive
- Bolted connection outside of chain cross-section possible
- Stainless steel version available (**Material: stainless steel 1.4301 / AISI 304)

Part no. structure
260. 12.E
Mounting bracket
Full set, 4 parts 2 with pin / 2 with bore
Mounting bracket

Single-part order
Mounting bracket Moving end
260. 1 (1 part left / right)
Mounting bracket Fixed end
260. 2 (1 part left / right)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148



Extender crossbars Series 2600·2700·2650 - Enormous increase of the interior for the smooth guiding of larger hoses



● Suitable for hoses with an outer diameter of max. 58 mm ● Optionally openable along the inner or outer radius, swivelling ● Modular interior separation Part No. 35/62.1 ● Cable-friendly design of extender crossbar and interior separation ● High holding force of the extender crossbar

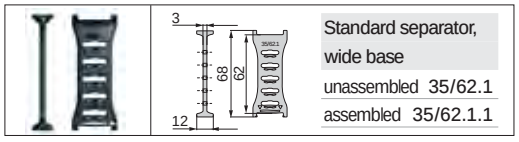
Order example
e-chain® with extender crossbar snap-open along outer radius, *Bi* 75 mm, *R* 100 mm:
Part No. 2700.15D58.100.0

Extender crossbars for e-chains® **snap-open along inner radius**	Extender crossbars for e-chains® **snap-open along outer radius**	Extender crossbars for half e-tubes **snap-open along inner radius**	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]
2600.07D58.*R*.0	2700.07D58.*R*.0	2650.07D58.*R*.0	75	91	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250
2600.12D58.*R*.0	2700.12D58.*R*.0	2650.12D58.*R*.0	125	141	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250
2600.15D58.*R*.0	2700.15D58.*R*.0	2650.15D58.*R*.0	150	166	| 063* | 075* | 100 | 125 | 150 | 175 | 200 | 250

*Radius 063 and 075 only possible with e-chains® Series 2700

Supplement Part No. with required radius. Example: 2700.15D58.100.0

Series 2600·2700·2650 | Interior separation for extender crossbars



Standard separator, wide base
For maximum locking strength and safe standing. In standard configuration separators are assembled every 2nd link!

Horizontal separation
Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights. Product range ▶ page 449

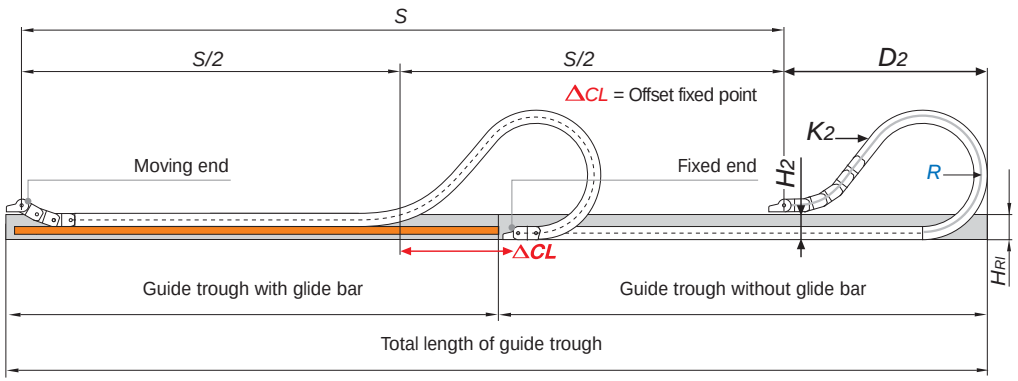
Optional: Support tray tool kit.
For support of the lower run.
Simple one-piece support trays according to your requirements and specification. Order example - support tray with bracket, length 1,0 m, color black: Part No. S9.011.15.1000.0. The complete range with order options ▶ from page 1258



2600·2650·2680·2700 | Dimensions | Long travels

Gliding applications | For long travels from 10 m to max. 120 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. **Please note:** For using Series 2600/2650/2680 for long travels (gliding), please consult igus® first. For long travels, igus® specifies Series 2700 that snaps open along the outer radius. In case of travels between 5 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 56 mm/link · Links/m = 18 (1008 mm) · Chain length = $S/2 + K_2$

R	063*	075*	100	125	150	175	200	250
H_2	130	150	166	166	166	166	166	166
D_2^{+25}	140	150	350	475	500	655	770	950
K_2	335	375	616	784	896	1120	1288	1624
ΔCL	–	–	144	244	244	374	464	594

*Radius for Series 2650/2680 available upon request, please consult igus® for delivery time. Note: Before using Series 2600/2650/2680 on long travels, please consult igus®!

More solutions | For long travel applications

autoglide 2700.*Bi*.AG.*R* - self-guiding, no guide troughs - Travel lengths ≤ 50 m — v_{max} 1,5 m/s

Self-guiding e-chainsystems® - no need for guide troughs

guidelok slimline F - Safe vertical guidance for e-chains® - Travels up to 50 m height — v_{max} 7 m/s

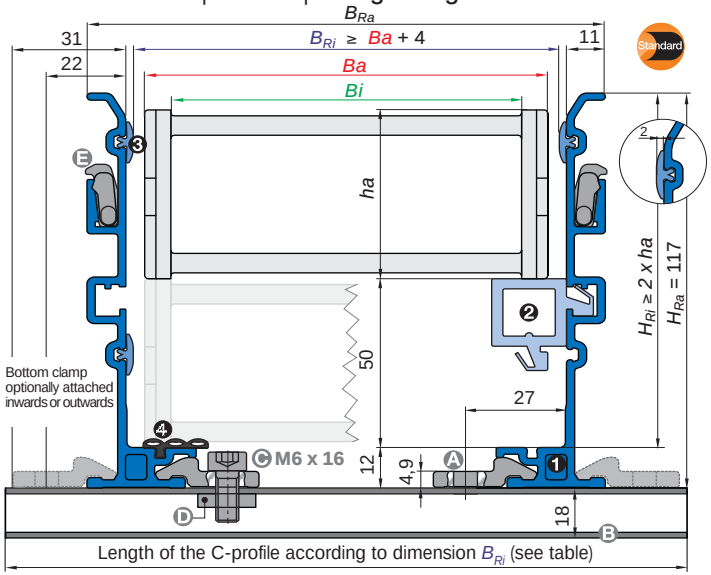
For hanging applications e.g. high-speed rack feeders up to 7 m/s and 10 m/s². No swinging of the e-chain®, high reliability through lever mechanism and guiding rails. Energy and data and all kinds of media in one single system

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{RI} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

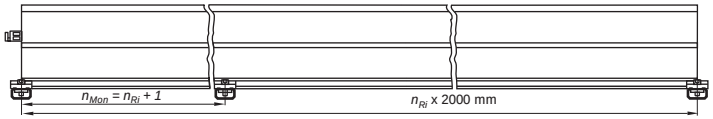
Part No. 972.30 | 972.32 | Trough height: 117 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 2700.05.100.0 with B_{Ri} = 70

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 972.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 972.32.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.175
Module for the fixed end	
Order text: 1 set	Part No. 972.81
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 972.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1200

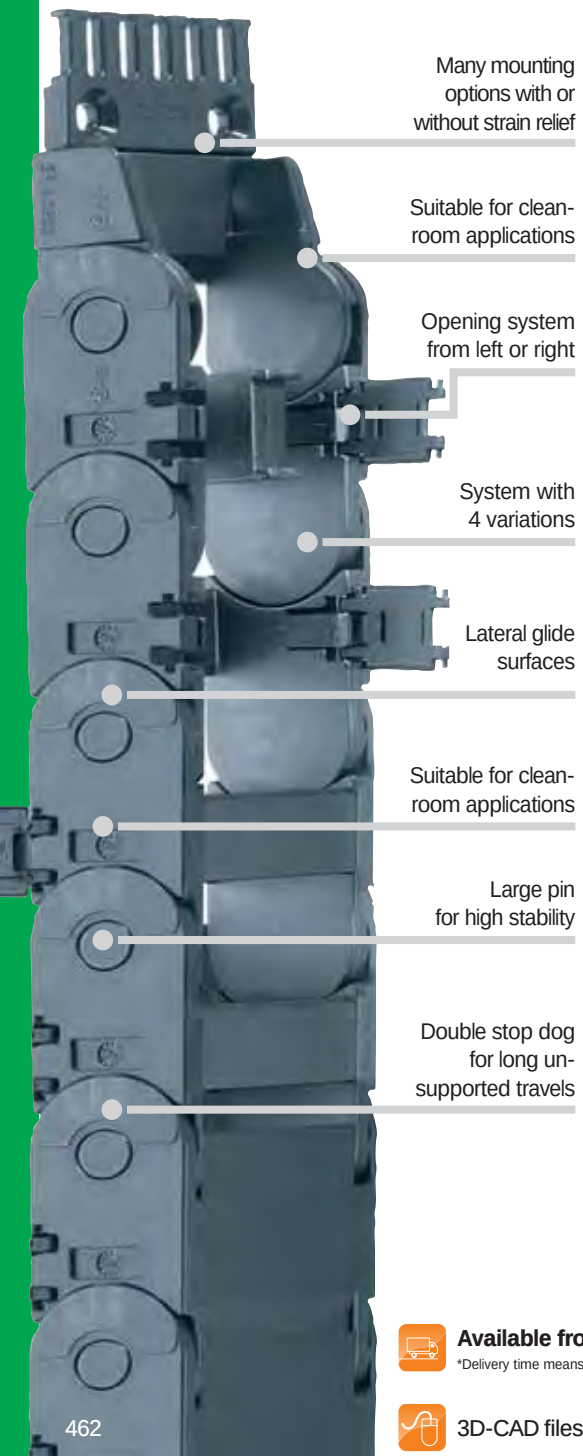
● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	70	upon request	960.30.175
.06	85	960.30.150	960.30.200
.07	95	960.30.150	960.30.200
.09	110	960.30.175	960.30.225
.10	120	960.30.175	960.30.225
.12	145	960.30.200	960.30.250
.15	170	960.30.225	960.30.275
.17	198	960.30.250	960.30.300

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"



Large inner height, high stability

When to use Series 3400·3450·3480·3500:

- If a medium-sized, stable system with an inner height of 21 mm is required (e-chains®, half and full e-tubes)
- If inner widths up to 250 mm are required
- For unsupported lengths up to 3,0 m and fill weights up to 13 kg/m
- For long travels up to 150 m
- If an optimized system for quick opening of crossbars from left or right is required

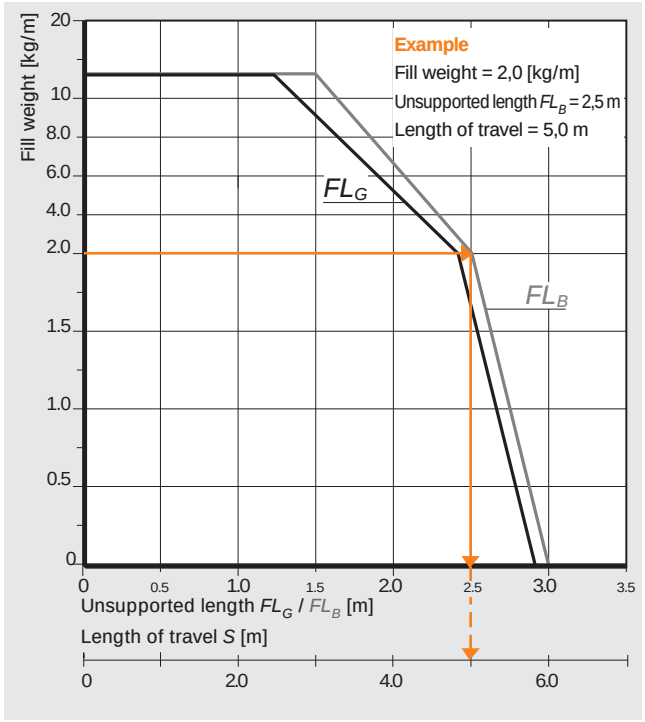
When to use a different igus® Series:

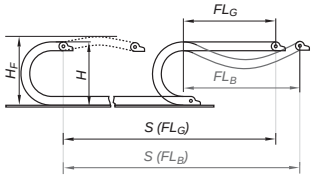
- If more stability is required
  ▶ System E4.1, Series E4.42, page 662
- For simple applications and easy filling
  ▶ easy chain®, Series E300, page 200

Open E2/000 e-chains® in a flash with the **e-chain® opener** ▶ page 405

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E2000



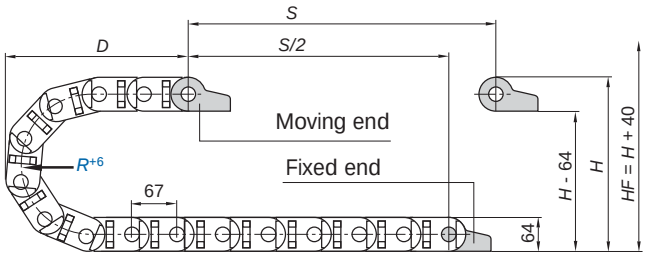


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Long travels up to 150 m.
More information ▶ page 478



Technical Data

Speed, material, temperature and flammability class ▶ page 408

Pitch = 67 mm/link
Links/m = 15 (1005 mm)
Chain length = $S/2 + K$

R	075*	100*	125	150	200	250	300
H	214	264	314	364	464	564	664
D	208	233	258	283	333	383	433
K	370	450	530	610	765	920	1080

The required clearance height: $H_F = H + 40$ mm (with 2,5 kg/m fill weight)

*Radius for Series 3450/3480 available upon request, please consult igus® for delivery time. Note: Before using Series 3400/3450/3480 on long travels, please consult igus®!

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series 3400 snap-open along inner radius
e-chains® | Series 3500 snap-open along outer radius | Standard

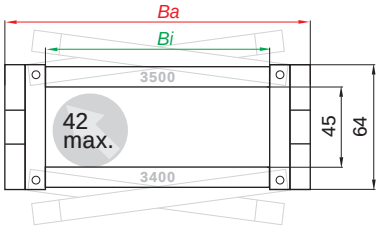
e-chains® snap-open along inner radius	e-chains® snap-open along outer radius Standard	Bi [mm]	Ba [mm]	R Bending radii [mm]	3400 [kg/m]	3500 [kg/m]
3400. 050 .R.0	3500. 050 .R.0	50	70	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,60	≈ 1,60
3400. 075 .R.0	3500. 075 .R.0	75	95	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,78	≈ 1,78
3400. 100 .R.0	3500. 100 .R.0	100	120	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,93	≈ 1,93
3400. 115 .R.0	3500. 115 .R.0	115	135	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 1,99	≈ 1,99
3400. 125 .R.0	3500. 125 .R.0	125	145	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 2,03	≈ 2,03
3400. 150 .R.0	3500. 150 .R.0	150	170	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 2,17	≈ 2,17
3400. 175 .R.0	3500. 175 .R.0	175	195	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 2,28	≈ 2,28
3400. 200 .R.0	3500. 200 .R.0	200	220	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 2,45	≈ 2,45
3400. 225 .R.0	3500. 225 .R.0	225	245	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 2,59	≈ 2,59
3400. 250 .R.0	3500. 250 .R.0	250	270	| 075 | 100 | 125 | 150 | 200 | 250 | 300	≈ 2,73	≈ 2,73

Supplement Part No. with required radius. Example: 3500.075.200.0

Note: Before using Series 3400/3450/3480 on long travels (gliding), please consult igus®!

Order key
3400. 075. 200. 0 e-chain®
3500. 075. 200. 0 e-chain®

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Half e-tubes | Series 3450 snap-open along inner radius, closed along outer radius
Full e-tubes | Series 3480 snap-open along inner radius, fully enclosed

Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	3450 [kg/m]	3480 [kg/m]
3450. 050 .R.0	3480. 050 .R.0	50	70	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 1,77	≈ 1,96
3450. 075 .R.0	3480. 075 .R.0	75	95	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 1,95	≈ 2,07
3450. 100 .R.0	3480. 100 .R.0	100	120	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 2,15	≈ 2,30
3450. 115 .R.0	3480. 115 .R.0	115	135	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 2,30	≈ 2,46
3450. 125 .R.0	3480. 125 .R.0	125	145	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 2,42	≈ 2,49
3450. 150 .R.0	3480. 150 .R.0	150	170	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 2,60	≈ 2,62
3450. 175 .R.0	3480. 175 .R.0	175	195	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 2,75	≈ 2,80
3450. 200 .R.0	3480. 200 .R.0	200	220	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 2,90	≈ 2,94
3450. 225 .R.0	3480. 225 .R.0	225	245	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 3,15	≈ 3,12
3450. 250 .R.0	3480. 250 .R.0	250	270	| 075* | 100* | 125 | 150 | 200 | 250 | 300	≈ 3,30	≈ 3,28

*Radius available upon request, please consult igus® for delivery time

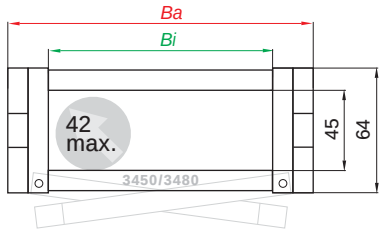
For radii 075, 100 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: 3450.075.200.0

Note: Before using Series 3400/3450/3480 on long travels (gliding), please consult igus®!

Order key
3450. 075. 200. 0 Half e-tube
3480. 075. 200. 0 Full e-tube

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶ page 409

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Noise dampening | Noise reduction ≈ 5 dB(A)

e-chains® snap-open along inner radius	Half e-tubes snap-open along inner radius	Full e-tubes snap-open along inner radius		*R* Bending radii [mm]	*Bi* [mm]
S3400.050	S3450.050	S3480.050	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	50
S3400.075	S3450.075	S3480.075	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	75
S3400.100	S3450.100	S3480.100	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	100
S3400.115	S3450.115	S3480.115	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	115
S3400.125	S3450.125	S3480.125	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	125
S3400.150	S3450.150	S3480.150	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	150
S3400.175	S3450.175	S3480.175	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	175
S3400.200	S3450.200	S3480.200	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	200
S3400.225	S3450.225	S3480.225	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	225
S3400.250	S3450.250	S3480.250	.*R*.0	| 075* | 100* | 125 | 150 | 200 | 250 | 300	250

*Radius Series 3450/3480 available upon request, please consult igus® for delivery time

For radii 075, 100 the e-tube is not fully enclosed. Please consult igus®.

Supplement Part No. with required radius. Example: S3400.075.200.0

Note: Before using Series 3400/3450/3480 on long travels (gliding), please consult igus®!

Configuration options and order keys, overview ▶ page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Magnetically detectable plastic e-chains®

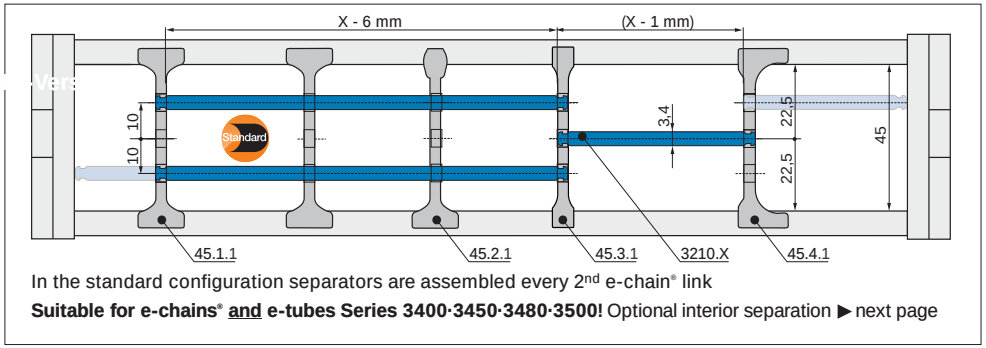
For the food- and tobaccoindustry | New in this catalog

● The material igumid DT is detected to the tiniest fragment all common metal detection systems and can therefore be selected automatically ● Particles as small as 1.0 mm can be recognized for fragments passing at speeds of 20 m/min

More information ▶ www.igus.eu/eu/detectable-chain



New generation of interior separation - for e-chains® and e-tubes



In the standard configuration separators are assembled every 2nd e-chain® link

Suitable for e-chains® and e-tubes Series 3400·3450·3480·3500! Optional interior separation ▶ next page



	unassembled	assembled
Standard separator, wide base	45.1	45.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains®.



	unassembled	assembled
Separator, narrow head	45.2	45.2.1

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



	unassembled	assembled
Separator, narrow base	45.3	45.3.1

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



	unassembled	assembled
Separator, asymmetrical	45.4	45.4.1

For side-mounted applications

Asymmetrical separator, for defined distance.
No additional spacers necessary.



	unassembled	assembled
Full-width shelf, lockable	3200.X	3210.X

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. To be used as full-width shelf for a consequent subdivision or as shelf for a pattern system in 3 levels.

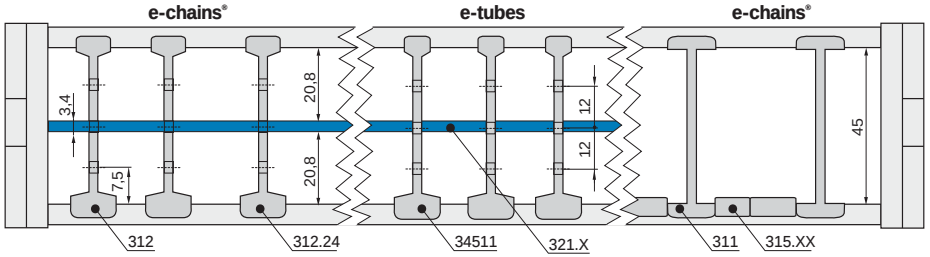


Lockable full-width shelves - for the standard interior separation

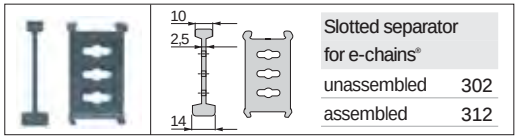
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

3400·3450·3480·3500 | Interior separation | Options

Previous interior separation - for e-chains® and e-tubes



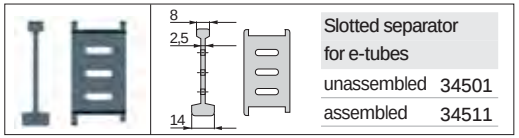
Separators, spacers, full-width shelves - In the standard configuration separators are assembled every 2nd e-chain® link



Slotted separator for e-chains®	
unassembled	302
assembled	312

Slotted separator 302 (e-chains® only)

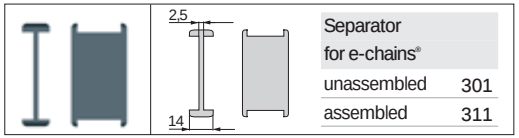
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Slotted separator for e-tubes	
unassembled	34501
assembled	34511

Slotted separator 34501 (e-tubes only)

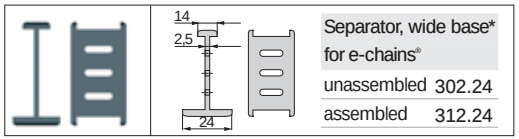
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator for e-chains®	
unassembled	301
assembled	311

Separator 301 (e-chains® only)

For a simple vertical subdivision on e-chains®.

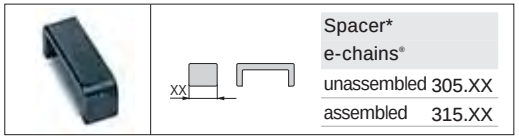


Separator, wide base* for e-chains®	
unassembled	302.24
assembled	312.24

Separator, wide base* 302.24 (e-chains® only)

If a wide space between the separators has to be kept or separators have to be fixed in their position.

(*for side-mounted applications)

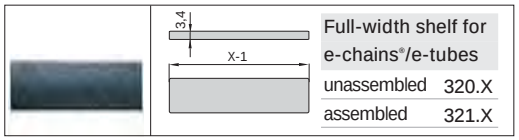


Spacer* e-chains®	
unassembled	305.XX
assembled	315.XX

Spacer* 305.XX (e-chains® only)

Separators can be fixed in position. Only mountable onto the fixed crossbar. XX = width of spacer, available 8, 12 mm.

(*for side-mounted applications)



Full-width shelf for e-chains®/e-tubes	
unassembled	320.X
assembled	321.X

Full-width shelf 320.X (e-chains® and e-tubes)

This option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 3 different heights (in 12 mm increments).

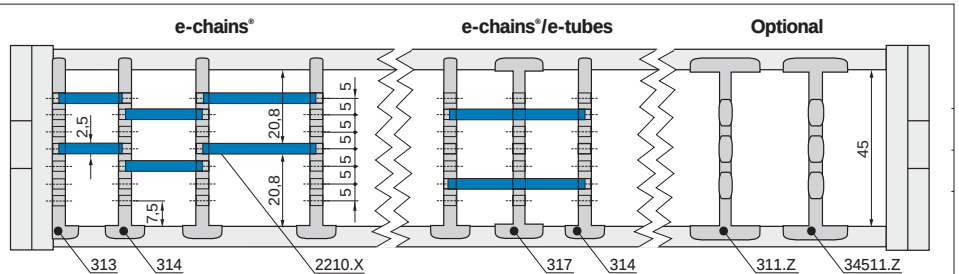
Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	320.050	321.050	150	320.150	321.150	250	320.250	321.250
075	320.075	321.075	175	320.175	321.175			
115	320.115	321.115	200	320.200	321.200			
125	320.125	321.125	225	320.225	321.225			

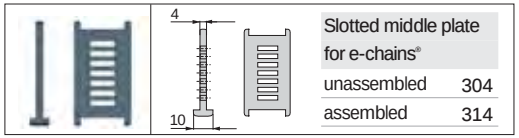
3400
3450
3480
3500

3400·3450·3480·3500 | Interior separation | Options

Previous interior separation - for e-chains® and e-tubes



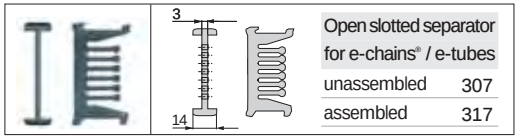
Shelves - In the standard configuration separators are assembled every 2nd e-chain® link



Slotted middle plate for e-chains®	
unassembled	304
assembled	314

Middle plate 304 (e-chains® only)

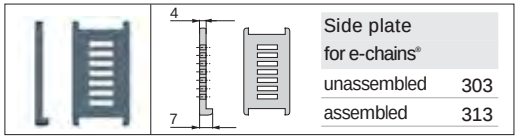
To achieve a modular shelving by shelf 2200.X arranged at 7 different heights (in 5 mm increments)



Open slotted separator for e-chains® / e-tubes	
unassembled	307
assembled	317

Open slotted separator 307 (e-chains® and e-tubes)

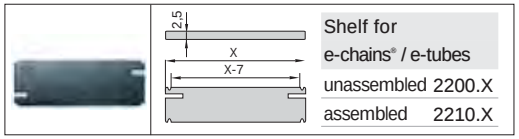
Quick assembly - retrofitting into an existing interior separation system without dismantling.



Side plate for e-chains®	
unassembled	303
assembled	313

Side plate 303 (e-chains® only)

Works like middle plate.
Allows modular shelving close to the side links.



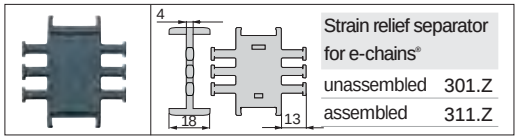
Shelf for e-chains® / e-tubes	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X (e-chains® and e-tubes)

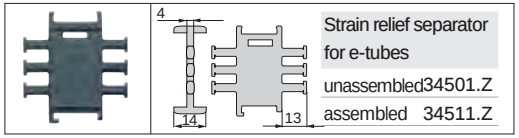
For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 7 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			



Strain relief separator for e-chains®	
unassembled	301.Z
assembled	311.Z



Strain relief separator for e-tubes	
unassembled	34501.Z
assembled	34511.Z

Additional elements for interior separation

Strain relief separator 301.Z (e-chains® only)

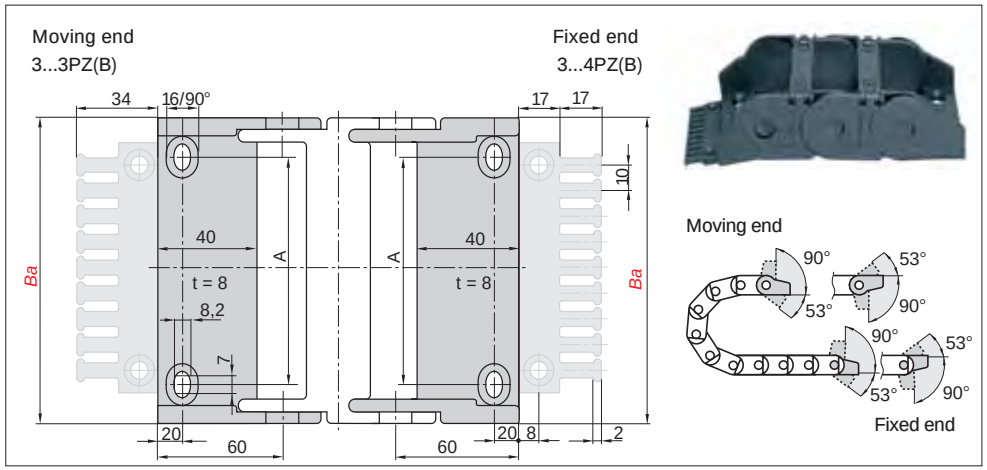
Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

Strain relief separator 34501.Z (e-tubes only)

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

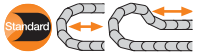
3400·3450·3480·3500 | Mounting brackets pivoting

For tight installation conditions



Polymer pivoting | Standard - Universal for e-chains® and e-tubes
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Number of teeth
.050. ▶	3050.34PZB	3050.34PZBK1	3050.34PZ	28	5
.075. ▶	3075.34PZB	3075.34PZBK1	3075.34PZ	53	7
.100. ▶	3100.34PZB	3100.34PZBK1	3100.34PZ	78	10
.115. ▶	3115.34PZB	3115.34PZBK1	3115.34PZ	93	11
.125. ▶	3125.34PZB	3125.34PZBK1	3125.34PZ	103	12
.150. ▶	3150.34PZB	3150.34PZBK1	3150.34PZ	128	15
.175. ▶	3175.34PZB	3175.34PZBK1	3175.34PZ	153	17
.200. ▶	3200.34PZB	3200.34PZBK1	3200.34PZ	178	20
.225. ▶	3225.34PZB	3225.34PZBK1	3225.34PZ	203	22
.250. ▶	3250.34PZB	3250.34PZBK1	3250.34PZ	228	25

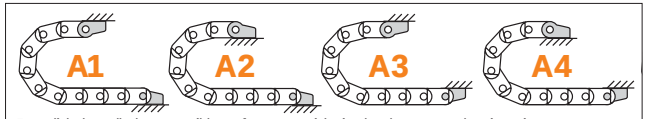


- Standard
- For tight installation conditions
- Strain relief with detachable chainfix tiewrap plates
- Corrosion resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

3075. 34 PZB A1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set pivoting = 34
- Mounting brackets for selected width index



Possible installation conditions for assembled, pivoting mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 3075.34PZBA1

Single-part order

Mounting bracket Moving end

3075. 3 PZB A1 (preassembled + tiewrap plate)

Mounting bracket Fixed end

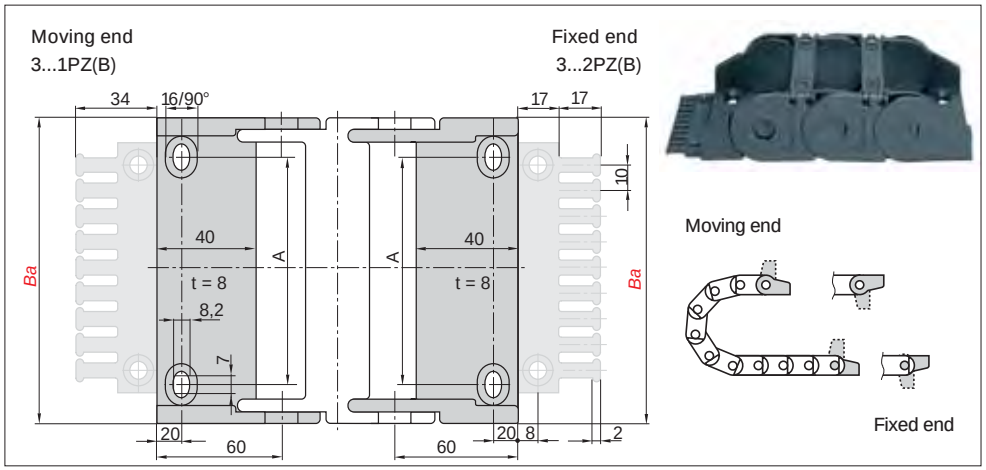
3075. 4 PZB A1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

3400
3450
3480
3500

3400·3450·3480·3500 | Mounting brackets locking

For very high speed and acceleration



Polymer locking | Universal for e-chains® and e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Number of teeth
.050. ▶	3050.12PZB	3050.12PZBK1	3050.12PZ	28	5
.075. ▶	3075.12PZB	3075.12PZBK1	3075.12PZ	53	7
.100. ▶	3100.12PZB	3100.12PZBK1	3100.12PZ	78	10
.115. ▶	3115.12PZB	3115.12PZBK1	3115.12PZ	93	11
.125. ▶	3125.12PZB	3125.12PZBK1	3125.12PZ	103	12
.150. ▶	3150.12PZB	3150.12PZBK1	3150.12PZ	128	15
.175. ▶	3175.12PZB	3175.12PZBK1	3175.12PZ	153	17
.200. ▶	3200.12PZB	3200.12PZBK1	3200.12PZ	178	20
.225. ▶	3225.12PZB	3225.12PZBK1	3225.12PZ	203	22
.250. ▶	3250.12PZB	3250.12PZBK1	3250.12PZ	228	25

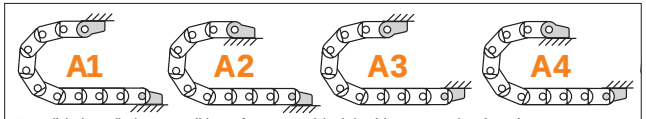


- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

3075. 12 PZB A1

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set locking = 12
- Mounting brackets for selected width index



Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 3075.12PZBA1

Single-part order

Mounting bracket Moving end

3075. 1 PZB A1 (preassembled + tiewrap plate)

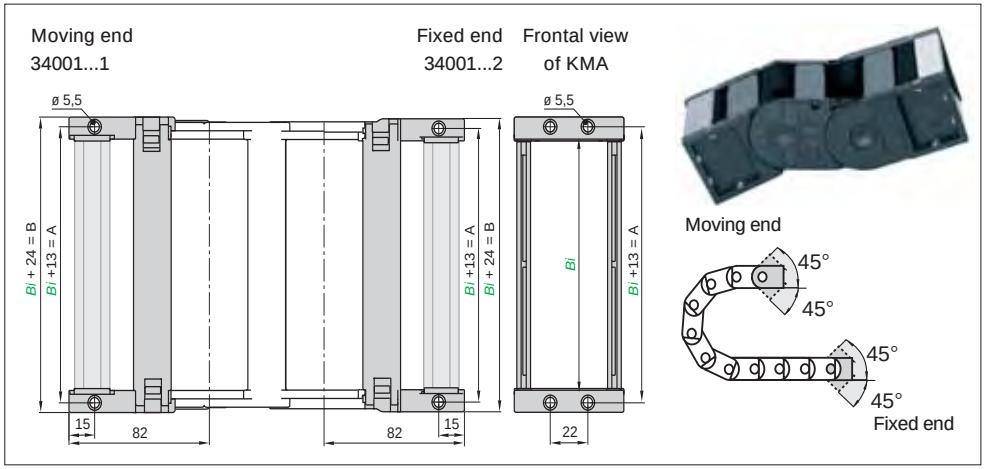
Mounting bracket Fixed end

3075. 2 PZB A1 (preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-chains® | 3400·3500 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment - Universal for e-chains® (Series 3400·3500)

Recommended for unsupported and gliding applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.050. ▶	34001.050.12.C	34001.050.12	63	74
.075. ▶	34001.075.12.C	34001.075.12	88	99
.100. ▶	34001.100.12.C	34001.100.12	113	124
.115. ▶	34001.115.12.C	34001.115.12	128	139
.125. ▶	34001.125.12.C	34001.125.12	138	149
.150. ▶	34001.150.12.C	34001.150.12	163	174
.175. ▶	34001.175.12.C	34001.175.12	188	199
.200. ▶	34001.200.12.C	34001.200.12	213	224
.225. ▶	34001.225.12.C	34001.225.12	238	249
.250. ▶	34001.250.12.C	34001.250.12	263	274

KMA pivoting to one side: Moving end 34001...1 / Fixed end 34001...2

- Bolted connection outside of chain cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting) - e-chain®

34001. 075. 12.C **A**

- A…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA pivoting

Single-part order

Mounting bracket Moving end

34001. 075. 1.C **A** (preassembled + C-profile)

Mounting bracket Fixed end

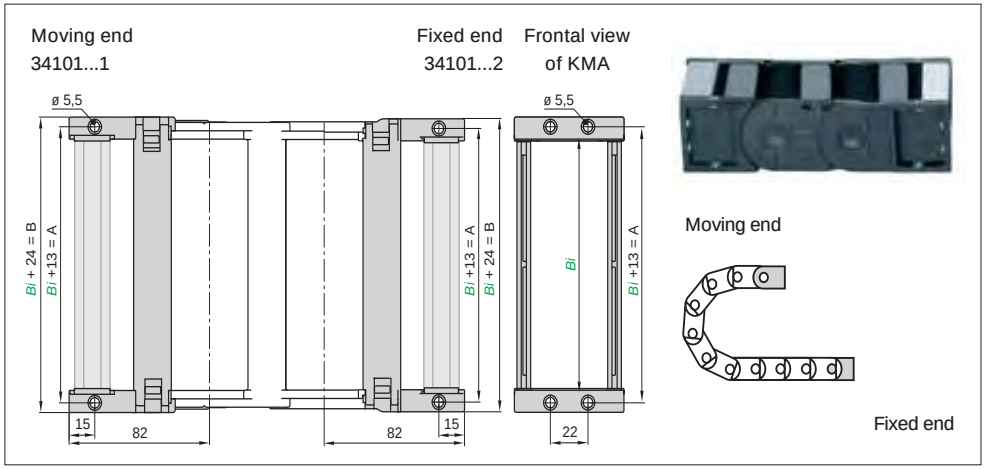
34001. 075. 2.C **A** (preassembled + C-profile)

A These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 34001.075.12.C**A**

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-chains® | 3400·3500 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment - Universal for e-chains® (Series 3400·3500)

Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.050. ▶	34101.050.12.C	34101.050.12	63	74
.075. ▶	34101.075.12.C	34101.075.12	88	99
.100. ▶	34101.100.12.C	34101.100.12	113	124
.115. ▶	34101.115.12.C	34101.115.12	128	139
.125. ▶	34101.125.12.C	34101.125.12	138	149
.150. ▶	34101.150.12.C	34101.150.12	163	174
.175. ▶	34101.175.12.C	34101.175.12	188	199
.200. ▶	34101.200.12.C	34101.200.12	213	224
.225. ▶	34101.225.12.C	34101.225.12	238	249
.250. ▶	34101.250.12.C	34101.250.12	263	274

- Bolted connection outside of chain cross-section possible
- At very high speed and/or acceleration
- Universally mountable
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking) - e-chain®

34101. 075. 12.C **A**

- A…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA locking

Single-part order

Mounting bracket Moving end

34101. 075. 1.C **A** (preassembled + C-profile)

Mounting bracket Fixed end

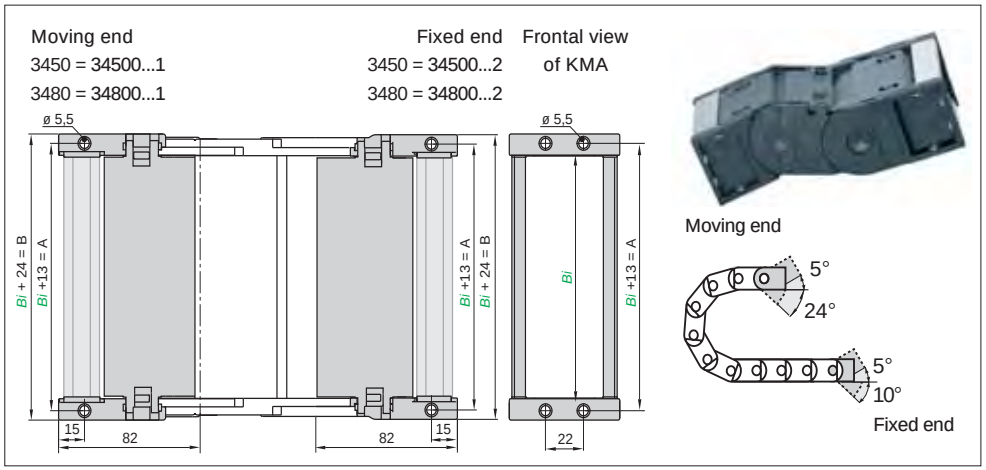
34101. 075. 2.C **A** (preassembled + C-profile)

A These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 34101.075.12.C**A**

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-tubes | 3450·3480 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment - Universal for e-chains® (Series 3450·3480)
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.050. ▶	34500 | 34800 .050.12.C	34500 | 34800 .050.12	63	74
.075. ▶	34500 | 34800 .075.12.C	34500 | 34800 .075.12	88	99
.100. ▶	34500 | 34800 .100.12.C	34500 | 34800 .100.12	113	124
.115. ▶	34500 | 34800 .115.12.C	34500 | 34800 .115.12	128	139
.125. ▶	34500 | 34800 .125.12.C	34500 | 34800 .125.12	138	149
.150. ▶	34500 | 34800 .150.12.C	34500 | 34800 .150.12	163	174
.175. ▶	34500 | 34800 .175.12.C	34500 | 34800 .175.12	188	199
.200. ▶	34500 | 34800 .200.12.C	34500 | 34800 .200.12	213	224
.225. ▶	34500 | 34800 .225.12.C	34500 | 34800 .225.12	238	249
.250. ▶	34500 | 34800 .250.12.C	34500 | 34800 .250.12	263	274

KMA pivoting Part No. 34500... for half e-tube Series 3450
KMA pivoting Part No. 34800... for full e-tube Series 3480

- Bolted connection outside of chain cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting) - e-tube

34500. 075. 12.C **A**

- **A**…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA pivoting Half e-tube

Single-part order

Mounting bracket Moving end

34500. 075. 1.C **A** (preassembled + C-profile)

Mounting bracket Fixed end

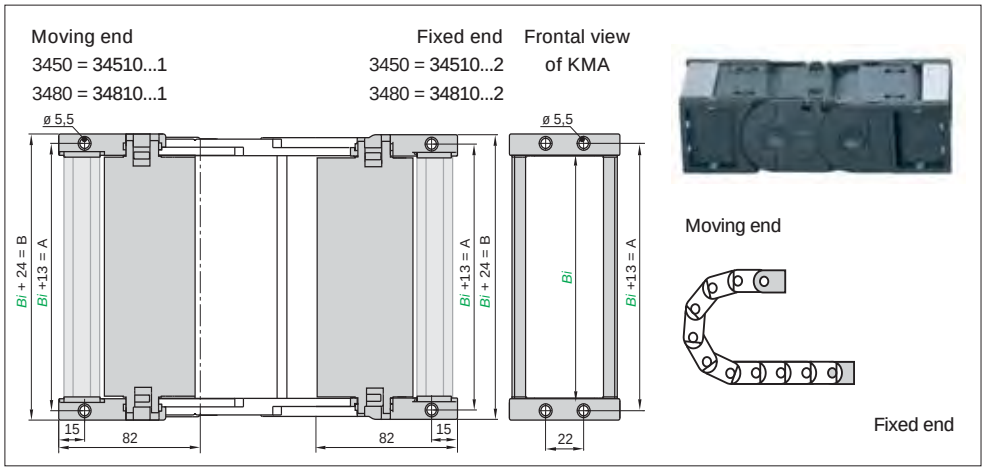
34500. 075. 2.C **A** (preassembled + C-profile)

A These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 34500.075.12.C**A**

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

e-tubes | 3450·3480 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment - Universal for e-chains® (Series 3450·3480)
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** C-profile	Part No. full set **without** C-profile	Dim. A [mm]	Dim. B [mm]
.050. ▶	34510 | 34810 .050.12.C	34510 | 34810 .050.12	63	74
.075. ▶	34510 | 34810 .075.12.C	34510 | 34810 .075.12	88	99
.100. ▶	34510 | 34810 .100.12.C	34510 | 34810 .100.12	113	124
.115. ▶	34510 | 34810 .115.12.C	34510 | 34810 .115.12	128	139
.125. ▶	34510 | 34810 .125.12.C	34510 | 34810 .125.12	138	149
.150. ▶	34510 | 34810 .150.12.C	34510 | 34810 .150.12	163	174
.175. ▶	34510 | 34810 .175.12.C	34510 | 34810 .175.12	188	199
.200. ▶	34510 | 34810 .200.12.C	34510 | 34810 .200.12	213	224
.225. ▶	34510 | 34810 .225.12.C	34510 | 34810 .225.12	238	249
.250. ▶	34510 | 34810 .250.12.C	34510 | 34810 .250.12	263	274

KMA locking Part No. 34510... for half e-tube Series 3450
KMA locking Part No. 34810... for full e-tube Series 3480

- Bolted connection outside of chain cross-section possible
- At very high speed and/or acceleration
- Universally mountable
- C-profile option
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking) - e-tube

34510. 075. 12.C **A**

- **A**…must be indicated on preassembled configurations
- Full set with integrated C-profile
- Width index
- KMA locking Half e-tube

Single-part order

Mounting bracket Moving end

34510. 075. 1.C **A** (preassembled + C-profile)

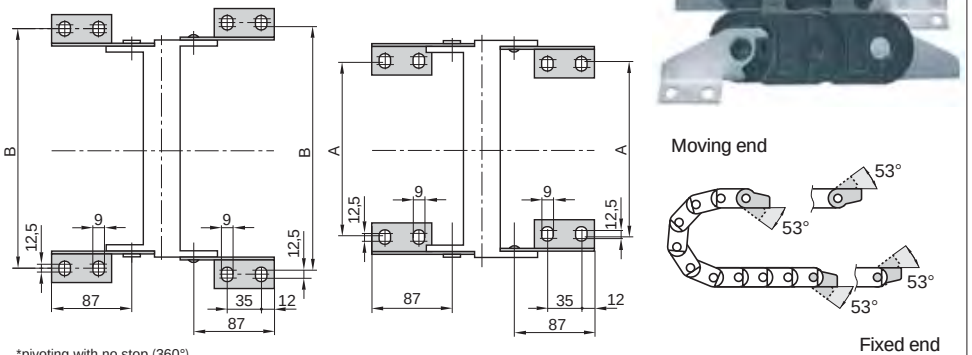
Mounting bracket Fixed end

34510. 075. 2.C **A** (preassembled + C-profile)

A These attachment types are triggered automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶ e.g. 34510 .075.12.C**A**

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

3400·3450·3480·3500 | Steel mounting brackets pivoting



*pivoting with no stop (360°)

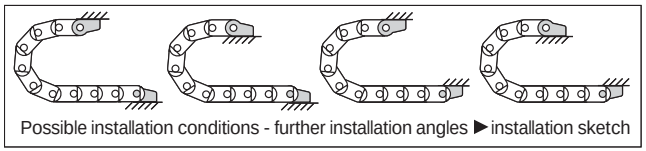
Steel pivoting | For e-chains® and e-tubes
Recommended for unsupported, vertical hanging and standing applications

For width index	Part No. full set	Part No. full set stainless steel**	Dim. A [mm]	Dim. B [mm]
.050. ▶	3000.12	3000.12.E	28	94
.075. ▶	3000.12	3000.12.E	53	119
.100. ▶	3000.12	3000.12.E	78	144
.115. ▶	3000.12	3000.12.E	93	159
.125. ▶	3000.12	3000.12.E	103	169
.150. ▶	3000.12	3000.12.E	128	194
.175. ▶	3000.12	3000.12.E	153	219
.200. ▶	3000.12	3000.12.E	178	244
.225. ▶	3000.12	3000.12.E	203	269
.250. ▶	3000.12	3000.12.E	228	294

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!



- Pivoting connections
- One part (2-piece) for all e-chain® widths
- Electrically conductive
- Bolted connection outside of chain cross-section possible
- Stainless steel version available
  (**Material: stainless steel 1.4301 / AISI 304)

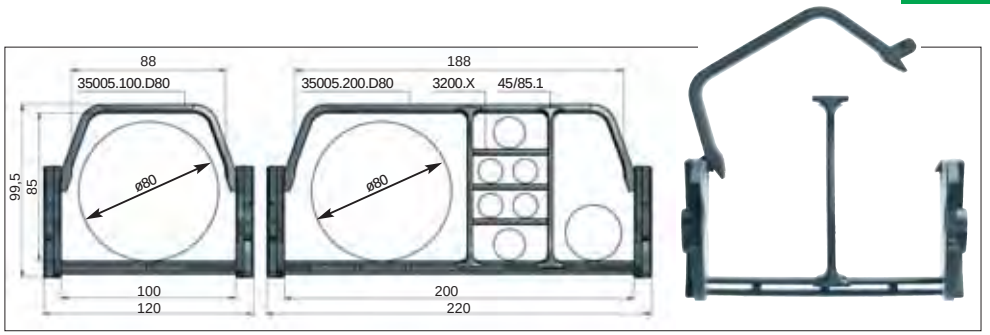

Possible installation conditions - further installation angles ▶ installation sketch

Part no. structure
3000. 12.E
Optional stainless steel
Full set, 4 parts
2 with pin / 2 with bore
Mounting bracket

Single-part order
Mounting bracket Moving end
3000. 1 (1 part left / right)
Mounting bracket Fixed end
3000. 2 (1 part left / right)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

3400·3450·3480·3500 | More options and accessories



Extender crossbars Series 3400·3500·3450 - Enormous increase of the interior for the smooth guiding of larger hoses

- Suitable for hoses with an outer diameter of max. 80 mm
- Optionally openable along the inner or outer radius, swivelling
- Modular interior separation Part No. 45/85.1
- Cable-friendly design of extender crossbar and interior separation
- High holding force of the extender crossbar

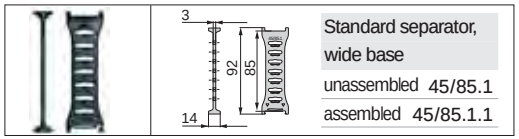
Order example
e-chain® with extender crossbar snap-open along outer radius, *Bi* 100 mm, *R* 200 mm:
Part No. 3500.100D80.200.0

Extender crossbars for e-chains® **snap-open along inner radius**	Extender crossbars for e-chains® **snap-open along outer radius**	Extender crossbars for half e-tubes **snap-open along inner radius**	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]
3400.100 D80.*R*.0	3500.100 D80.*R*.0	3450.100 D80.*R*.0	100	120	| 075* | 100* | 125 | 150 | 200 | 250 | 300
3400.200 D80.*R*.0	3500.200 D80.*R*.0	3450.200 D80.*R*.0	200	220	| 075* | 100* | 125 | 150 | 200 | 250 | 300

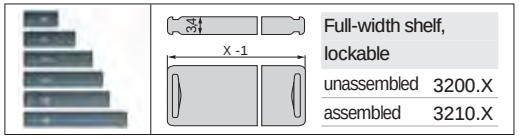
*Radius 075 and 100 only possible with e-chains® Series 3500 !

Supplement Part No. with required radius. Example: 3500.100D80.200.0

Series 3400·3500·3450 | Interior separation for extender crossbars



Standard separator, wide base
unassembled 45/85.1
assembled 45/85.1.1



Full-width shelf, lockable
unassembled 3200.X
assembled 3210.X

Standard separator, wide base
For maximum locking strength and safe standing. In standard configuration separators are assembled every 2nd link!

.

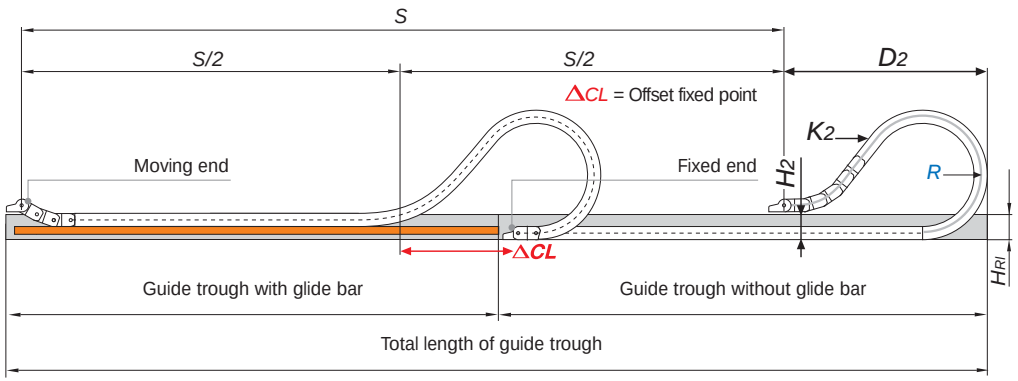
Horizontal separation
Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 7 different heights. Product range ▶ page 467

Optional: Support tray tool kit.
For support of the lower run.
Simple one-piece support trays according to your requirements and specification. Order example - support tray with bracket, length 1,0 m, color black: Part No. S9.021.10.1000.0. The complete range with order options ▶ from page 1258



Gliding applications | For long travels from 10 m to max. 150 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. **Please note:** For using Series 3400/3450/3480 for long travels (gliding), please consult igus® first. For long travels, igus® specifies Series 3500 that snaps open along the outer radius. In case of travels between 6 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 67 mm/link · Links/m = 15 (1005 mm) · Chain length = $S/2 + K_2$

R	075*	100*	125	150	200	250	300
H_2	150	200	186	186	186	186	186
D_2 +25	208	233	475	570	780	1010	1150
K_2	370	450	804	1005	1340	1675	1943
ΔCL	–	–	233	303	463	643	733

*Radius for Series 3450/3480 available upon request, please consult igus® for delivery time. Note: Before using Series 3400/3450/3480 on long travels, please consult igus®!

More solutions | For long travel applications

autoglide 3500.*Bi*.AG.*R* - self-guiding, no guide troughs - Travel lengths ≤ 50 m — v_{max} 1,5 m/s

Self-guiding e-chainsystems® - no need for guide troughs

guidelok slimline F - Safe vertical guidance for e-chains® - Travels up to 50 m height — v_{max} 7 m/s

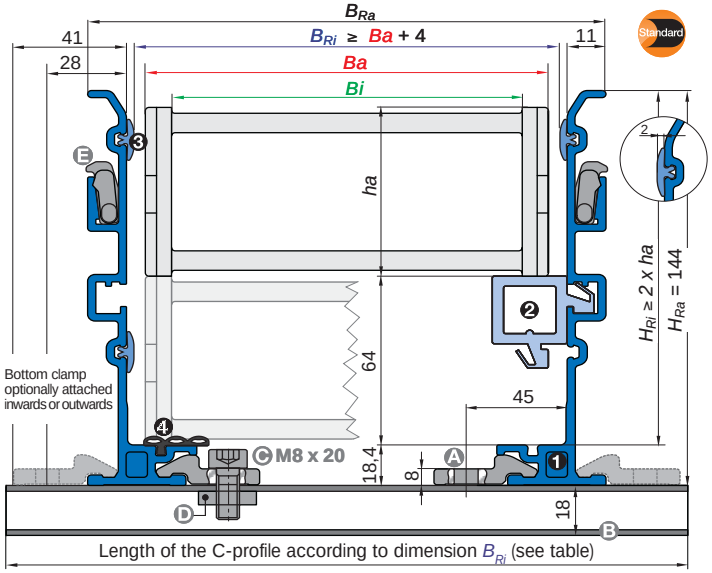
For hanging applications e.g. high-speed rack feeders up to 7 m/s and 10 m/s². No swinging of the e-chain®, high reliability through lever mechanism and guiding rails. Energy and data and all kinds of media in one single system

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

Part No. 973.30 | 973.31 | Trough height: 144 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Installation set "Basic" with C-Profile

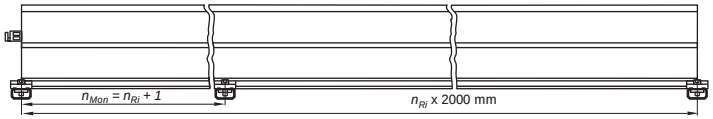
Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.050	74	upon request	960.40.200
.075	99	upon request	960.40.225
.100	124	960.40.175	960.40.250
.115	139	960.40.200	960.40.275
.125	149	960.40.200	960.40.275
.150	174	960.40.225	960.40.300
.175	199	960.40.250	960.40.325
.200	224	960.40.275	960.40.350
.225	249	960.40.300	960.40.375
.250	274	960.40.325	960.40.400

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of 960.40.XXX on the right column "attached outwards"

Order example: Length of travel 30 m - Center mounted for Series 3500.075.200.0 with B_{Ri} = 99

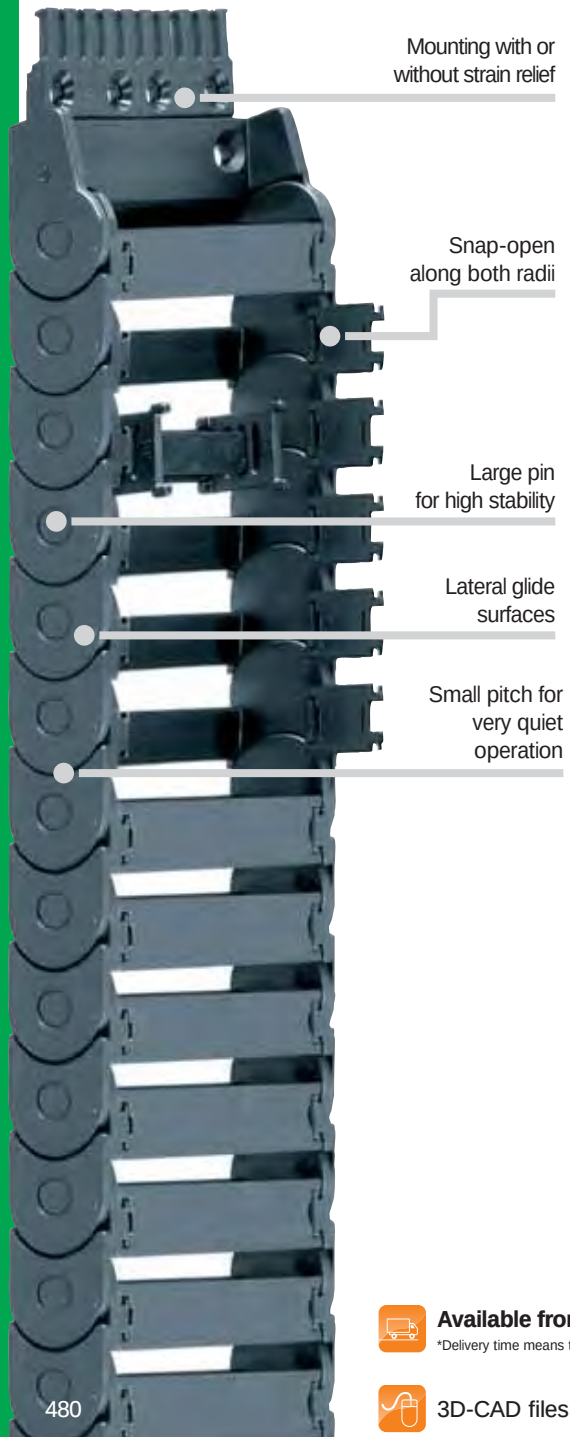
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 973.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 973.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.40.175
Module for the fixed end	
Order text: 1 set	Part No. 973.80
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 973.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1202

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Small pitch, smooth running

When to use Series 255:

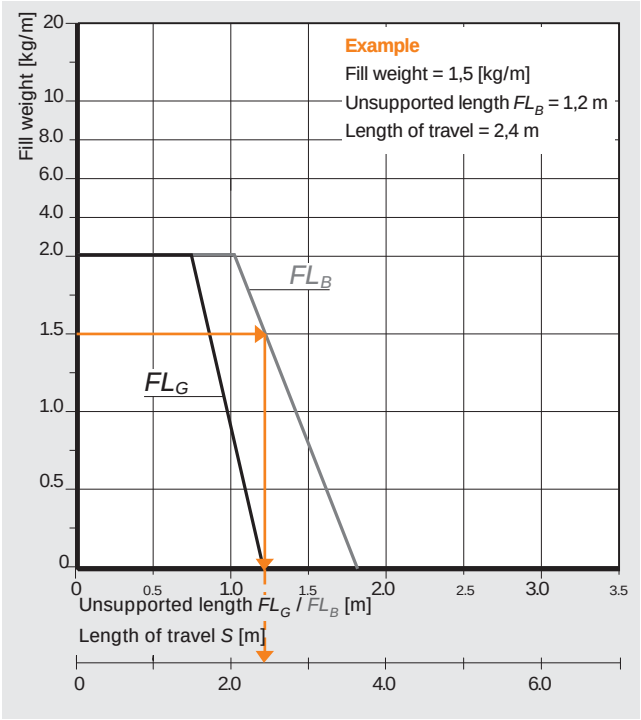
- If a medium-sized, stable e-chain® with a small pitch for very quiet operation and an inner height of 24 mm is required
- If inner widths up to 103 mm are required
- For unsupported lengths up to 1,8 m and fill weights up to 2,0 kg/m
- For long travels up to 100 m
- If snap-open capability of crossbars from both sides is required

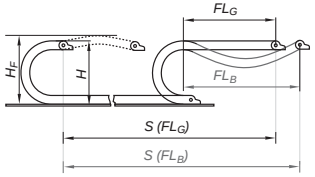
When to use a different igus® Series:

- If more stability is required
  ► System E4.1, Series E4.21, page 626
- For simple applications and easy filling
  ► easy chain®, Series E200, page 184
- If snap-open capability of links from both sides is required
  ► System E4.1, Series E4.21, page 626

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/255



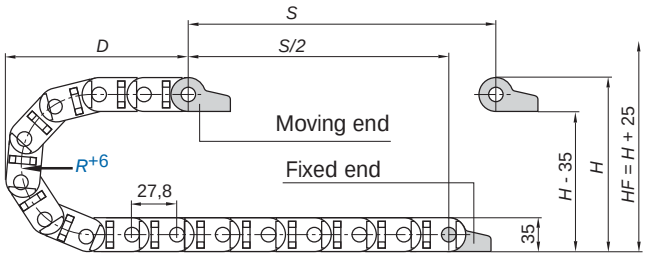


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95

Gliding applications

Long travels up to 100 m.
More information ► page 486



Technical Data

Speed, material, temperature and flammability class ► page 408

Pitch = 27,8 mm/link
Links/m = 36 (1000,8 mm)
Chain length = $S/2 + K$

R	055	075	100	125	150	175	200	225	250
H^{+4}_{0}	145	185	235	285	335	385	435	485	535
D	114	134	159	184	209	234	259	284	309
K	230	295	370	450	530	610	685	765	845

The required clearance height: $H_F = H + 25$ mm (with 1,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



Series 255 | Snap-open along outer radius

e-chains® snap-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	255 [kg/m]
255. 03 .*R*.0	38	54	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,81
255. 05 .*R*.0	57	73	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 0,90
255. 07 .*R*.0	77	93	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,01
255. 10 .*R*.0	103	119	| 055 | 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	≈ 1,15

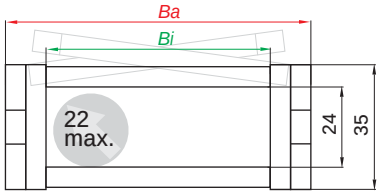
Supplement Part No. with required radius. Example: 255.10.200.0

Order key

255. 10. 200. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning

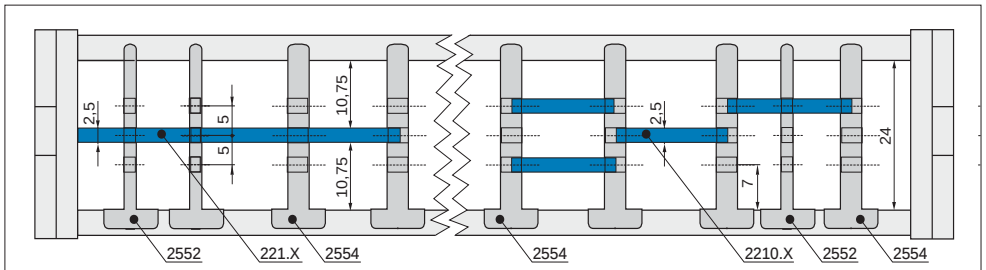


e-chain® links as single parts, overview ▶page 409

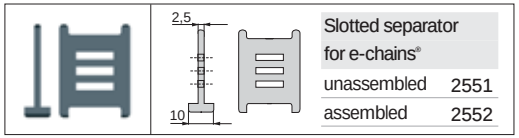
Configuration options and order keys, overview ▶page 410

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

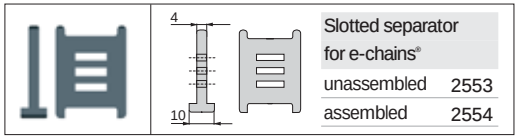


Separators, full-width shelves, shelves - In the standard configuration separators are assembled every 2nd e-chain® link



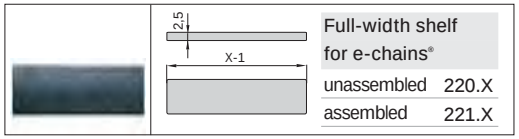
Slotted separator for e-chains®

unassembled	2551
assembled	2552



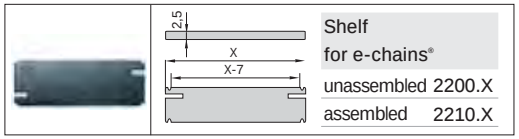
Slotted separator for e-chains®

unassembled	2553
assembled	2554



Full-width shelf for e-chains®

unassembled	220.X
assembled	221.X



Shelf for e-chains®

unassembled	2200.X
assembled	2210.X

Standard slotted separator 2551 and slotted separator 2553

Vertical subdivision on e-chains®. Due to its slot, it allows basic vertical/horizontal shelving arrangements (determining which type of separator to use depends on any potential retrofit requirements).

Full-width shelf 220.X

This option makes sense in applications with many thin cables with similar diameters. For a consequent subdivision. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 3 different heights (in 5 mm increments).

Full-width shelves

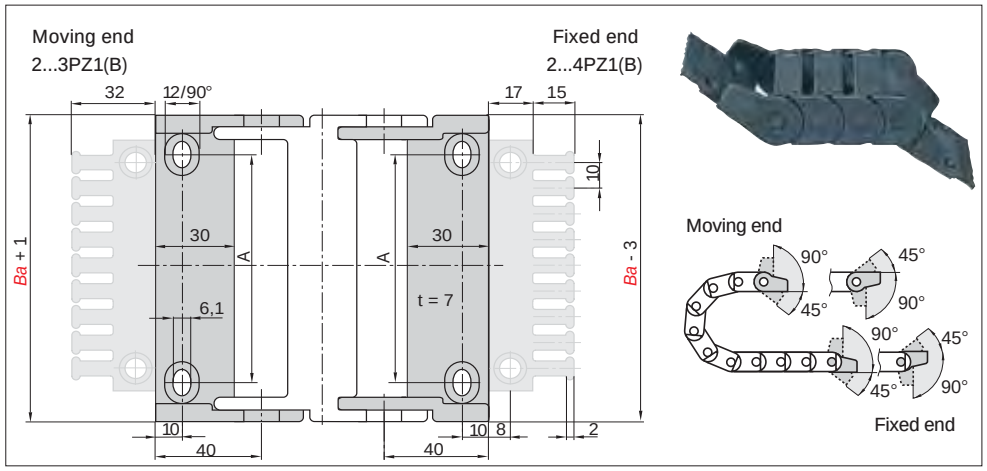
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
038	220.38	221.38	077	220.77	221.77
057	220.57	221.57	103	220.103	221.103

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	048	2200.48	2210.48
023	2200.23	2210.23	058	2200.58	2210.58
028	2200.28	2210.28	068	2200.68	2210.68
033	2200.33	2210.33	073	2200.73	2210.73
038	2200.38	2210.38	088	2200.88	2210.88
043	2200.43	2210.43	099	2200.99	2210.99

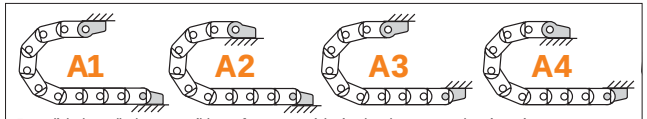
E2 medium | Series 255 | Mounting brackets pivoting

For tight installation conditions

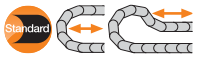


Polymer pivoting | Standard - Universal for e-chains®
Recommended for unsupported and gliding applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Zähne-zahl
03.	▶ 2030.34PZ1B	2030.34PZ1BK1	2030.34PZ1	25	4
05.	▶ 2050.34PZ1B	2050.34PZ1BK1	2050.34PZ1	44	6
07.	▶ 2070.34PZ1B	2070.34PZ1BK1	2070.34PZ1	64	8
10.	▶ 2100.34PZ1B	2100.34PZ1BK1	2100.34PZ1	90	10



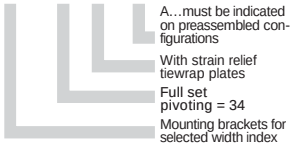
Possible installation conditions for assembled, pivoting mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 2100.34PZ1BA1



- Standard
- For tight installation conditions
- Strain relief with detachable chainfix tiewrap plates
- Corrosion resistant
- Variable traverse angle
- Various installation options on the fixed end and/or the moving end

Part No. structure (pivoting)

2100. 34 PZ1B A1



Single-part order

Mounting bracket Moving end

2100. 3 PZ1B A1(preassembled + tiewrap plate)

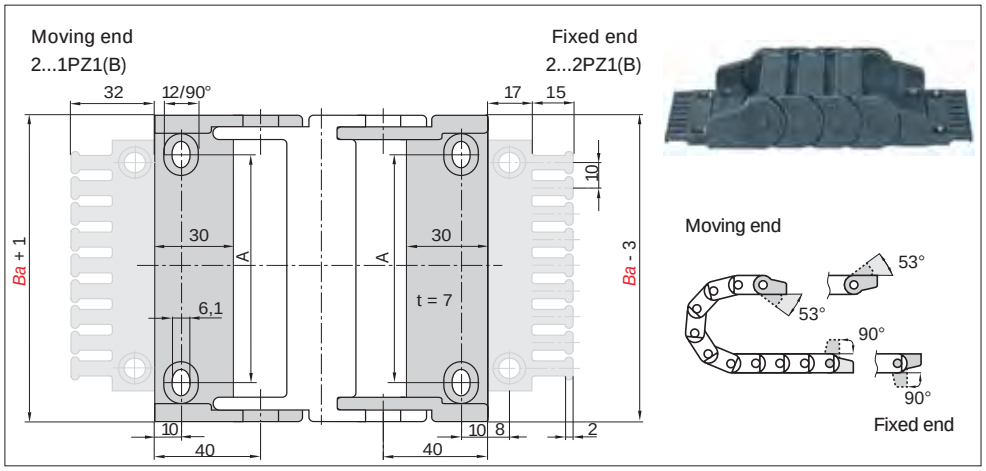
Mounting bracket Fixed end

2100. 4 PZ1B A1(preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

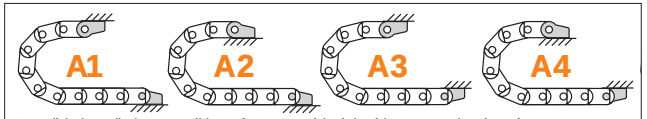
E2 medium | Series 255 | Mounting brackets locking

For very high speed and acceleration



Polymer locking | Universal for e-chains®
Recommended for vertical hanging and standing applications

For width index	Part No. full set **with** tiewrap plate	Full set **with** tiewrap plate + **10 cable tiewraps**	Part No. full set **without** tiewrap plate	Dim. A [mm]	Zähne-zahl
03.	▶ 2030.12PZ1B	2030.12PZ1BK1	2030.12PZ1	25	4
05.	▶ 2050.12PZ1B	2050.12PZ1BK1	2050.12PZ1	44	6
07.	▶ 2070.12PZ1B	2070.12PZ1BK1	2070.12PZ1	64	8
10.	▶ 2100.12PZ1B	2100.12PZ1BK1	2100.12PZ1	90	10



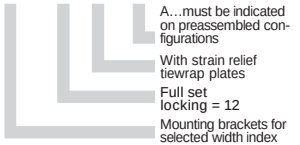
Possible installation conditions for assembled, locking mounting brackets.
For the preassembled mode please add index A1... A4 ▶ e.g. 2100.12PZ1BA1



- Locked connections
- At very high speed and/or acceleration
- If space is limited for height (the H_F measurement)
- Various installation options on the fixed end and/or the moving end

Part No. structure (locking)

2100. 12 PZ1B A1



Single-part order

Mounting bracket Moving end

2100. 1 PZ1B A1(preassembled + tiewrap plate)

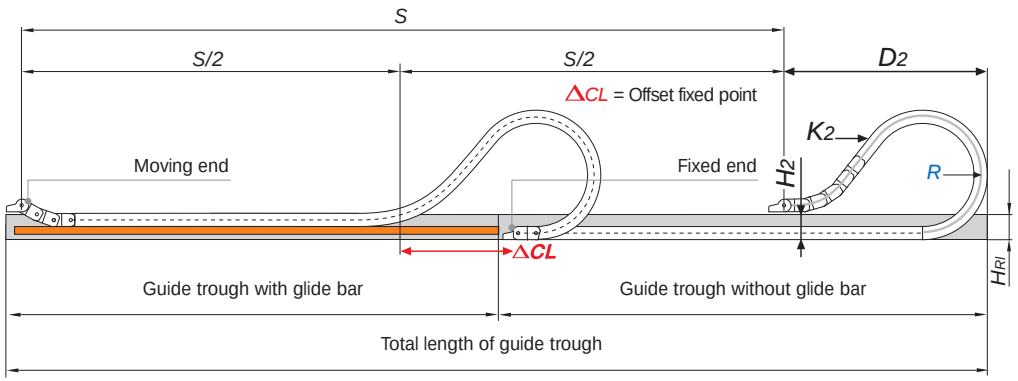
Mounting bracket Fixed end

2100. 2 PZ1B A1(preassembled + tiewrap plate)

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Gliding applications | For long travels from 10 m to max. 100 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. In case of travels between 4 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 27,8 mm/link · Links/m = 36 (1000,8 mm) · Chain length = $S/2 + K_2$

R	055	075	100	125	150	175	200	225	250
H_2	110	150	100	100	100	100	100	100	100
D_2 +25	114	134	380	495	570	665	740	1040	1130
K_2	230	295	612	806	945	1112	1223	1610	1779
ΔCL	–	–	222	322	372	437	497	upon request	822

More solutions | For long travel applications

Ibt flizz® - Enclosed plastic trough - Length of travel ≤ 200 m — v_{max} 8 m/s

High speeds and accelerations. Applicable for moving and stationary control

guidelok slimline F - Safe vertical guidance for e-chains® - Travels up to 50 m height — v_{max} 7 m/s

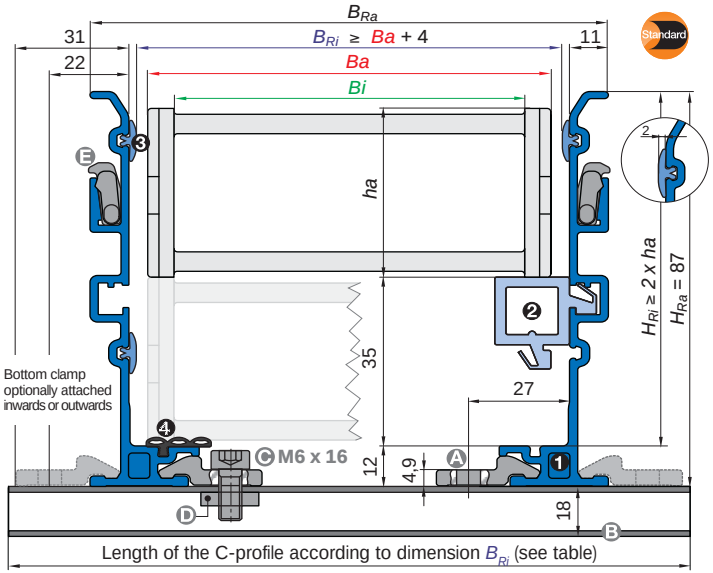
For hanging applications e.g. high-speed rack feeders up to 7 m/s and 10 m/s². No swinging of the e-chain®, high reliability through lever mechanism and guiding rails. Energy and data and all kinds of media in one single system

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) · K_2 = Further add-on (if the moving end is set lower) · ΔCL = Offset fixed point · S = Length of travel
D_2 = Over length - long travels, gliding · R = Bending radius · H_{Ri} = Inner trough height · S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

Part No. 971.30 | 971.31 | Trough height: 87 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

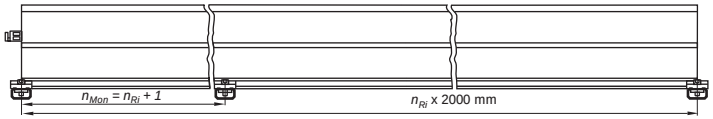
For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.03	58	upon request	960.30.150
.05	77	960.30.125	960.30.175
.07	97	960.30.150	960.30.200
.10	123	960.30.175	960.30.225

Insert for the installation set "Heavy-Duty": **971.50.XXX** instead of 960.30.XXX on the right column "attached outwards"

Order example: Length of travel 30 m - Center mounted for Series 255.10.200.0 with B_{Ri} = 123

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 971.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 971.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.175
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 971.80

971.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1194

● Trough set ● Installation set ● Glide bar · ● C-Profile · Ba = Outer width e-chains® · Bi = Inner width e-chains® · B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height · H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets



igus®
e-tubes

protection against dirt and debris

E2 e-tubes | Series R100 | Series R

Protection against chips (including hot chips)



from page 492

Cost-effective protection against dirt and debris - E2 e-tubes Series R100

- Very good protection against chips (including hot chips)
- Hinged, snap-open, removable lids along inner and outer radius
- Robust and close
- Space-efficient with optimized ratio of inner dimension to outer dimension
- Modular interior separation options
- Universal KMA mounting brackets with all-sides attachment capability
- Low weight, easy assembly and cost-effective
- Recommended for unsupported applications
- Inner heights: 21 - 50 mm

► **www.igus.eu/eu/R100**



from page 530

Chip protection - for high acceleration and smooth running - E2 e-tube Series R

- Small pitch for smooth running
- Very good protection against chips (including hot chips)
- Removable lids along outer radius
- Robust and close
- Space-efficient with optimized ratio of inner dimension to outer dimension
- Modular interior separation options
- Universal KMA mounting brackets with all-sides attachment capability
- Inner heights: 25 - 45 mm

► **www.igus.eu/eu/E2-R**

e-tubes | System RX

Extremely chip repellent



from page 574

Extremely chip repellent - e-tubes RX

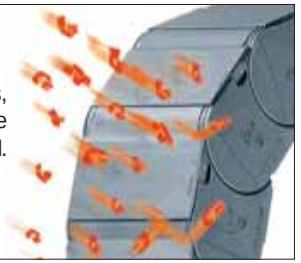
- Removable lids along outer radius
- Round contour prevents chip accumulation
- Injection-molded "sealing lip" all around
- No holes, cracks or undercuts
- Degree of protection tested (IP40) by TÜV NORD CERT GmbH - Series RX40
- Interior separation and Support Tray tool kit available
- Covered pin/bore connection and stop dogs
- "RBR"-Version with reverse bending radius available
- Inner heights: 42 - 73 mm

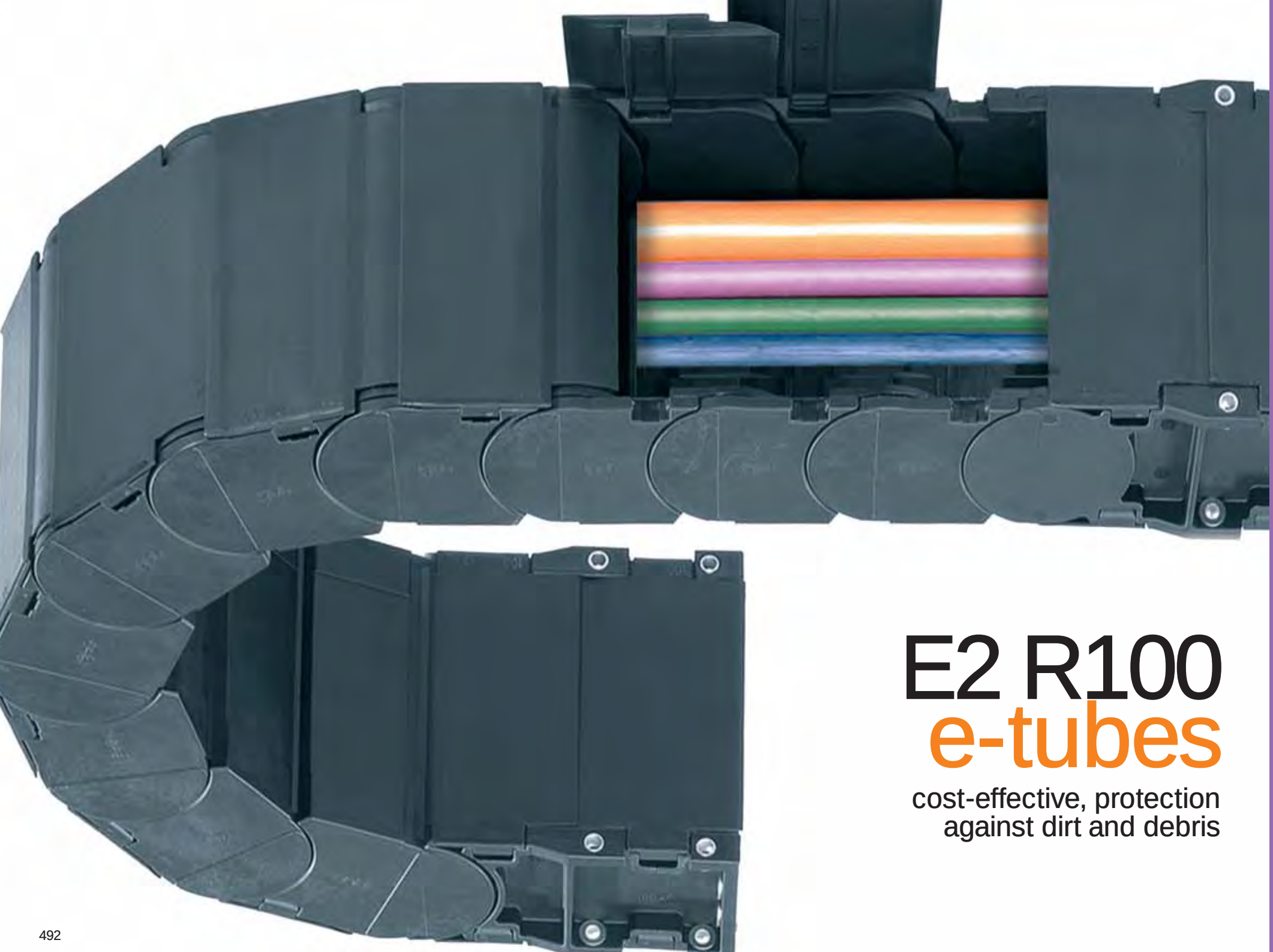
► **www.igus.eu/eu/RX**

reddot design award
honourable mention 2011

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ►www.igus.eu/eu/HT
Delivery time* 7-10 work days.
*Delivery time means time until shipping of goods (after technical release)





E2 R100
e-tubes

cost-effective, protection
against dirt and debris

E2 Series R100 - cost-effective, protection against dirt and debris

E2 Series R100 - cost-effective, for applications with low and medium speeds. e-tubes R100 work in hot chip areas, in areas of dirt and dust generated by woodworking, steelmills, pulp and paper, textile, agriculture, coal-fired plants and many other hostile environments.

- Very good protection against chips (including hot chips)
- Robust and tight
- Space-efficient with optimized ratio of inner dimension to outer dimension
- Modular interior separation
- Universal KMA mounting brackets with attachment options on all sides

Typical industries and applications

- Tooling machines
- Woodworking machines
- All kind of industries and machines with chip, dirt and dust

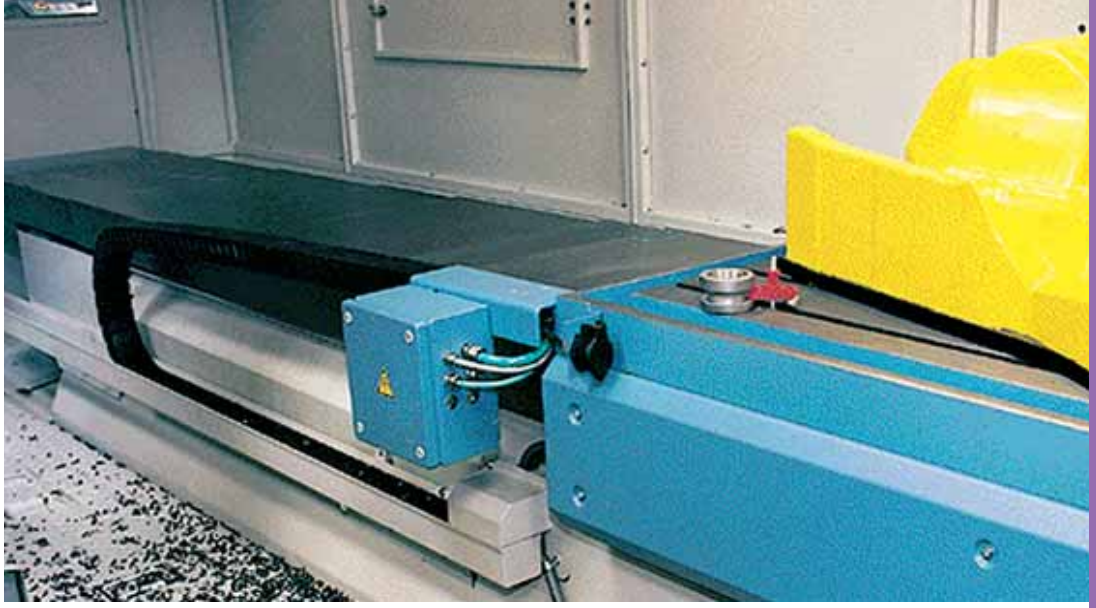


e-tubes with igumid HT-Material for hot chips up to 850°C available upon request

Electrically conductive
ESD/ATEX versions upon request

UL94-V0 classification
upon request

iF product design award
2000 Series R117/R118



Perfect protection of your cables against dirt and chips, thereby easy openable



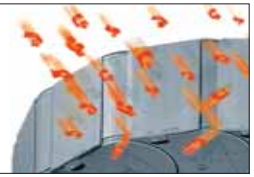
Typical operation for igus® e-tubes:
standing application in a tooling machine



Also in the direct chip area, you can use igus® e-tubes without problems

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT



Content overview, selection table and assembly instructions ▶ next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported max. length [m]	Page



E2 e-tubes R100 -
hinged, snap-open on both sides of the inner radius

R117	21	20 - 100	32 - 112	28	63 - 180	1,20	502
R157	40	40 - 200	56 - 216	50	100 - 250	2,25	508
R167	50	50 - 250	68 - 268	64	100 - 300	2,50	520



E2 e-tubes R100 - Standard
hinged, snap-open on both sides of the outer radius

R118	21	25 - 80	37 - 92	28	63 - 180	1,20	502
R158	40	40 - 200	56 - 216	50	100 - 250	2,25	508
R168	50	50 - 200	68 - 218	64	100 - 300	2,50	520

System RX - Extremely chip repellent e-tubes

Problem solver for energy supply systems in areas with chips - available in 4 sizes. Chips and dirt can significantly reduce the service life of cables and hoses. With System RX igus® presents an extremely dense but nonetheless uniquely shaped polymer e-tube. System RX ▶ from page 574



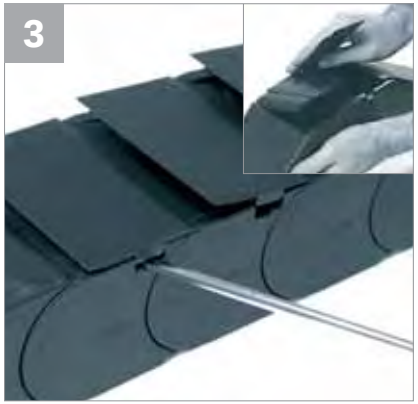
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Joining is accomplished by simply joining the e-chain® links and clicking the pins in place



Pivot lid, press down and snap in place. Then insert last lid



Separate by levering open the lid with a screwdriver. Bend e-tube to remove lid



Separate by levering open the side plates, then rotate the e-chain® links and separate

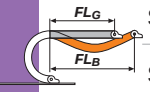
Technical Data, overview ▶ page 498

e-chain® links as single parts, overview ▶ page 499

Configuration options and order keys, overview ▶ page 500

Assembly video available online at ▶ www.igus.eu/eu/E2R100_assembly

Technical Data - R100



Gliding speed / acceleration (maximum)	upon request 1)
Speed / acceleration FL_G max.	max. 10 [m/s] / max. 100 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

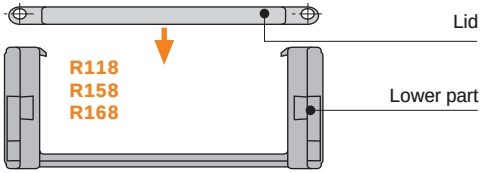
1) In special cases, gliding applications are also possible, please consult igus®.

Installation methods overview, maximum travels - R100

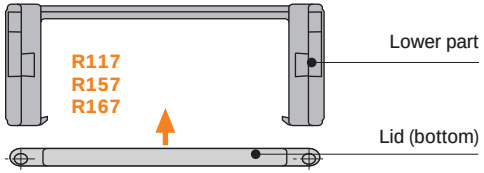
e-tube Series	Unsupported application	Vertical hanging	Vertical standing	Side mounted unsupported
R117 / R118	≤ 1,20 m	≤ 20 m	≤ 2,0 m	≤ 0,7 m
R157 / R158	≤ 2,25 m	≤ 40 m	≤ 3,0 m	≤ 1,0 m
R167 / R168	≤ 2,50 m	≤ 50 m	≤ 3,0 m	≤ 1,0 m

Part No. 2-piece e-chain® links as single parts - R100

e-tube - snap-open on both sides of the outer radius



snap-open on both sides of the inner radius



e-tube Series	e-tube Lid*	e-tube Lower parts**	e-tube Series	e-tube Lid (bottom)*	e-tube Lower parts**
R118	1185.*Bi*	118.*Bi*00.*R*	R117	1175.*Bi*	118.*Bi*00.*R*
R158	1585.*Bi*	158.*Bi*00.*R*	R157	1575.*Bi*	157.*Bi*00.*R*
R168	1685.*Bi*	168.*Bi*00.*R*	R167	1675.*Bi*	167.*Bi*00.*R*

* Lid / bottom - supplement Part No. with required width index (*Bi*), example: 1685.100

** Lower parts - supplement Part No. with required width index (*Bi*) and required radius (*R*), example: 168.10000.100

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E2 e-tubes R100 | Order keys and Options (based on Series R168)

	Standard	*NC-Version - (no camber) without pretension*	*No burning-in of hot chips up to 850°C (1562°F)*	*ESD / ATEX classified e-tubes* Ⓔx *II 2 GD*
	Part No. **Standard**	Part No. **NC-Version**	Part No. **igumid HT-Material**	Part No. **ESD-Material**
	168.100.*R*.0	168.100.*R*.0 .**NC**	168.100.*R*.0 .**HT**	168.100.*R*.0 .**ESD**
	Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* 7-10 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-tube Series R168 (1,0 m), color black, with mounting brackets and interior separation:

e-tube (1,0 m)	Please indicate e-tube length or number of links: 1,0 m or 17 links	168.100.100.0
+ Mounting brackets	1 set	1680.100.14
+ Interior separation	with 2 separators assembled every 2nd link	2 x 1686.01

Order text: 1,0 m 168.100.100.0 + 1680.100.14 + 2 x 1686.01

Order key
117.100.100.0
118.100.100.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

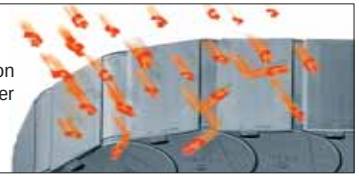
E2 e-tubes R100 | Application

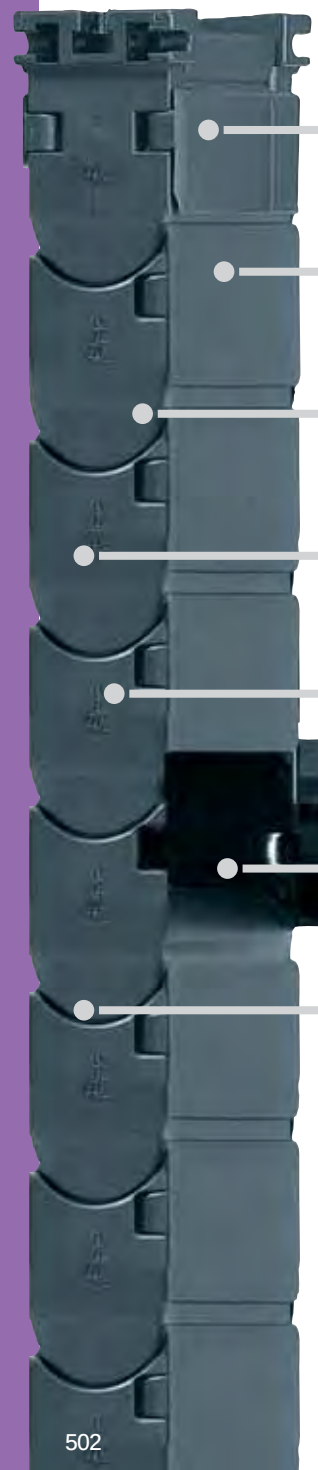


igus® e-tube Series R100 in a medical application

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT





Universal:
KMA-mounting bracket with flush mounting capability

Chip protection:
Smooth, chip-repellent exterior

Space-efficient:
Optimized ratio of inner to outer dimension

Long service life:
Double stop dog for strong unsupported length

Long lifetime:
Lateral gliding surfaces

Quick assembly:
Snap-open accessibility along inner or outer radius

Dirt repellent:
Covered pin/bore connection

Chip protection, cost-effective

When to use Series R117 · R118:

- If a chip repellent e-tube with an inner height of 21 mm is required
- If inner widths up to 100 mm are required
- For unsupported lengths up to 1,2 m and fill weights up to 1,5 kg/m
- If a cost-effective e-tube with snap-open accessibility along inner or outer radius is required
- If flush mounting capability is required
- For small bending radii

When to use a different igus® Series:

- If very smooth travel due to small pitch is required

►e-tubes Type R, Series R48, page 540

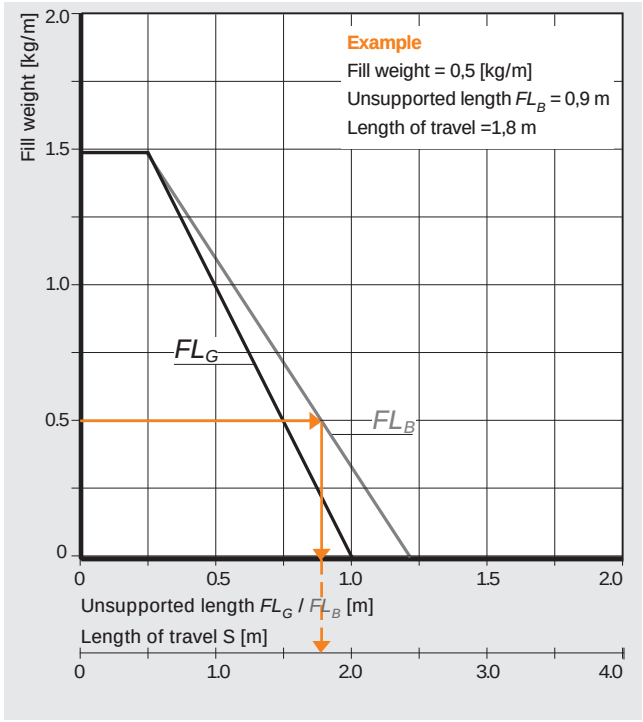
- If no chip protection is required

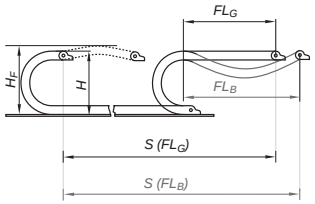
►E2/000 Series 1400/1500, page 412

iF product design award
2000 Series R117/R118

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

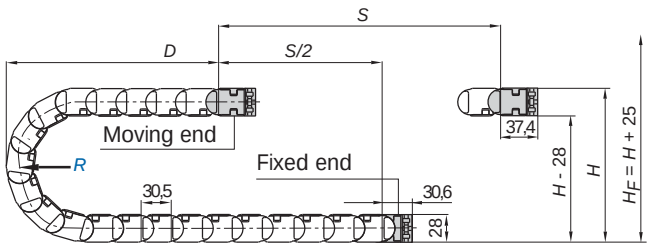
3D-CAD files, configurators, PDF ► www.igus.eu/eu/R118





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 498

Pitch = 30,5 mm/link
Links/m = 33 (1000,6 mm)
Chain length = $S/2 + K$

R	063	075	100	110	125	145	180
H	154	178	228	248	278	318	388
D	123	135	160	170	185	205	240
K	260	300	380	410	455	520	630

The required clearance height: $H_F = H + 25$ mm (with 1,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



Series R117 | Hinged, snap-open on both sides of the inner radius
Series R118 | Hinged, snap-open on both sides of the outer radius

e-tubes snap-open along inner radius	e-tubes snap-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
117.020.*R*.0	118.020.*R*.0*	20	32	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,43
117.025.*R*.0	118.025.*R*.0	25	37	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,46
117.038.*R*.0	118.038.*R*.0*	38	50	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,56
117.048.*R*.0	118.048.*R*.0	48	60	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,66
117.063.*R*.0	118.063.*R*.0*	63	75	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,76
117.080.*R*.0	118.080.*R*.0	80	92	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 0,89
117.100.*R*.0	118.100.*R*.0*	100	112	| 063 | 075 | 100 | 110 | 125 | 145 | 180 |	≈ 1,06

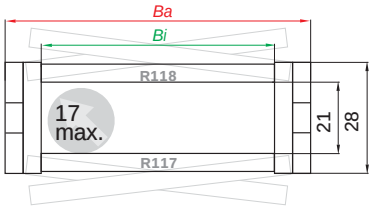
*Width available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (*R*), example: 118.080.100.0

Order key
117.080.100. 0
118.080.100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

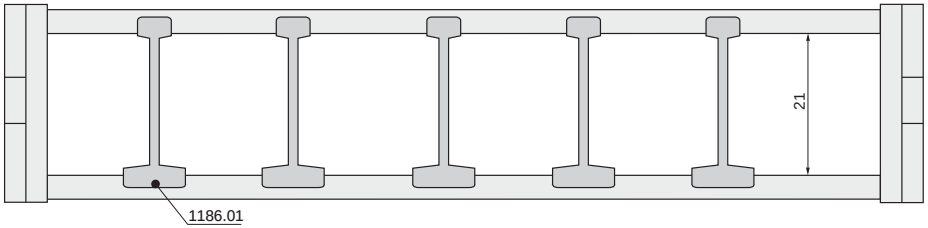
Dimensioning



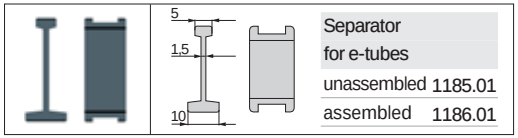
e-chain® links as single parts, overview ▶ page 499

Configuration options and order keys, overview ▶ page 500

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



In the standard configuration separators are assembled every 2nd e-tube link.



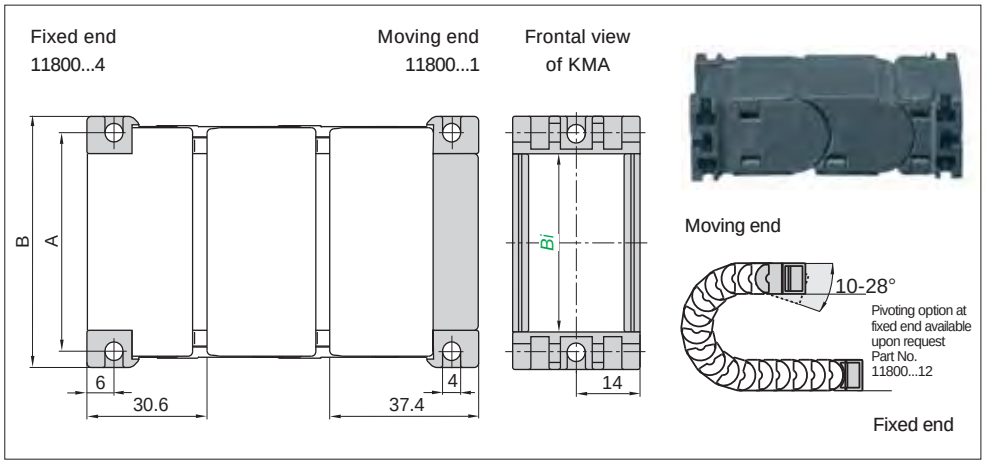
Separator for e-tubes	
unassembled	1185.01
assembled	1186.01

Vertical Separator 1185.01

Vertical Separators are used if a vertical subdivision of the e-tube interior is required - by standard Vertical Separators are assembled every 2nd e-tube link.

E2 e-tubes R100 | R117·R118 | Mounting brackets KMA

For tight installation conditions, all-sides attachment



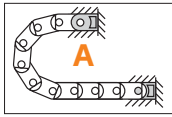
KMA one side pivoting | All-sides attachment | Standard - universal for e-tubes
Recommended for unsupported applications

For width index	Part No. full set **KMA**	Dim. A [mm]	Dim. B [mm]
020. ▶	11800.020.14	29	36
025. ▶	11800.025.14	34	41
038. ▶	11800.038.14	47	54
048. ▶	11800.048.14	57	64
063. ▶	11800.063.14	72	79
080. ▶	11800.080.14	89	96
100. ▶	11800.100.14	109	116

(KMA = Polymer Metal Mounting Bracket)

The mounting brackets are supplied with hexagon nuts and can be attached with M4 bolts,

or the mounting brackets may also be attached with M4 socket head cap bolts.



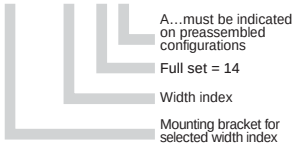
These attachment types are set automatically
in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**.
▶e.g. 11800.080.14 **A**



- Standard
- For tight installation conditions
- Pivoting on moving end
- Short travels
- Corrosion-resistant
- Pivoting on fixed end available upon request (Part No. 11800...12)

Part no. structure

11800.080.14 **A**

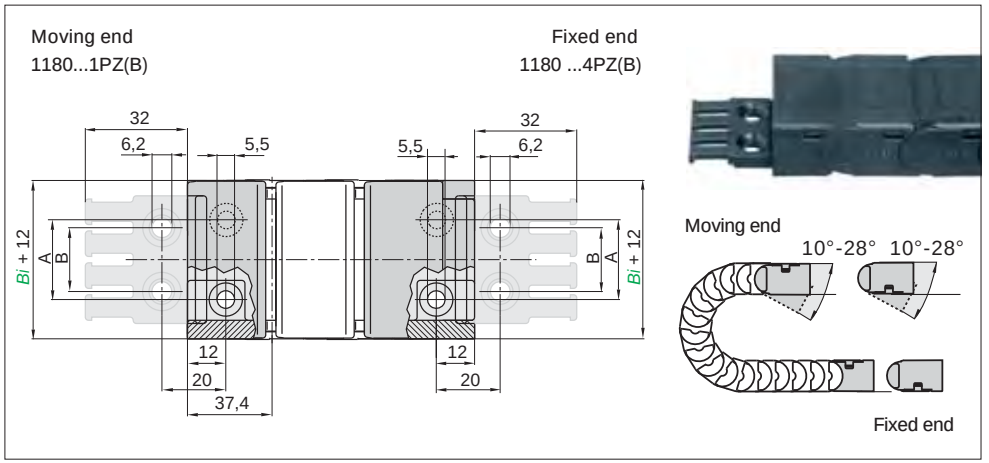


Single-part order:
Mounting bracket Moving end
11800.080.1 **A** (preassembled)
Mounting bracket Fixed end
11800.080.4 **A** (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R117·R118 | Mounting brackets angled, polymer

Space-efficient, minimized outer width

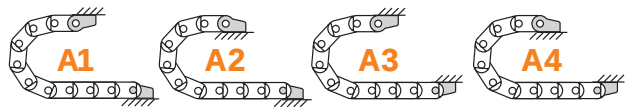


Polymer one side pivoting | For e-tubes
Recommended for unsupported applications

For width index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
025. ▶	1180.025.14PZB	1180.025.14PZ	12	15	3
038. ▶	1180.038.14PZB	1180.038.14PZ	25	20	4
048. ▶	1180.048.14PZB	1180.048.14PZ	35	30	5
063. ▶	1180.063.14PZB	1180.063.14PZ	50	40	6
080. ▶	1180.080.14PZB	1180.080.14PZ	67	60	8
100. ▶	1180.100.14PZB	1180.100.14PZ	87	80	10

The following parts are required for attachment of the mounting brackets:

- Countersunk bolt M5 DIN 912-8.8. Length depends on the thickness of the attachment base
- Hexagon nut M5 DIN 934-8



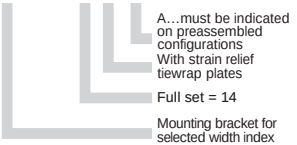
Possible installation conditions for assembled mounting brackets. For the preassembled mode please add index **A1**... **A4**. ▶e.g. 1180.080.14PZB **A1**



- Locked connection to e-tube
- Pivoting on moving end
- Minimized outer width
- Short travels
- Attachment option for strain relief tiewrap plate. Strain relief on moving end and/or fixed end possible!

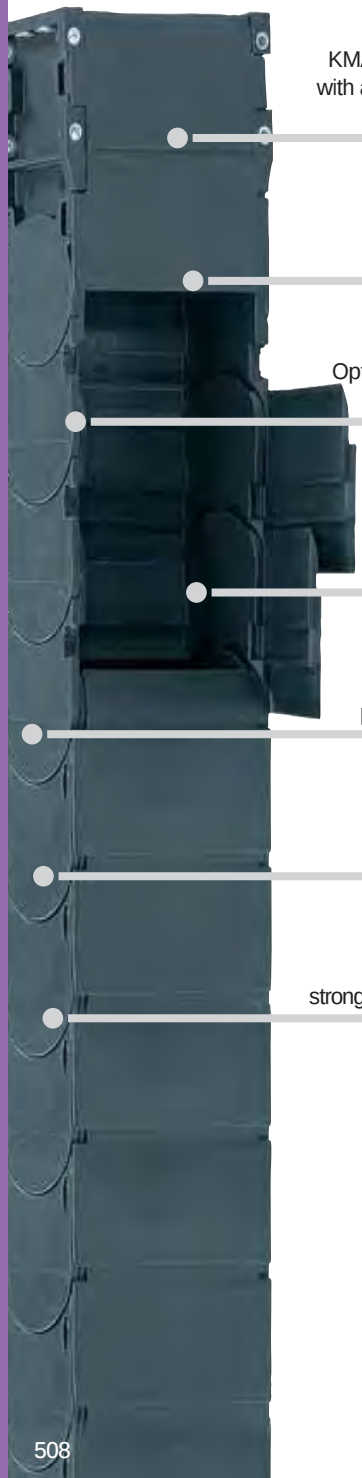
Part no. structure

1180.080.14PZB**A1**



Single-part order:
Mounting bracket Moving end
1180.080.1PZB**A1** (preass. + tiewrap plate)
Mounting bracket Fixed end
1180.080.1PZB**A1** (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148



Universal:
KMA-mounting bracket
with all-sides attachment

Chip protection:
Smooth, chip-
repellent exterior

Space-efficient:
Optimized ratio of inner
to outer dimension

Quick assembly:
Snap-open
accessibility along
inner or outer radius

Dirt repellent:
Covered
pin/bore connection

Long lifetime:
Lateral gliding
surfaces

Long service life:
Double stop dog for
strong unsupported length

Chip protection, cost-effective

When to use Series R157 · R158:

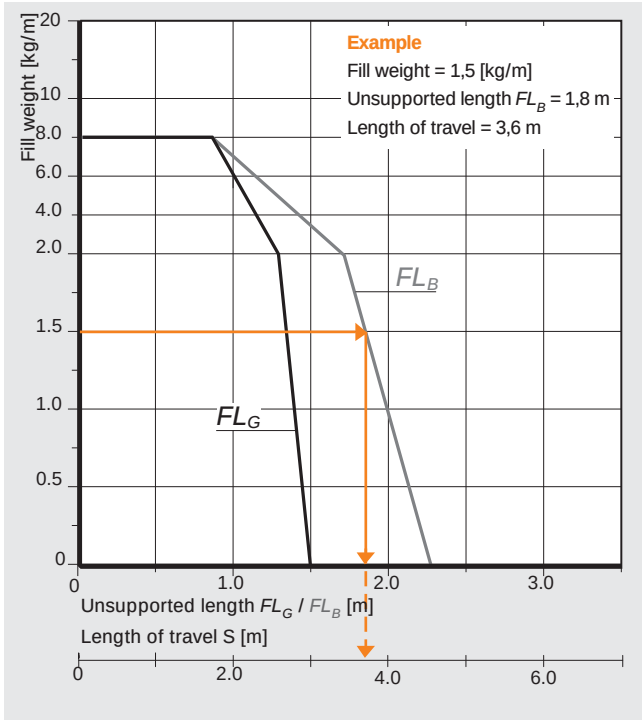
- If a chip repellent e-tube with an inner height of 40 mm is required
- If inner widths up to 200 mm are required
- For unsupported lengths up to 2,25 m and fill weights up to 8,0 kg/m
- If a cost-effective e-tube with snap-open accessibility along inner or outer radius is required
- If flush mounting capability is required
- For small bending radii

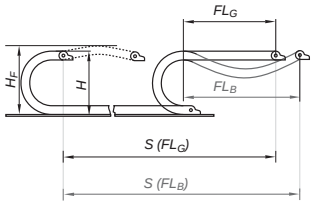
When to use a different igus® Series:

- For extremely chip repellent e-tubes
- ►System RX, Series RX32, page 582
- If snap-open accessibility along both sides is required
- ►System E4.1, Series R4.32, page 646
- If very smooth travel due to small pitch is required
- ►e-tubes Type R, Series R58, page 550

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

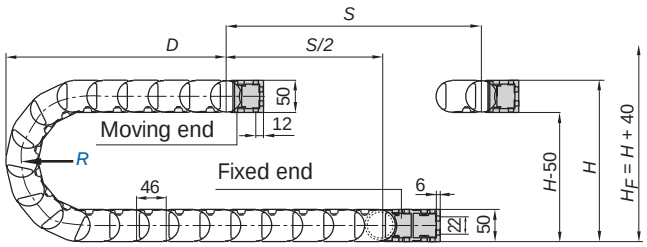
3D-CAD files, configurators, PDF ► www.igus.eu/eu/R158





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 498

Pitch = 46 mm/link
Links/m = 22 (1012 mm)
Chain length = $S/2 + K$

R	100	125	150	175	200	250
H	250	300	350	400	450	550
D	194	219	244	269	294	344
K	410	485	565	645	725	880

The required clearance height: $H_F = H + 40$ mm (with 1,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



Series R157 | Hinged, snap-open on both sides of the inner radius
Series R158 | Hinged, snap-open on both sides of the outer radius

e-tubes snap-open along inner radius	e-tubes snap-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
157.040.*R*.0 1)	158.040.*R*.0 1)	40	56	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,21
157.050.*R*.0	158.050.*R*.0	50	66	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,30
157.075.*R*.0	158.075.*R*.0	75	91	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,50
157.088.*R*.0	158.088.*R*.0	88	104	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,57
157.090.*R*.0 2)	158.090.*R*.0 2)	88	104	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,63
157.100.*R*.0	158.100.*R*.0	100	116	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,71
157.125.*R*.0	158.125.*R*.0	125	141	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,92
157.135.*R*.0	158.135.*R*.0	135	150	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 2,10
157.150.*R*.0	158.150.*R*.0	150	166	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 2,13
157.175.*R*.0	158.175.*R*.0	175	191	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 2,34
157.200.*R*.0	158.200.*R*.0	200	216	| 100 | 125 | 150 | 175 | 200 | 250 |	≈ 2,55

1) Lid removable only, not hinged

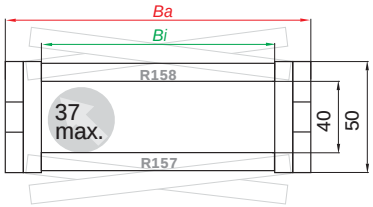
2) Same dimensions as 157.088 - less recent design, no hinged option

Supplement Part No. with required radius *(R)*, example: 158.100.100.0

Order key
157.100.100. 0
158.100.100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 499

Configuration options and order keys, overview ▶ page 500

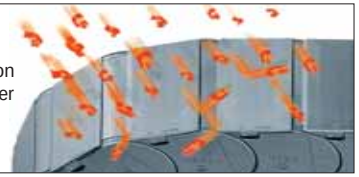
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Next generation of chip-proof igus® e-tubes. System RX for extreme dirt and chip exposure, shown here in direct contact with aluminum chips. IP40 testet. RX e-tubes ▶ from page 574

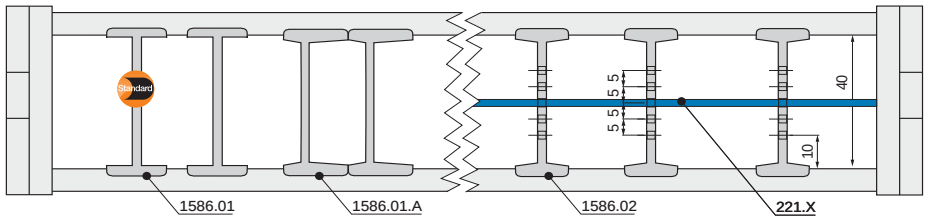
Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶ www.igus.eu/eu/HT

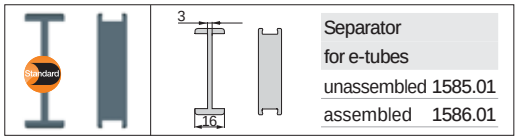


E2 e-tubes R100 | R157·R158 | Interior separation

Option 1: Vertical separators | Option 2: Full-width shelves



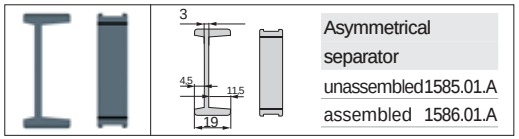
In the standard configuration separators are assembled every 2nd e-tube link.



Separator for e-tubes	
unassembled	1585.01
assembled	1586.01

Vertical Separator 1585.01

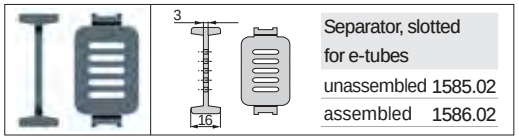
For a vertical subdivision.
Offers safe stability due to its wide base design, also when used with thick cables or hoses.



Asymmetrical separator	
unassembled	1585.01.A
assembled	1586.01.A

Asymmetrical separator 1585.01.A

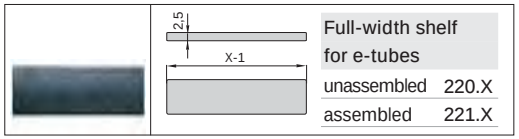
For side-mounted applications.
Asymmetrical separator, for defined distance.
No additional spacers necessary.



Separator, slotted for e-tubes	
unassembled	1585.02
assembled	1586.02

Slotted separator 1585.02

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Full-width shelf for e-tubes	
unassembled	220.X
assembled	221.X

Full-width shelf 220.X

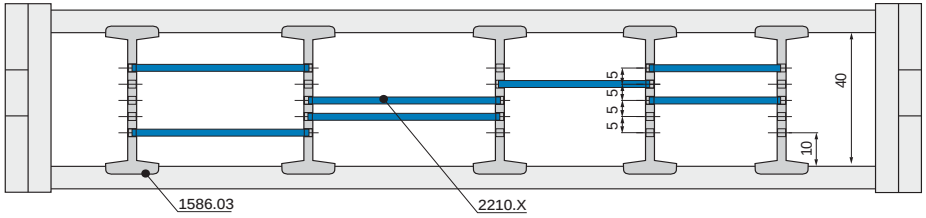
This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves

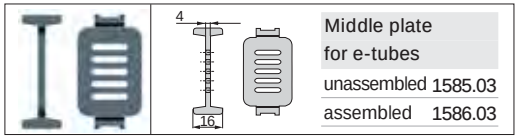
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
040	220.40	221.40	100	220.100	221.100	150	220.150	221.150
050	220.50	221.50	125	220.125	221.125	175	220.175	221.175
075	220.75	221.75	135	220.135	221.135	200	220.200	221.200

E2 e-tubes R100 | R157·R158 | Interior separation

Option 3: Shelves



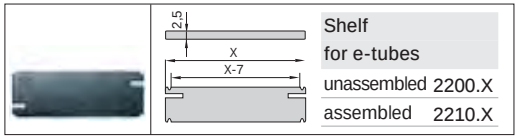
In the standard configuration separators are assembled every 2nd e-tube link.



Middle plate for e-tubes	
unassembled	1585.03
assembled	1586.03

Middle plate 1585.03

To achieve a modular shelving the shelf 2200.X can be arranged at 5 different heights (in 5 mm increments).



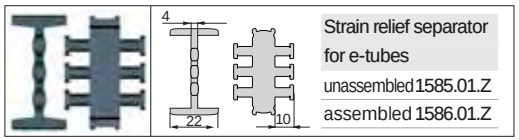
Shelf for e-tubes	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 5 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			



Strain relief separator for e-tubes	
unassembled	1585.01.Z
assembled	1586.01.Z

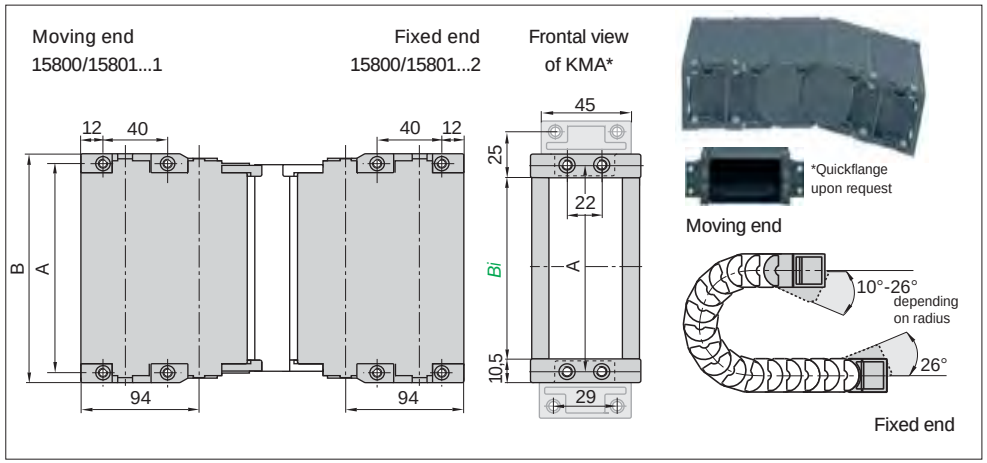
Additional elements for interior separation

Strain relief separator 1585.01.Z

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

R157·R158 | KMA mounting brackets, extended, pivoting

Extended type, all-sides attachment



KMA, extended pivoting | All-sides attachment | Standard - universal for e-tubes
Recommended for unsupported applications

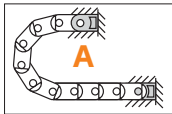
For width index	Part No. full set **KMA pivoting**	Dim. A [mm]	Dim. B [mm]
.040. ▶	15801.040.12	50	61
.050. ▶	15800.050.12	60	71
.075. ▶	15800.075.12	85	96
.088. ▶	15800.088.12	98	109
.090. ▶	15801.090.12	98	109
.100. ▶	15800.100.12	110	121
.125. ▶	15800.125.12	135	146
.135. ▶	15800.135.12	145	156
.150. ▶	15800.150.12	160	171
.175. ▶	15800.175.12	185	196
.200. ▶	15800.200.12	210	221

(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF
▶ e.g. Part No. 15800.100.12.QF. Unassembled Quickflange: Part No. 15800.QF

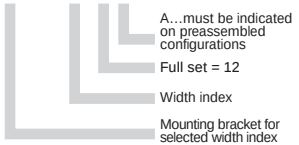


These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index A.
▶ e.g. 15800.100.12 A



- Standard
- Recommended for unsupported applications
- Extended type, pivoting
- Easy to assemble
- Universally mountable with attachment capability on all sides
- Locked connection to dem e-tube

Part no. structure, pivoting
15800.100.12 A

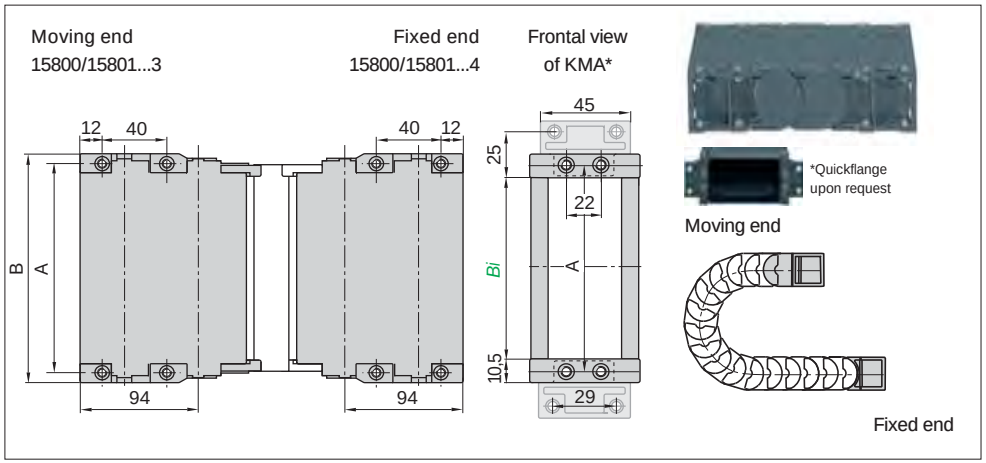


Single-part order:
Mounting bracket Moving end
15800.100.1 A (preassembled)
Mounting bracket Fixed end
15800.100.2 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R157·R158 | KMA mounting brackets, extended, locking

Extended type, all-sides attachment



KMA, extended locking | All-sides attachment - universal for e-tubes
Recommended for vertical hanging and standing applications

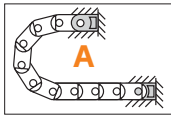
For width index	Part No. full set **KMA locking**	Dim. A [mm]	Dim. B [mm]
.040. ▶	15801.040.34	50	61
.050. ▶	15800.050.34	60	71
.075. ▶	15800.075.34	85	96
.088. ▶	15800.088.34	98	109
.090. ▶	15801.090.34	98	109
.100. ▶	15800.100.34	110	121
.125. ▶	15800.125.34	135	146
.135. ▶	15800.135.34	145	156
.150. ▶	15800.150.34	160	171
.175. ▶	15800.175.34	185	196
.200. ▶	15800.200.34	210	221

(KMA = Polymer Metal Mounting Bracket)

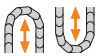
The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF
▶ e.g. Part No. 15800.100.34.QF. Unassembled Quickflange: Part No. 15800.QF

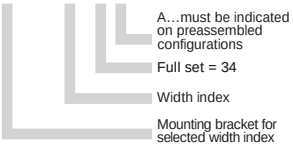


These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ▶ e.g. 15800.100.34 A



- Recommended for vertical hanging and standing applications
- Extended type, locking
- Easy to assemble
- Flush mounting at both ends of the e-tube
- Universally mountable with attachment capability on all sides
- Corrosion-resistant

Part no. structure, locking
15800.100.34 A

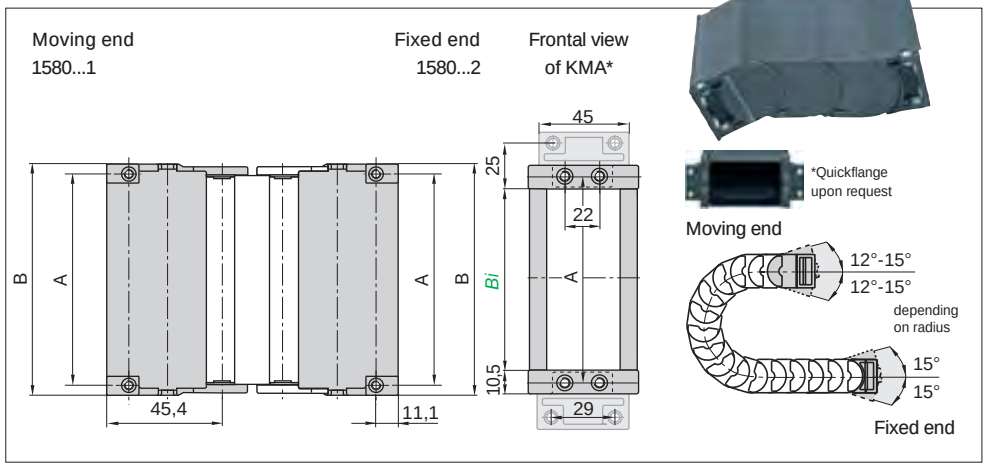


Single-part order:
Mounting bracket Moving end
15800.100.3 A (preassembled)
Mounting bracket Fixed end
15800.100.4 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R157·R158 | KMA mounting brackets, abbreviated, pivoting

Abbreviated type, all-sides attachment



KMA abbreviated, pivoting | All-sides attachment | Standard - universal for e-tubes
Recommended for unsupported applications

For width index	Part No. full set **KMA pivoting**	Dim. A [mm]	Dim. B [mm]
.040. ▶	1580.040.12	50	61
.050. ▶	1580.050.12	60	71
.075. ▶	1580.075.12	85	96
.088. ▶	1580.088.12	98	109
.090. ▶	1580.090.12	98	109
.100. ▶	1580.100.12	110	121
.125. ▶	1580.125.12	135	146
.135. ▶	1580.135.12	145	156
.150. ▶	1580.150.12	160	171
.175. ▶	1580.175.12	185	196
.200. ▶	1580.200.12	210	221

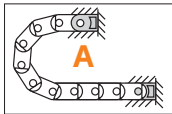
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF

▶ e.g. Part No. 15800.100.12.QF. Unassembled Quickflange: Part No. 15800.QF



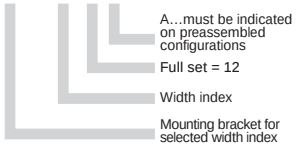
These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index A.
▶ e.g. 1580.100.12 A



- Standard
- Recommended for unsupported applications
- Abbreviated type, pivoting
- Easy to assemble
- Universally mountable with attachment capability on all sides
- Locked connection to dem e-tube

Part no. structure, pivoting

1580.100.12 A

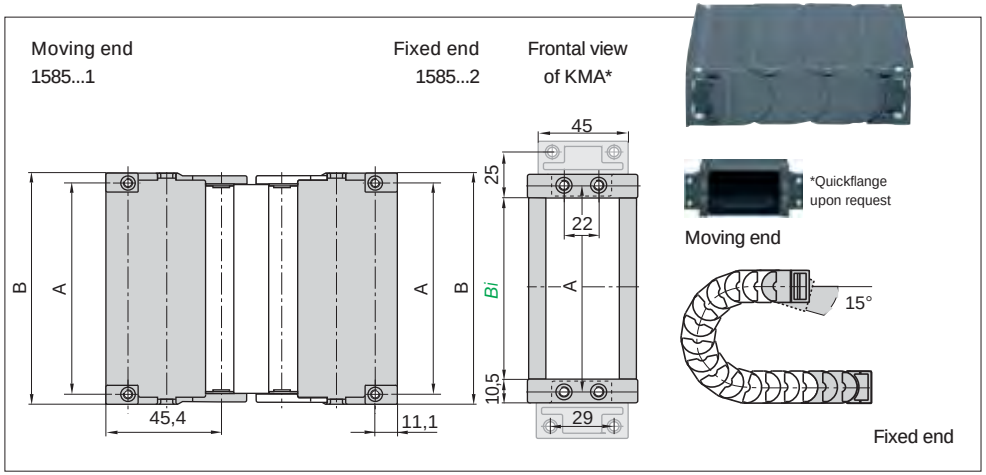


Single-part order:
Mounting bracket Moving end
1580.100.1 A (preassembled)
Mounting bracket Fixed end
1580.100.2 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

R157·R158 | KMA mounting brackets, abbreviated, locking

Abbreviated type, all-sides attachment



KMA abbreviated, locking | All-sides attachment - universal for e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **KMA locking**	Dim. A [mm]	Dim. B [mm]
.040. ▶	1585.040.12	50	61
.050. ▶	1585.050.12	60	71
.075. ▶	1585.075.12	85	96
.088. ▶	1585.088.12	98	109
.090. ▶	1585.090.12	98	109
.100. ▶	1585.100.12	110	121
.125. ▶	1585.125.12	135	146
.135. ▶	1585.135.12	145	156
.150. ▶	1585.150.12	160	171
.175. ▶	1585.175.12	185	196
.200. ▶	1585.200.12	210	221

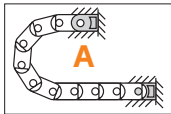
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

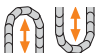
- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF

▶ e.g. Part No. 15885.100.12.QF. Unassembled Quickflange: Part No. 15800.QF



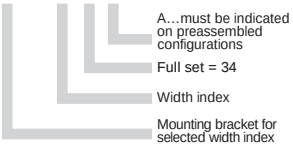
These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ▶ e.g. 1585.100.12 A



- Recommended for vertical hanging and standing applications
- Abbreviated type, locking
- Easy to assemble
- Flush mounting at both ends of the e-tube
- Universally mountable with attachment capability on all sides
- Corrosion-resistant

Part no. structure, locking

1585.100.12 A

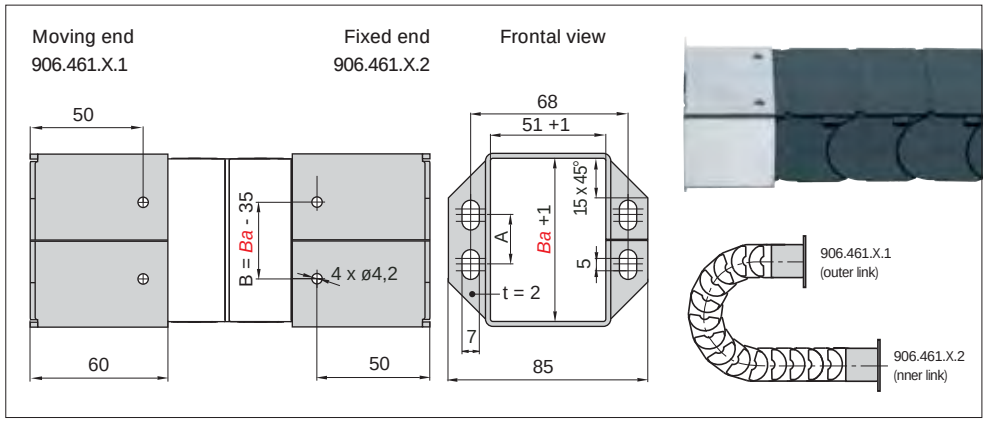


Single-part order:
Mounting bracket Moving end
1585.100.1 A (preassembled)
Mounting bracket Fixed end
1585.100.2 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

R157·R158 | Mounting brackets, flange steel, locking

Flush mounting possibilities

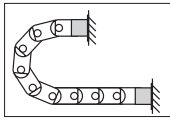


Flange steel mounting brackets

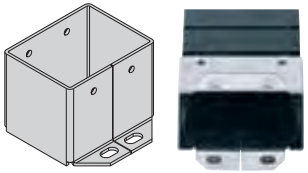
For width index	Hole pattern	Part No. full set **steel, flange**	*Bi* [mm]	*Ba* [mm]	Dim. A [mm]	Dim. B [mm]
.050. ▶	58.05	906.461.1.12	50	66	20	31
.075. ▶	58.1	906.461.2.12	75	91	30	57

Mounting only with hexagon socket DIN 912 M6 and washer DIN 125, 6,3 mm

- Bolted connection outside the e-chain's cross-section possible
- Flush mounting possibilities
- Galvanized steel
- One-piece
- Robust



Metallic flange brackets with common hole patterns, easily be replaced by their modern successors, without having to alter the hole pattern. Flush mounting possibilities at both ends of the e-tube for flange mounting brackets made of steel.



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

R157·R158 | My sketches

R157
R158



Universal:
KMA-mounting bracket
with all-sides attachment

Chip protection:
Smooth, chip-
repellent exterior

Space-efficient:
Optimized ratio of inner
to outer dimension

Quick assembly:
Snap-open
accessibility along
inner or outer radius

Dirt repellent:
Covered
pin/bore connection

Long lifetime:
Lateral gliding
surfaces

Long service life:
Double stop dog for
strong unsupported length

Chip protection, cost-effective

When to use Series R167 · R168:

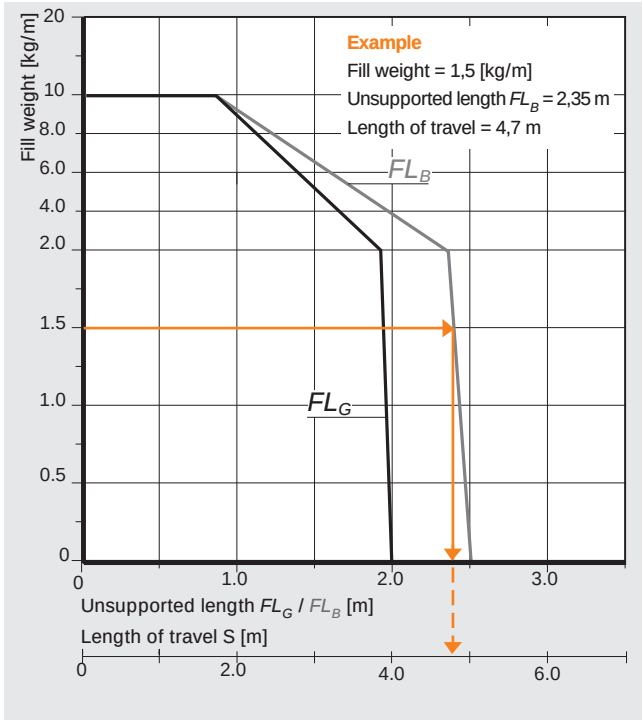
- If a chip repellent e-tube with an inner height of 50 mm is required
- If inner widths up to 250 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 10 kg/m
- If a cost-effective e-tube with snap-open accessibility along inner or outer radius is required
- If flush mounting capability is required

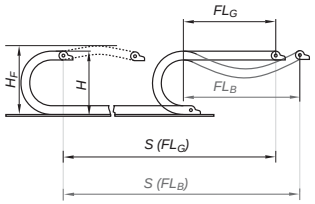
When to use a different igus® Series:

- For extremely chip repellent e-tubes
  ▶System RX, Series RX40, page 588
- If snap-open accessibility along both sides is required
  ▶System E4.1, Series R4.42, page 662
- If very smooth travel due to small pitch is required
  ▶e-tubes Type R, Series R68, page 562

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

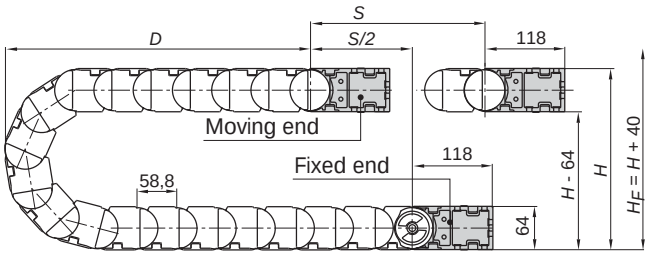
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/R167





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 498

Pitch = 58,8 mm/link
Links/m = 17 (999,6 mm)
Chain length = $S/2 + K$

R	100	125	150	175	200	225	250	300
H	264	314	364	414	464	514	564	664
D	220	245	270	295	320	345	370	420
K	435	515	590	670	750	825	905	1065

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series R167 | Hinged, snap-open on both sides of the inner radius
Series R168 | Hinged, snap-open on both sides of the outer radius

e-tubes snap-open along inner radius	e-tubes snap-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
167.050.*R*.0	168.050.*R*.0	50	68	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 1,58
167.075.*R*.0	168.075.*R*.0	75	93	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 1,84
167.100.*R*.0	168.100.*R*.0	100	118	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,09
167.115.*R*.0	168.115.*R*.0	115	133	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,24
167.125.*R*.0	168.125.*R*.0*	125	143	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,35
167.150.*R*.0	168.150.*R*.0	150	168	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,60
167.175.*R*.0	168.175.*R*.0	175	193	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,86
167.200.*R*.0	168.200.*R*.0	200	218	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,11
167.225.*R*.0	168.225.*R*.0*	225	243	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,37
167.250.*R*.0	168.250.*R*.0*	250	268	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,62

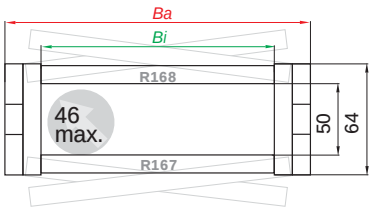
*Width available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (*R*), example: 168.100.100.0

Order key
167.100.100. 0
168.100.100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

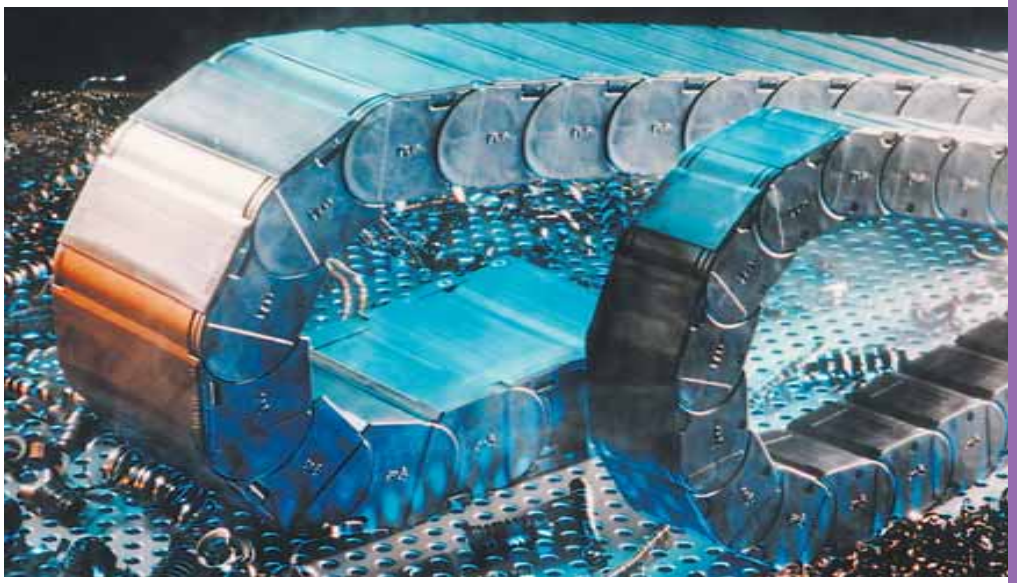
Dimensioning



e-chain® links as single parts, overview ▶ page 499

Configuration options and order keys, overview ▶ page 500

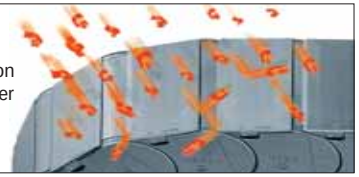
Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



E2 e-tubes R100, suited for use in the chip area, even for chips up to 900°C (brief exposure)

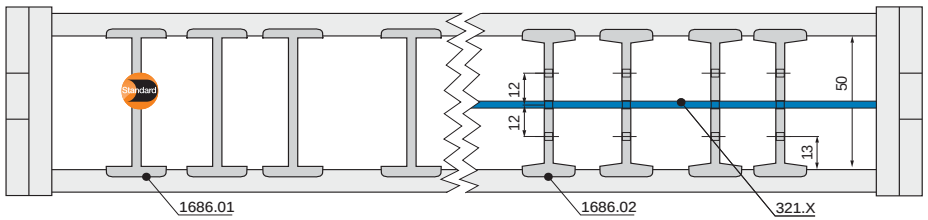
Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT

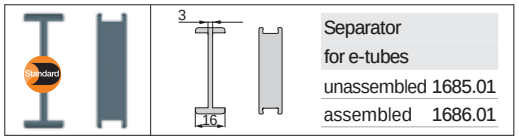


E2 e-tubes R100 | R167·R168 | Interior separation

Option 1: Vertical separators | Option 2: Full-width shelves



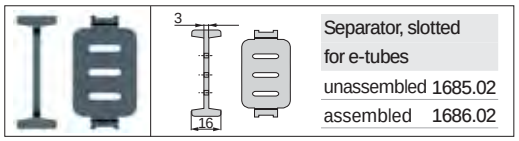
In the standard configuration separators are assembled every 2nd e-tube link.



Separator for e-tubes	
unassembled	1685.01
assembled	1686.01

Vertical Separator 1685.01

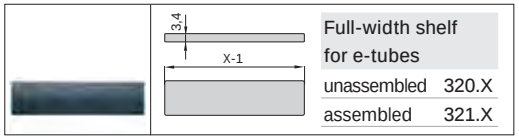
For a vertical subdivision.
Offers safe stability due to its wide base design, also when used with thick cables or hoses.



Separator, slotted for e-tubes	
unassembled	1685.02
assembled	1686.02

Slotted separator 1685.02

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Full-width shelf for e-tubes	
unassembled	320.X
assembled	321.X

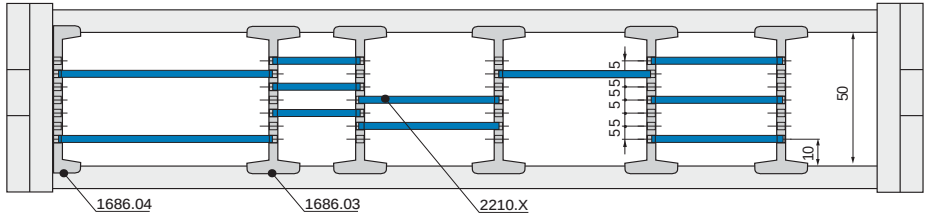
Full-width shelf 320.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 12 mm increments).

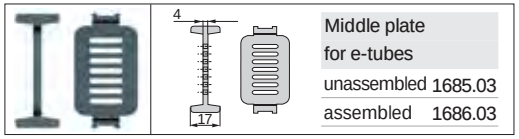
Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	320.050	321.050	150	320.150	321.150	250	320.250	321.250
075	320.075	321.075	175	320.175	321.175			
115	320.115	321.115	200	320.200	321.200			
125	320.125	321.125	225	320.225	321.225			

Option 3: Shelves



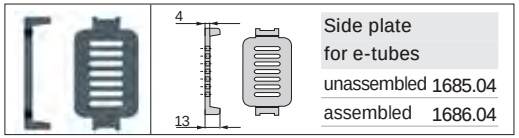
In the standard configuration separators are assembled every 2nd e-tube link.



Middle plate for e-tubes	
unassembled	1685.03
assembled	1686.03

Middle plate 1685.03

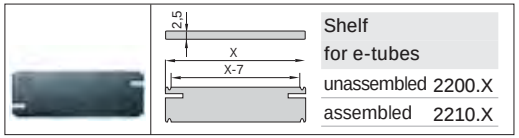
To achieve a modular shelving the shelf 2200.X can be arranged at 7 different heights (in 5 mm increments).



Side plate for e-tubes	
unassembled	1685.04
assembled	1686.04

Side plate 1685.04

Side plate for use with shelf 2200.X and middle plate 1685.03.



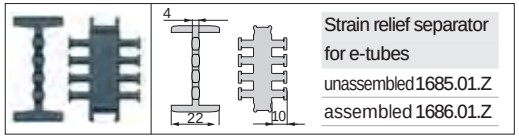
Shelf for e-tubes	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 7 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			



Strain relief separator for e-tubes	
unassembled	1685.01.Z
assembled	1686.01.Z

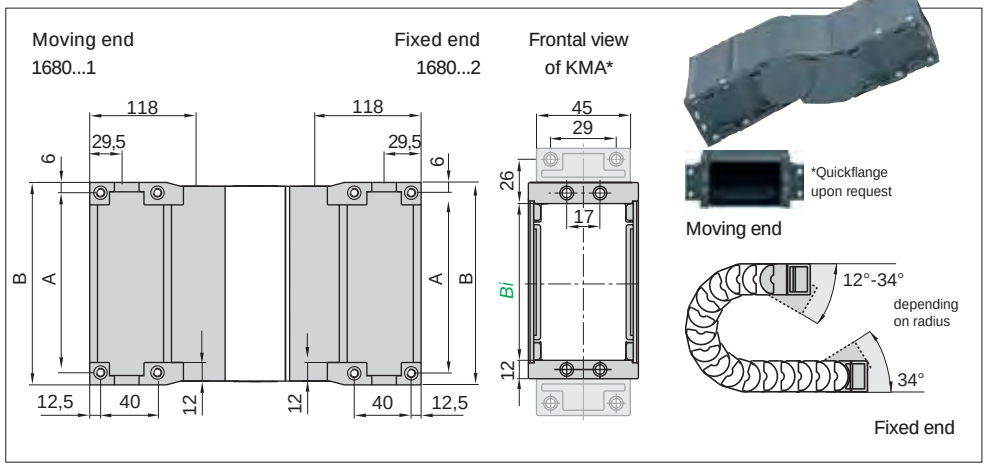
Additional elements for interior separation

Strain relief separator 1685.01.Z

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

R167·R168 | KMA mounting brackets pivoting

Extended type, all-sides attachment



KMA, extended pivoting | All-sides attachment | Standard - universal for e-tubes
Recommended for unsupported applications

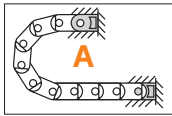
For width index	Part No. full set **KMA pivoting**	Dim. A [mm]	Dim. B [mm]
.050. ▶	1680.050.12	62	74
.075. ▶	1680.075.12	87	99
.100. ▶	1680.100.12	112	124
.115. ▶	1680.115.12	127	139
.125. ▶	1680.125.12	137	149
.150. ▶	1680.150.12	162	174
.175. ▶	1680.175.12	187	199
.200. ▶	1680.200.12	212	224
.225. ▶	1680.225.12	237	249
.250. ▶	1680.250.12	262	274

(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF
▶ e.g. Part No. 1680.100.12.QF. Unassembled Quickflange: Part No. 16800.QF



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ▶e.g. 1680.100.12 A



- Standard
- Recommended for unsupported applications
- Extended type, pivoting
- Easy to assemble
- Universally mountable with attachment capability on all sides
- Locked connection to dem e-tube

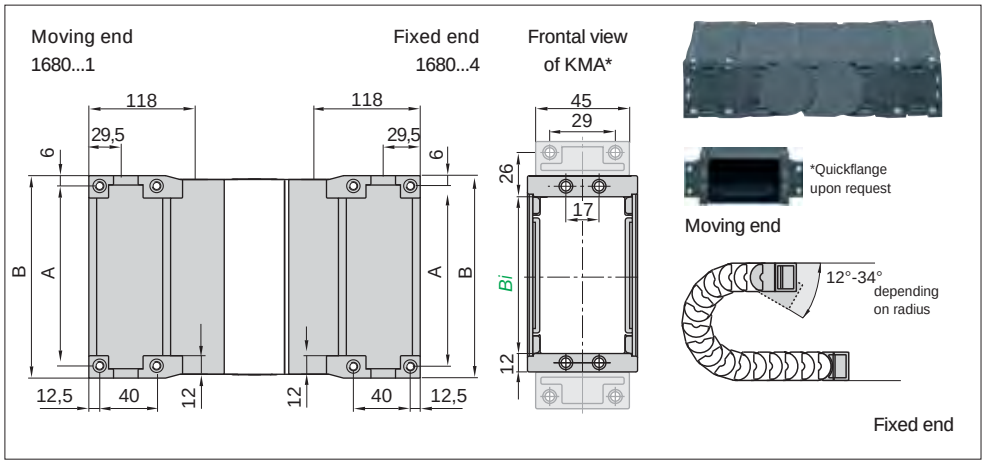
Part no. structure, pivoting
1680.100.12 A
A…must be indicated on preassembled configurations
Full set = 12
Width index
Mounting bracket for selected width index

Single-part order:
Mounting bracket Moving end
1680.100.1 A (preassembled)
Mounting bracket Fixed end
1680.100.2 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R167·R168 | KMA mounting brackets locking

Extended type, all-sides attachment



KMA, extended locking | All-sides attachment - universal for e-tubes
Recommended for vertical hanging and standing applications

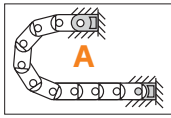
For width index	Part No. full set **KMA fixed end locking***	Dim. A [mm]	Dim. B [mm]
.050. ▶	1680.050.14	62	74
.075. ▶	1680.075.14	87	99
.100. ▶	1680.100.14	112	124
.115. ▶	1680.115.14	127	139
.125. ▶	1680.125.14	137	149
.150. ▶	1680.150.14	162	174
.175. ▶	1680.175.14	187	199
.200. ▶	1680.200.14	212	224
.225. ▶	1680.225.14	237	249
.250. ▶	1680.250.14	262	274

*only the fixed end is locking, the moving end is pivoting (KMA = Polymer Metal Mounting Bracket)

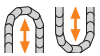
The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF
▶ e.g. Part No. 1680.100.14.QF. Unassembled Quickflange: Part No. 16800.QF



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ▶e.g. 1680.100.14 A



- Recommended for vertical hanging and standing applications
- Extended type, locking
- Easy to assemble
- Flush mounting at both ends of the e-tube
- Universally mountable with attachment capability on all sides
- Corrosion-resistant

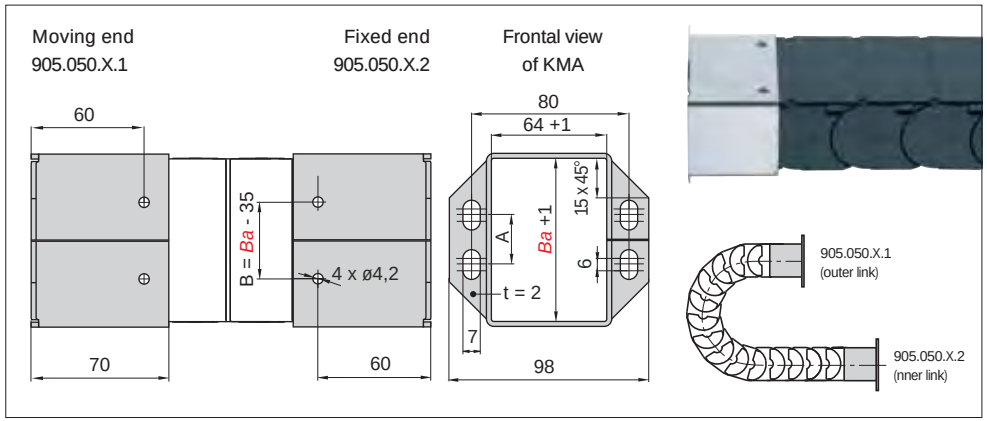
Part no. structure, locking
1680.100.14 A
A…must be indicated on preassembled configurations
Full set = 14
Width index
Mounting bracket for selected width index

Single-part order:
Mounting bracket Moving end
1680.100.1 A (preassembled)
Mounting bracket Fixed end
1680.100.4 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R167·R168 | Mounting brackets, flange steel, locking

Flush mounting possibilities

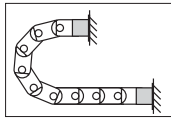


Flange steel mounting brackets

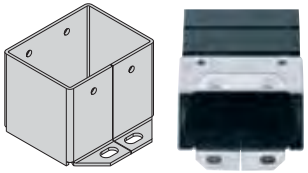
For width index	Hole pattern	Part No. full set **steel, flange**	*Bi* [mm]	*Ba* [mm]	Dim. A [mm]	Dim. B [mm]
.075. ▶	68.01	905.050.1.12	75	93	30	58
.115. ▶	68.02	905.050.2.12	115	133	50	98
.175. ▶	68.03	905.050.3.12	175	193	100	158

Mounting only with hexagon socket DIN 912 M6 and washer DIN 125, 6,3 mm

- Bolted connection outside the e-chain's cross-section possible
- Flush mounting possibilities
- Galvanized steel
- One-piece
- Robust



Metallic flange brackets with common hole patterns, easily be replaced by their modern successors, without having to alter the hole pattern. Flush mounting possibilities at both ends of the e-tube for flange mounting brackets made of steel.



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148



Cost-effective snap-open solution for reliable chip protection - igus® R100 e-tubes in a machine tool



E2 R
e-tubes

chip protection,
high speeds,
smooth running

Chip protection - higher speeds and smooth running - E2 Series R

E2 Series R - small pitch for higher speeds and smooth motion. igus® e-tubes work in hot chip areas, in areas of dirt and dust generated by woodworking, steelmills, pulp and paper, textile, agriculture, coal plant and many other hostile environments.

- Very good protection against chips (including hot chips)
- Robust and tight
- Space-efficient with optimized ratio of inner dimension to outer dimension
- Modular interior separation
- Universal KMA mounting brackets with attachment options on all sides

Typical industries and applications

- Tooling machines
- Woodworking machines
- All kind of industries and machines with chip, dirt and dust



e-tubes with igumid HT-Material for hot chips up to 850°C available upon request



Electrically conductive ESD/ATEX versions upon request



UL94-V0 classification upon request

iF product design award
1987 igus® Series R68





E2 e-tubes in chip-area of a tooling machine. Resistant against hot metal chips up to 850°C



U-shaped supported e-tube
for high lateral acceleration



Standing application - R68 e-tube -
Note: the first links are supported

Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT



Content overview, selection table and assembly instructions ▶ next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported max. length [m]	Page
 E2 e-tubes R - Removable lids along outer radius							
R48	25	25 - 130	36 - 141	36	60 - 250	1,50	540
R58	35	50 - 200	66 - 216	50	75 - 250	2,30	550
R68	45	50 - 250	68 - 268	64	100 - 300	2,50	562

System RX - Extremely chip repellent e-tubes

Problem solver for energy supply systems in areas with chips - available in 4 sizes. Chips and dirt can significantly reduce the service life of cables and hoses. With System RX igus® presents an extremely dense but nonetheless uniquely shaped polymer e-tube. System RX ▶ from page 574



Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

1



Joining is accomplished by simply joining the e-chain® links and clicking the pins in place

2



Insert lid, press down and cllick to close

3



Separate by levering open lid with screwdriver. Then remove lid

4



Separate by levering open the side plates, then rotate the e-chain® links and separate

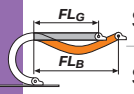
Technical Data, overview ▶ page 536

e-chain® links as single parts, overview ▶ page 537

Configuration options and order keys, overview ▶ page 538

Assembly video available online at ▶ www.igus.eu/eu/E2R_assembly

Technical Data



Gliding speed / acceleration (maximum)	upon request 1)
Speed / acceleration FL_G max.	max. 10 [m/s] / max. 100 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

1) For gliding applications, please consult igus®.

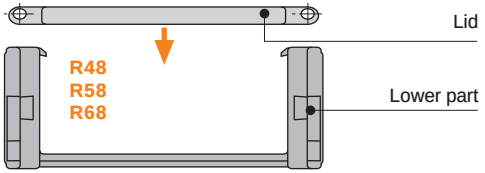
Installation methods overview, maximum travels

e-tube Series	Unsupported application	Gleitende Application 1)	Vertical hanging	Vertical standing	Side mounted unsupported	Zig-zag application	Unsupp. length of lower run
R48	≤ 1,30 m	≤ 50 m	≤ 50 m	≤ 4,0 m	≤ 1,5 m	upon request	upon request
R58	≤ 2,30 m	≤ 75 m	≤ 50 m	≤ 4,0 m	≤ 2,0 m	upon request	upon request
R68	≤ 2,50 m	≤ 100 m	≤ 60 m	≤ 4,0 m	≤ 2,0 m	upon request	upon request

1) For gliding applications, please consult igus®.

Part No. 2-piece e-chain® links as single parts

e-tube - removable lids along outer radius



e-tube Series	e-tube Lid*	e-tube Lower parts**
R48	485.*Bi*	48.*Bi*00.*R*
R58	585.*Bii*	58.*Bi*00.*R*
R68	685.*Bi*	68.*Bi*00.*R*

* Lid / bottom - supplement Part No. with required width index (*Bi*), example: 685.100

** Lower parts - supplement Part No. with required width index (*Bi*) and required radius (*R*), example: 68.10000.100

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Standard	*NC-Version - (no camber) without pretension*	*No burning-in of hot chips up to 850°C (1562°F)*	*ESD / ATEX classified e-tubes* Ex II 2 GD
Part No. **Standard**	Part No. **NC-Version**	Part No. **igumid HT-Material**	Part No. **ESD-Material**
68.100.*R*.0	68.100.*R*.0.**NC**	68.100.*R*.0.**HT**	68.100.*R*.0.**ESD**
Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* 7-10 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-tube Series R68 (1,0 m), color black, with mounting brackets and interior separation:

e-tube (1,0 m)	Please indicate e-tube length or number of links: 1,0 m or 28 links	68.100.100.0
+ Mounting brackets	1 set	680.100.12
+ Interior separation	with 2 separators assembled every 2nd link	2 x 34511

Order text: 1,0 m 68.100.100.0 + 680.100.12 + 2 x 34511

Order key
68.100.100.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Color options for e-chains® and e-tubes

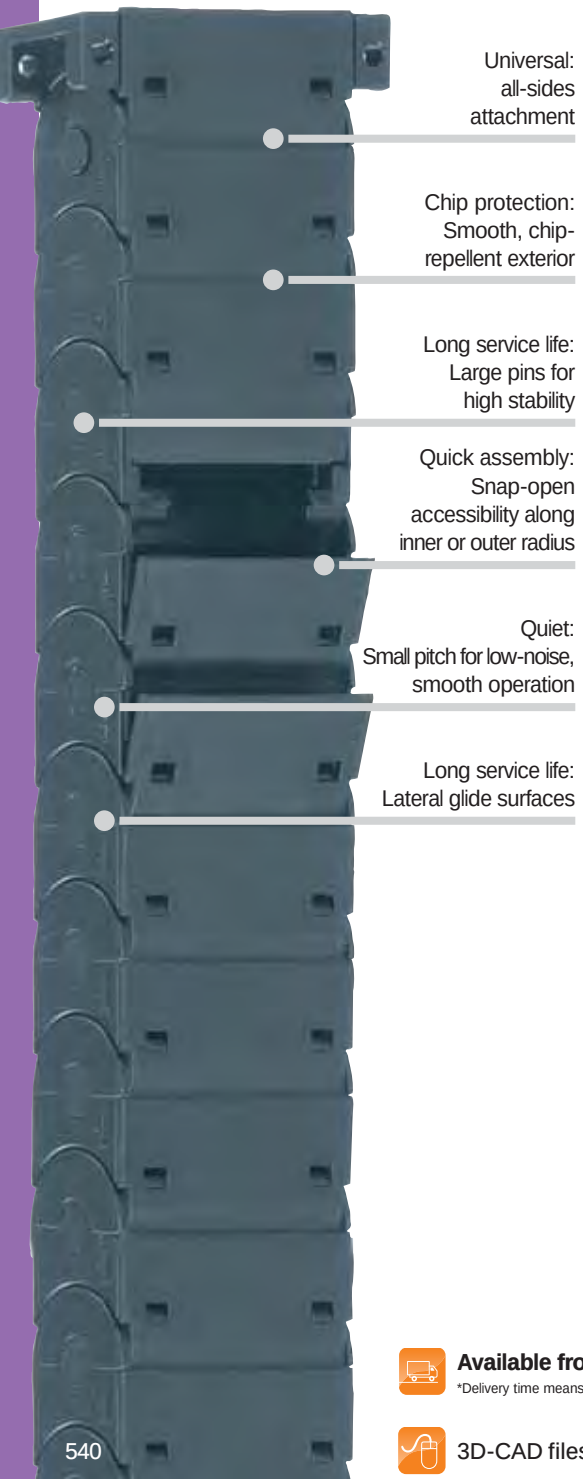
Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Series R68 works in an apple-sorting-machine: humidity and dirt



Universal: all-sides attachment

Chip protection: Smooth, chip-repellent exterior

Long service life: Large pins for high stability

Quick assembly: Snap-open accessibility along inner or outer radius

Quiet: Small pitch for low-noise, smooth operation

Long service life: Lateral glide surfaces

Small pitch, smooth running

When to use Series R48:

- If a stable e-tube with small pitch for smooth running and an inner height of 25 mm is required
- If inner widths up to 130 mm are required
- For unsupported lengths up to 1,5 m and fill weights up to 1,0 kg/m
- If chip-repellent features are required

When to use a different igus® Series:

- If a particularly cost-effective solution is the main factor

►e-tubes Series R117/R118, page 502

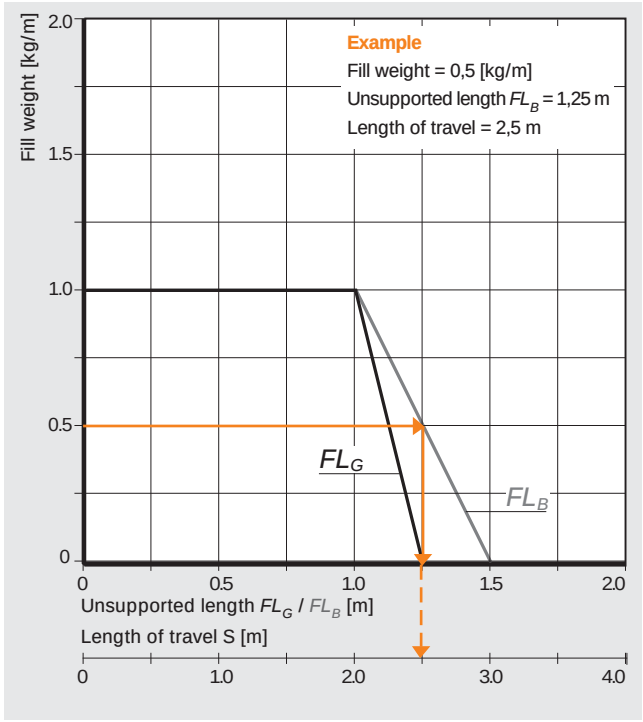
- If no chip protection is required

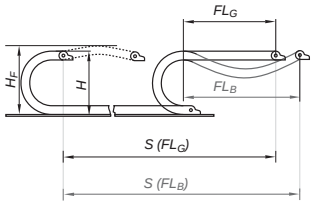
►E2/000 Series 2400/2500, page 426

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/R48



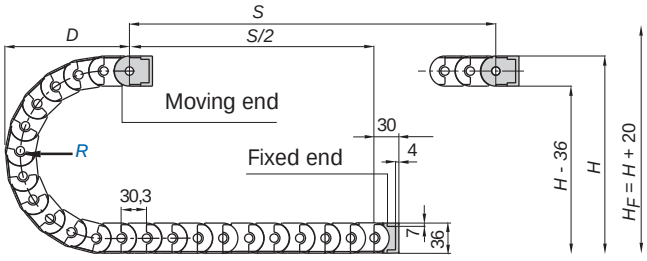


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95

Gliding applications

Travels up to 50 m.
More information ►page 548



Technical Data

Speed, material, temperature and flammability class ►page 536

Pitch = 30,3 mm/link
Links/m = 33 (999,9 mm)
Chain length = $S/2 + K$

R	060	075	100	125	150	175	200	250
H	156	186	236	286	336	386	436	536
D	123	138	163	188	213	238	263	313
K	250	300	375	455	535	615	690	850

The required clearance height: $H_F = H + 20$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series R48 | Removable lids along outer radius

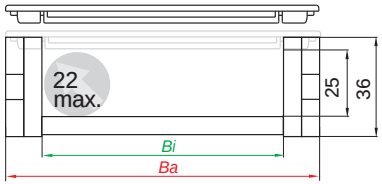
e-tubes - removable lids along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	Weight [kg/m]
48. 025 .R.0	25	36	| 060 | 075 | 100 | 125 | 150 | 175 | 200 | 250 |	≈ 0,64
48. 050 .R.0	50	61	| 060 | 075 | 100 | 125 | 150 | 175 | 200 | 250 |	≈ 0,84
48. 075 .R.0	75	86	| 060 | 075 | 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,03
48. 100 .R.0	100	111	| 060 | 075 | 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,23
48. 130 .R.0	130	141	| 060 | 075 | 100 | 125 | 150 | 175 | 200 | 250 |	≈ 1,46

Supplement Part No. with required radius (*R*), example: 48.100.100.0

Order key
48.100.100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning

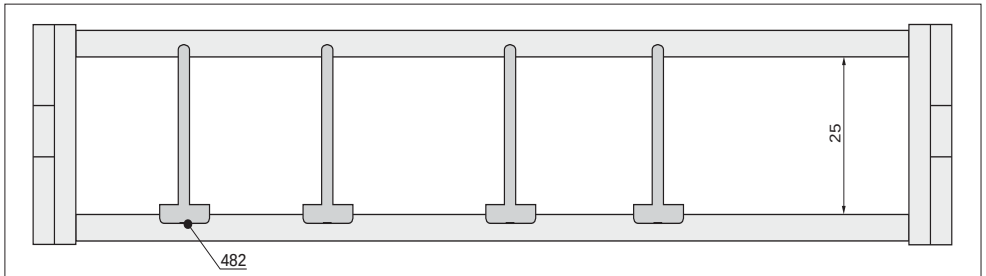


e-chain® links as single parts, overview ▶ page 537

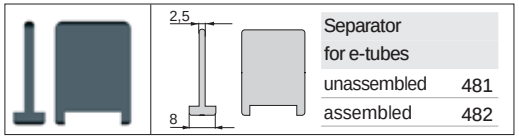
Configuration options and order keys, overview ▶ page 538

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



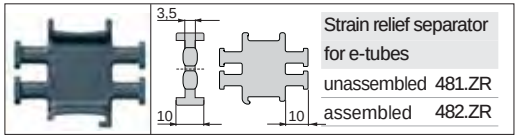
In the standard configuration separators are assembled every 2nd e-tube link.



Separator for e-tubes	
unassembled	481
assembled	482

Vertical Separator 481

Vertical Separators are used if a vertical subdivision of the e-tube interior is required - by standard Vertical Separators are assembled every 2nd e-tube link.



Strain relief separator for e-tubes	
unassembled	481.ZR
assembled	482.ZR

Additional elements for interior separation
Strain relief separator 1585.01.Z

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

Aluminum SuperTrough

● Very simple, modular assembly ● Side-mounted glide strips for wear protection in high-speed ● Corrosion resistant, seawater resistant aluminum profile ● Independent of profile lengths and butt joints ● Plastic glide bar made of PE ● Bottom clamp can be mounted -inside or outside- directly on the bottom or on the c-profile

The complete range with order options ▶ from page 1184



Hot Chips up to 850°C

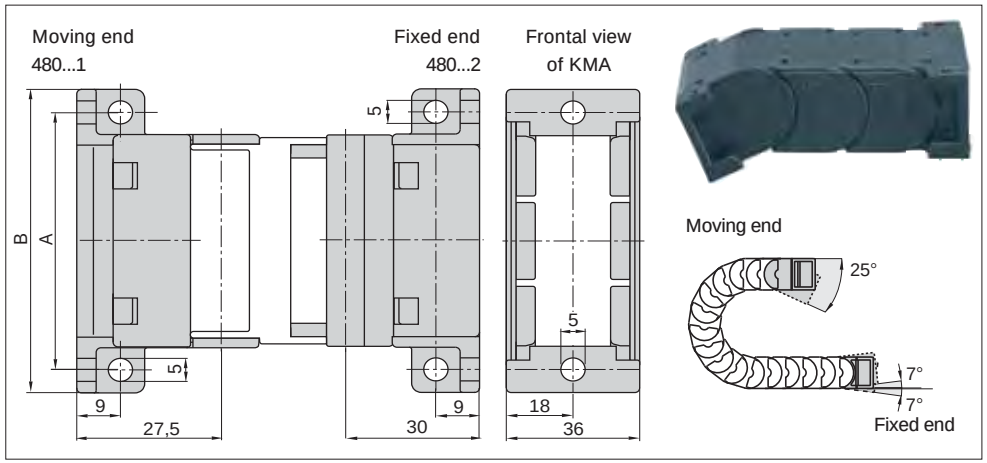
e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.

More information ▶www.igus.eu/eu/HT



E2 e-tubes R | R48 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



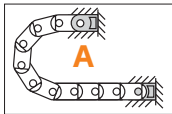
KMA, pivoting | All-sides attachment | Standard | For e-tubes
Recommended for unsupported applications

For width index	Part No. full set **KMA pivoting**	Dim. A [mm]	Dim. B [mm]
.025. ▶	480.025.12	45	55
.050. ▶	480.050.12	70	80
.075. ▶	480.075.12	95	105
.100. ▶	480.100.12	120	130
.130. ▶	480.130.12	150	160

(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST
- Hexagon nut M5 DIN 934-8



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A**. ▶e.g. 480.100.12 **A**



- Standard
- Recommended for unsupported applications
- Bolted connection outside the e-chain's cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides

Part no. structure, pivoting

480. 100. 12 **A**

- A...must be indicated on preassembled configurations
- Full set = 12
- Width index
- Mounting bracket for selected width index

Single-part order:

Mounting bracket Moving end

480.100.1 **A** (preassembled)

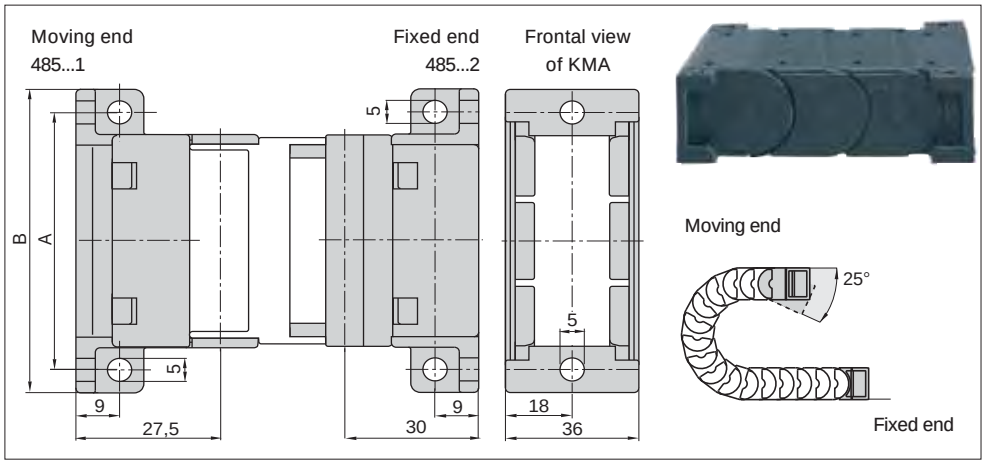
Mounting bracket Fixed end

480.100.2 **A** (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

E2 e-tubes R | R48 | KMA mounting brackets locking

For high speed and acceleration, all-sides attachment



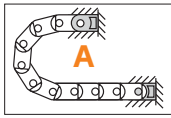
KMA, locking | All-sides attachment | For e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **KMA locking**	Dim. A [mm]	Dim. B [mm]
.025. ▶	485.025.12	45	55
.050. ▶	485.050.12	70	80
.075. ▶	485.075.12	95	105
.100. ▶	485.100.12	120	130
.130. ▶	485.130.12	150	160

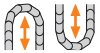
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST
- Hexagon nut M5 DIN 934-8



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A**. ▶e.g. 485.100.12 **A**



- Recommended for vertical hanging and standing applications
- Bolted connection outside the e-chain's cross-section possible
- For high speed and acceleration
- Universally mountable with attachment capability on all sides

Part no. structure, locking

485. 100. 12 **A**

- A...must be indicated on preassembled configurations
- Full set = 12
- Width index
- Mounting bracket for selected width index

Single-part order:

Mounting bracket Moving end

485.100.1 **A** (preassembled)

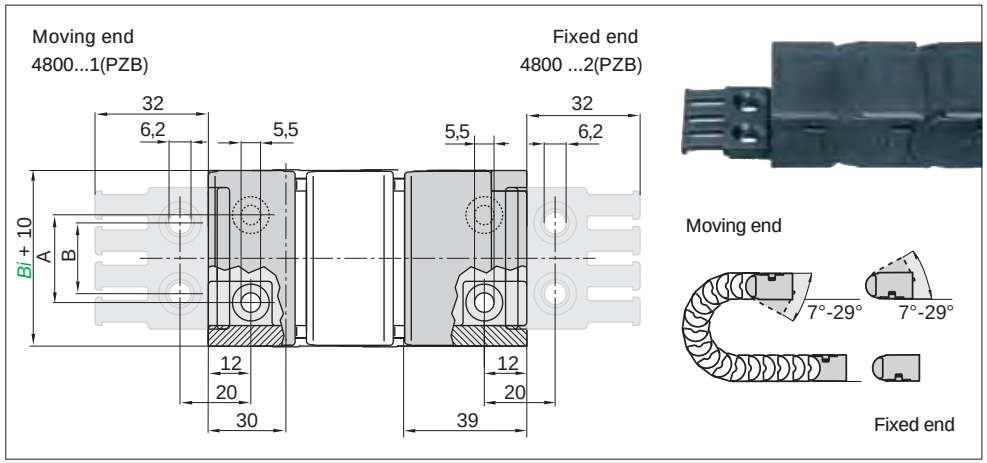
Mounting bracket Fixed end

485.100.2 **A** (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R48 | Mounting brackets angled, polymer

Space-efficient, minimized outer width



Polymer one side pivoting | For e-tubes
Recommended for unsupported applications

For width index	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Dim. A [mm]	Dim. B [mm]	Number of teeth
.025. ▶	4800.025.12PZB	4800.025.12	12	15	3
.050. ▶	4800.050.12PZB	4800.050.12	37	30	5
.075. ▶	4800.075.12PZB	4800.075.12	62	60	8
.100. ▶	4800.100.12PZB	4800.100.12	87	80	10
.130. ▶	–	4800.130.12	117	–	–

- For tight installation conditions
- Strain relief with detachable tiewrap plates
- Locked connection to e-tube
- Corrosion-resistant
- Various installation options on the fixed end and/or the moving end

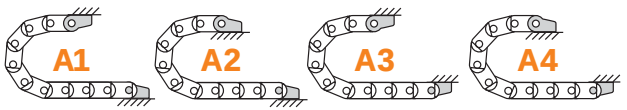
The following parts are required for attachment of the mounting brackets:

- Countersunk bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Hexagon nut M5 DIN 934-8

Part no. structure

4800.100.12 PZB**A1**

- A…must be indicated on preassembled configurations
- With strain relief tiewrap plates
- Full set
- Mounting bracket for selected width index



Possible installation conditions for assembled mounting brackets. For the preassembled mode please add index **A1**... **A4**. ▶e.g. 4800.100.12 PZB**A1**

Single-part order:

Mounting bracket Moving end

4800.100.1PZB**A1** (preass. + tiewrap plate)

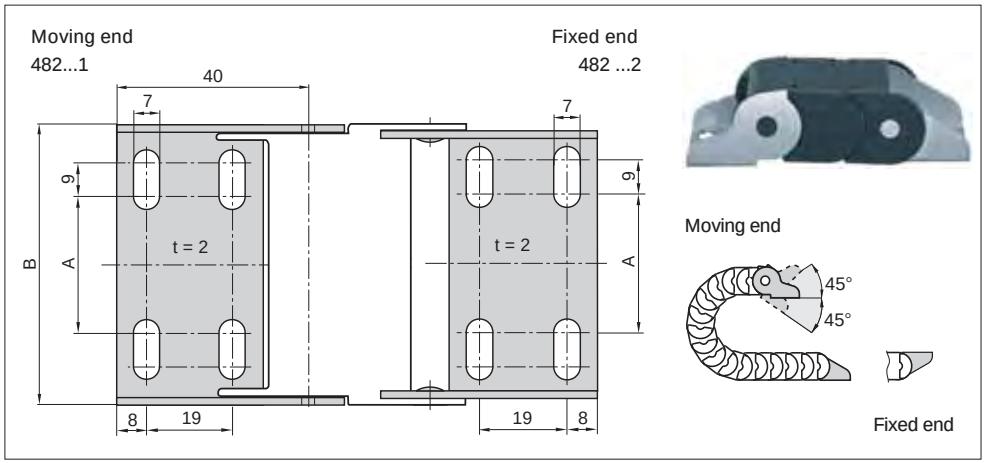
Mounting bracket Fixed end

4800.100.2PZB**A1** (preass. + tiewrap plate)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R48 | Mounting brackets steel, one side pivoting

Electrically conductive



Steel one side pivoting | For e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set	Part No. full set stainless steel**	Dim. A [mm]	Dim. B [mm]
.025. ▶	482.025 .12	482.025 .12.E	–	35
.050. ▶	482.050 .12	482.050 .12.E	22	60
.075. ▶	482.075 .12	482.075 .12.E	47	85
.100. ▶	482.100 .12	482.100 .12.E	72	110
.130. ▶	482.130 .12	482.130 .12.E	102	140

- Locked connection to e-tube
- Electrically conductive
- Minimized outer width
- Stainless steel version available

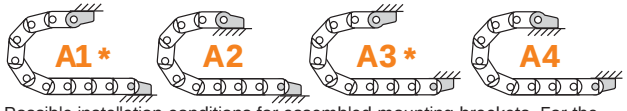
(**Material stainless steel: 1.4301 / AISI 304)

Note: By ordering steel mounting brackets in combination with an e-chain® / e-tube, they will be delivered assembled!

Part no. structure

480. 100. 12 **E**

- Stainless steel option
- Full set, 4 parts 2 with pin / 2 with bore
- Width index
- Mounting bracket



Possible installation conditions for assembled mounting brackets. For the preassembled mode please add index **A1**... **A4**. ▶e.g. 480.100.12**A1**
(***A1**+**A3** only moving end)

Single-part order:

Mounting bracket Moving end

482.100. 1 (1 part left / right)

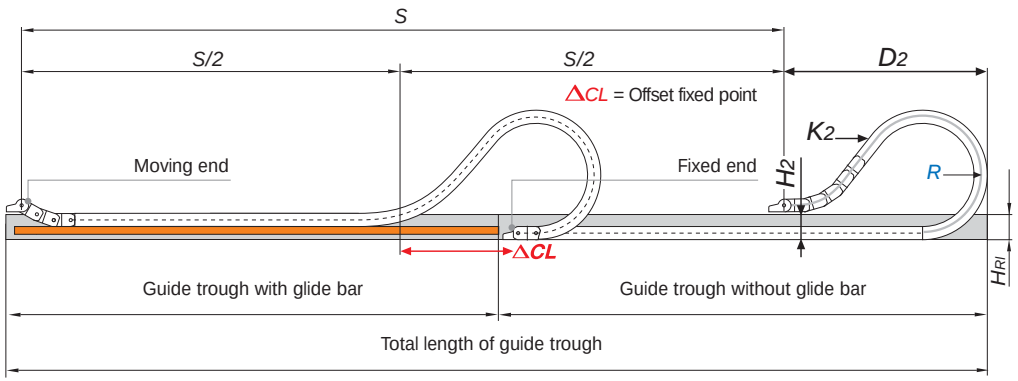
Mounting bracket Fixed end

482.100. 2 (1 part left / right)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

Gliding applications | For long travels from 5 m to max. 50 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. In case of travels between 2,0 m and 5,0 m we recommend a longer unsupported length. More information ▶ Design, from page 106.
For gliding applications, please consult igus®.



Pitch = 30,3 mm/link · Links/m = 33 (999,9 mm) · Chain length = $S/2 + K_2$

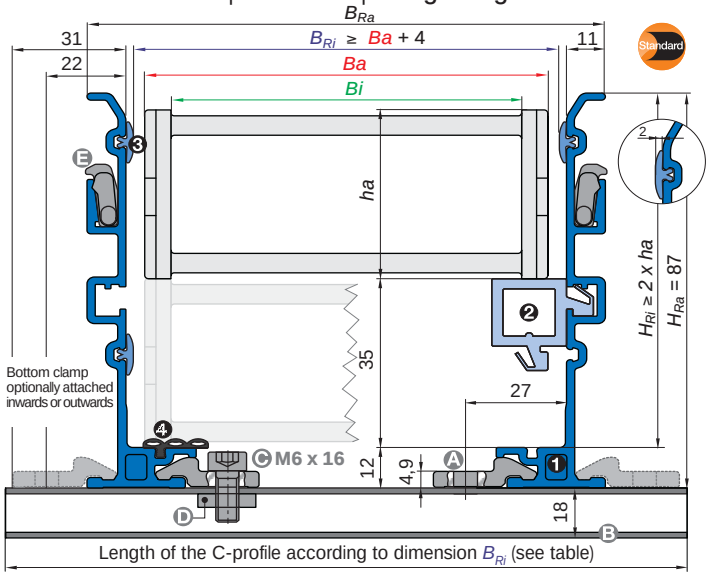
R	060	075	100	125	150	175	200	250
H_2	156	186	176	176	176	176	176	*
D_2	110	125	330	450	610	730	690	*
K_2	250	300	545	758	970	1151	1182	*
ΔCL	*	*	170	270	380	470	*	*

*Values upon request.

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{RI} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

Part No. 971.30.SL | 971.31.SL | Trough height: 87 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ Table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 48.100.100.0 with B_{Ri} = 115

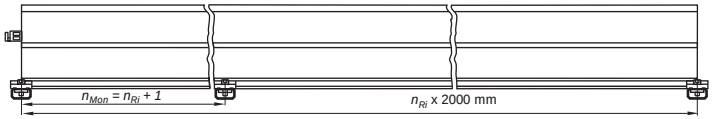
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 971.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 971.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.175
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 971.30.SLA

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For width index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.025	40	upon request	960.30.150
.050	65	upon request	960.30.175
.075	90	960.30.150	960.30.200
.100	115	960.30.175	960.30.225
.130	145	960.30.200	960.30.250

Insert for the installation set "Heavy-Duty": **971.50.XXX** instead of 960.30.XXX on the right column "attached outwards"



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1194

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Universal: all-sides attachment

Chip protection: Smooth, chip-repellent exterior

Long service life: Large pins for high stability

Quick assembly: Snap-open accessibility along inner or outer radius

Quiet: Small pitch for low-noise, smooth operation

Long service life: Lateral glide surfaces

Small pitch, smooth running

When to use Series R58:

- If a stable e-tube with small pitch for smooth running and an inner height of 35 mm is required
- If inner widths up to 200 mm are required
- For unsupported lengths up to 2,3 m and fill weights up to 8,0 kg/m
- If chip-repellent features are required

When to use a different igus® Series:

- If a particularly cost-effective solution is the main factor

►e-tubes Series R157/R158, page 508

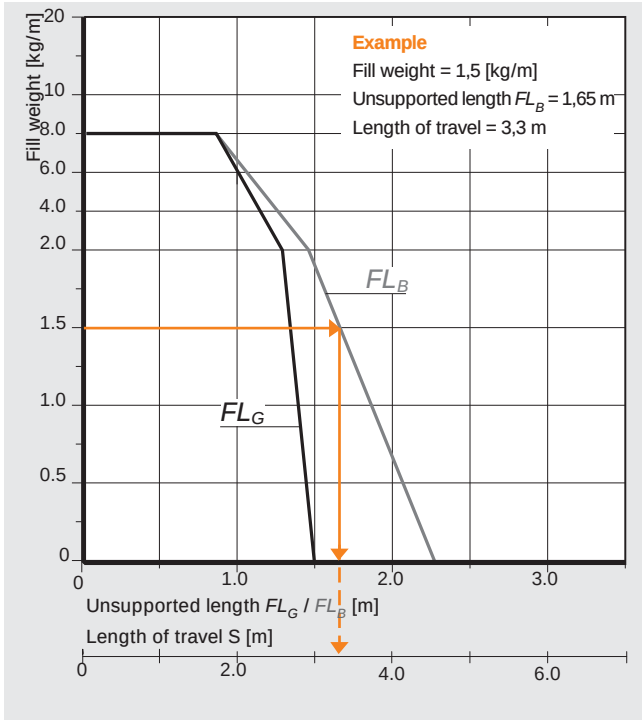
- If no chip protection is required

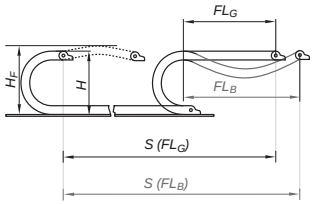
►E2/000 Series 2600/2700, page 444

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/R58



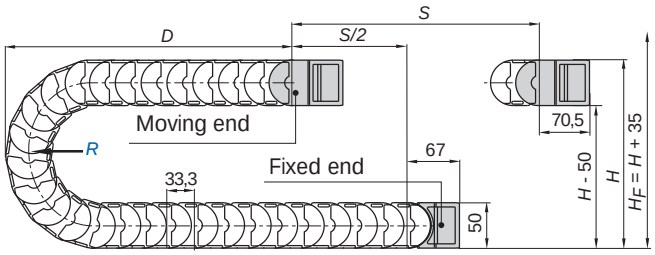


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95

Gliding applications

Travels up to 75 m.
More information ►page 559



Technical Data

Speed, material, temperature and flammability class ►page 536

Pitch = 33,3 mm/link
Links/m = 30 (999 mm)
Chain length = $S/2 + K$

R	075	100	125	150	200	250
H	200	250	300	350	450	550
D	150	175	200	225	275	325
K	305	385	460	540	695	855

The required clearance height: $H_F = H + 35$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series R58 | Removable lids along outer radius

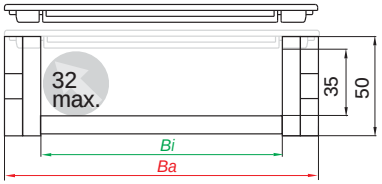
e-tubes - removable lids along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
58. 050 . *R*.0	50	66	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 1,50
58. 075 . *R*.0	75	91	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 1,77
58. 100 . *R*.0	100	116	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 2,04
58. 125 . *R*.0	125	141	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 2,31
58. 150 . *R*.0	150	166	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 2,61
58. 175 . *R*.0	175	191	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 2,88
58. 200 . *R*.0	200	216	| 075 | 100 | 125 | 150 | 200 | 250 |	≈ 3,15

Supplement Part No. with required radius (*R*), example: 58.100.100.0

Order key
58.100.100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 537

Configuration options and order keys, overview ▶ page 538

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



3-axis robot for loading and unloading functions with closed E2 e-tube R48 and easy to fill igus® 3D e-chain® triflex® R (TRE). Accelerations of up to 10m/s². Speed of up to 1,1 m/s

Aluminum SuperTrough

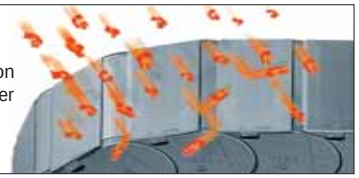
● Very simple, modular assembly ● Side-mounted glide strips for wear protection in high-speed ● Corrosion resistant, seawater resistant aluminum profile ● Independent of profile lengths and butt joints ● Plastic glide bar made of PE ● Bottom clamp can be mounted -inside or outside- directly on the bottom or on the c-profile

The complete range with order options ▶ from page 1184



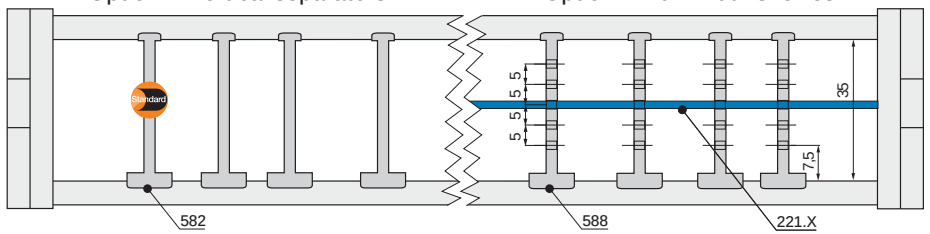
Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶ www.igus.eu/eu/HT

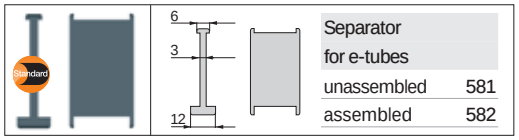


E2 e-tubes R100 | R58 | Interior separation

Option 1: Vertical separators | Option 2: Full-width shelves



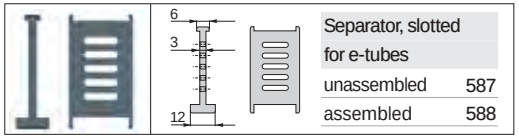
In the standard configuration separators are assembled every 2nd e-tube link.



Separator for e-tubes	
unassembled	581
assembled	582

Vertical Separator 581

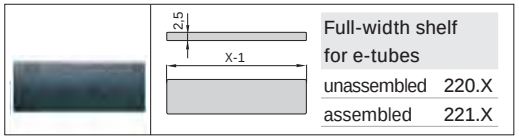
For a vertical subdivision.
Offers safe stability due to its wide base design, also when used with thick cables or hoses.



Separator, slotted for e-tubes	
unassembled	587
assembled	588

Slotted separator 587

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Full-width shelf for e-tubes	
unassembled	220.X
assembled	221.X

Full-width shelf 220.X

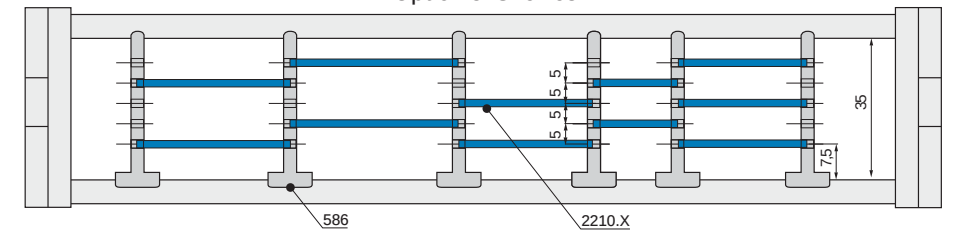
This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves

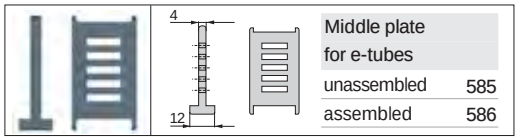
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	220.50	221.50	125	220.125	221.125	200	220.200	221.200
075	220.75	221.75	150	220.150	221.150			
100	220.100	221.100	175	220.175	221.175			

E2 e-tubes R100 | R58 | Interior separation

Option 3: Shelves



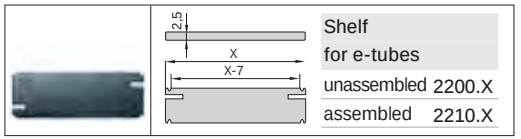
In the standard configuration separators are assembled every 2nd e-tube link.



Middle plate for e-tubes	
unassembled	585
assembled	586

Middle plate 585

To achieve a modular shelving the shelf 2200.X can be arranged at 5 different heights (in 5 mm increments).



Shelf for e-tubes	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

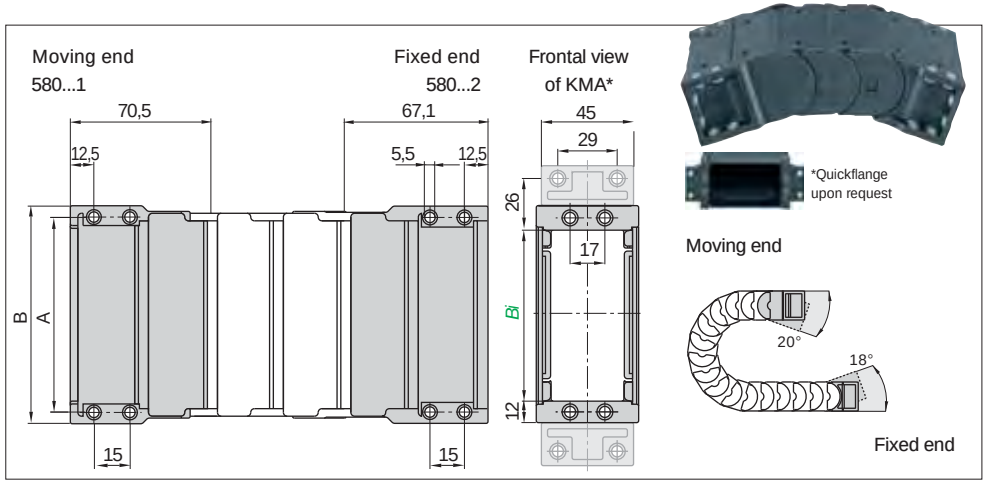
For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 5 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			

E2 e-tubes R | R58 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA, pivoting | All-sides attachment | Standard | For e-tubes
Recommended for unsupported applications

For width index	Part No. full set **KMA pivoting**	Dim. A [mm]	Dim. B [mm]
.050. ▶	580.050.12	62	74
.075. ▶	580.075.12	87	99
.100. ▶	580.100.12	112	124
.125. ▶	580.125.12	137	149
.150. ▶	580.150.12	162	174
.175. ▶	580.175.12	187	199
.200. ▶	580.200.12	212	224

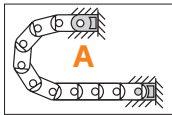
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST
- Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF

► e.g. Part No. 580.100.12.QF. Unassembled Quickflange: Part No. 16800.QF



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ►e.g. 580.100.12 A



- Standard
- Recommended for unsupported applications
- Bolted connection outside the e-chain's cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides

Part no. structure, pivoting

580. 100. 12 A

- A…must be indicated on preassembled configurations
- Full set = 12
- Width index
- Mounting bracket for selected width index

Single-part order:

Mounting bracket Moving end

580.100.1 A (preassembled)

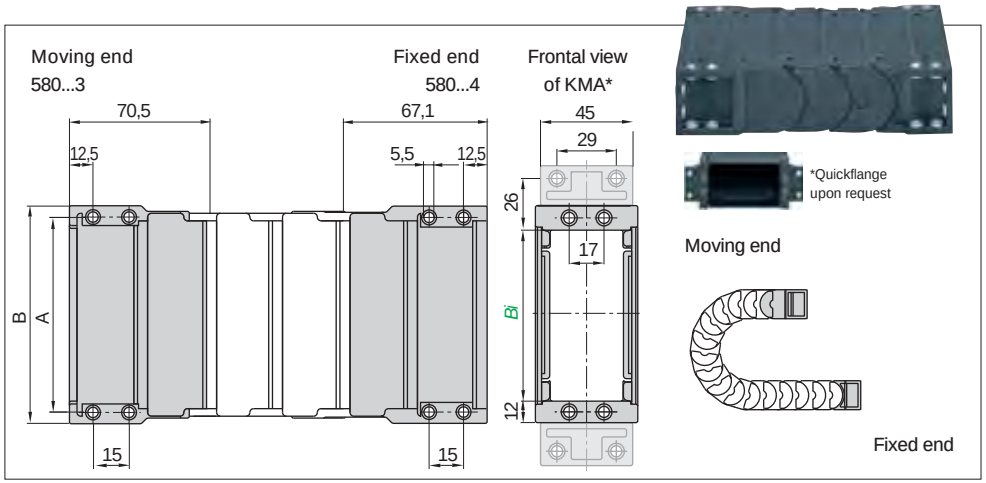
Mounting bracket Fixed end

580.100.2 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E2 e-tubes R | R58 | KMA mounting brackets locking

For high speed and acceleration, all-sides attachment



KMA, locking | All-sides attachment | For e-tubes
Recommended vertical hanging and standing applications

For width index	Part No. full set **KMA locking**	Dim. A [mm]	Dim. B [mm]
.050. ▶	580.050.34	62	74
.075. ▶	580.075.34	87	99
.100. ▶	580.100.34	112	124
.125. ▶	580.125.34	137	149
.150. ▶	580.150.34	162	174
.175. ▶	580.175.34	187	199
.200. ▶	580.200.34	212	224

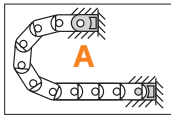
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

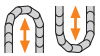
- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST
- Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF

► e.g. Part No. 580.100.34.QF. Unassembled Quickflange: Part No. 16800.QF



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ►e.g. 580.100.34 A



- Recommended for vertical hanging and standing applications
- Bolted connection outside the e-chain's cross-section possible
- For high speed and acceleration
- Universally mountable with attachment capability on all sides

Part no. structure, locking

580. 100. 34 A

- A…must be indicated on preassembled configurations
- Full set = 34
- Width index
- Mounting bracket for selected width index

Single-part order:

Mounting bracket Moving end

580.100.3 A (preassembled)

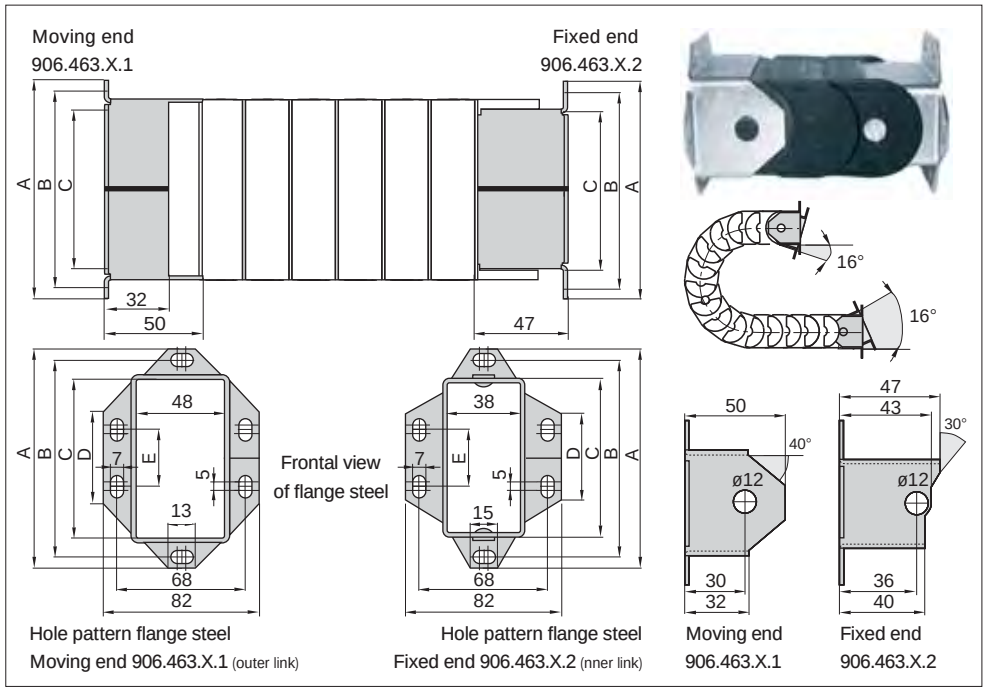
Mounting bracket Fixed end

580.100.4 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

R58 | Mounting brackets, flange steel, pivoting

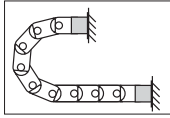
Flush mounting possibilities



Flange steel mounting brackets, pivoting | For e-tubes

Width index	Hole pattern	Part No. **Moving end**	Bi [mm]	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
.050. ▶	58.05	906.463.05.1	50	90,5	78,5	58,3	24,5	20
.075. ▶	58.1	906.463.1.1	75	116	104	83,3	50	30
Width index	Hole pattern	Part No. **Fixed end**	Bi [mm]	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
.050. ▶	58.05	906.463.05.2	50	90,5	78,5	57,5	28	20
.075. ▶	58.1	906.463.1.2	75	116	104	82,5	45	30

- Bolted connection outside the e-chain's cross-section possible
- Flush mounting possibilities
- Galvanized steel
- One-piece
- Robust

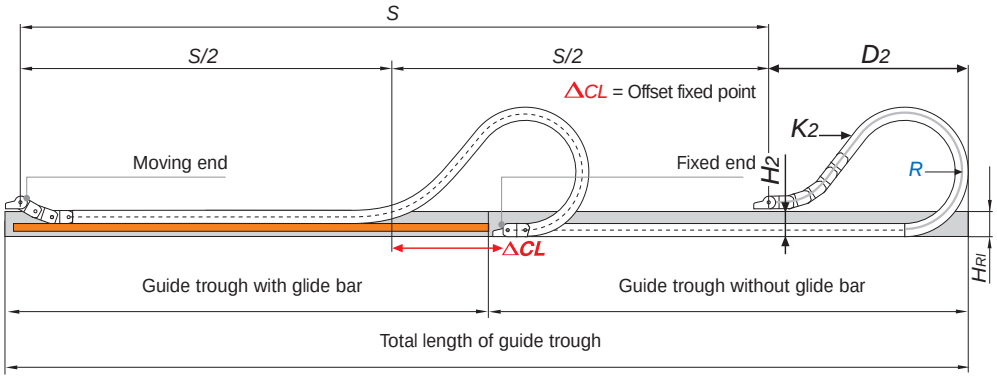


Metallic flange brackets with common hole patterns, easily be replaced by their modern successors, without having to alter the hole pattern. Flush mounting possibilities at both ends of the e-tube for flange mounting brackets made of steel.

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Gliding applications | For long travels from 5 m to max. 75 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. In case of travels between 3,0 m and 5,0 m we recommend a longer unsupported length. More information ▶ Design, from page 106.
For gliding applications, please consult igus®.



Pitch = 30,3 mm/link · Links/m = 33 (999,9 mm) · Chain length = $S/2 + K_2$

R	075	100	125	150	200	250
H_2	150	166	166	166	166	166
D_2	150	310	380	480	800	1050
K_2	375	500	699	866	1265	1665
ΔCL	*	122	167	247	512	717

*Value upon request.

H_2 = Mounting height (if the moving end is set lower)
D_2 = Over length - long travels, gliding
K_2 = Further add-on (if the moving end is set lower)
R = Bending radius
ΔCL = Offset fixed point
H_{RI} = Inner trough height
S = Length of travel
S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

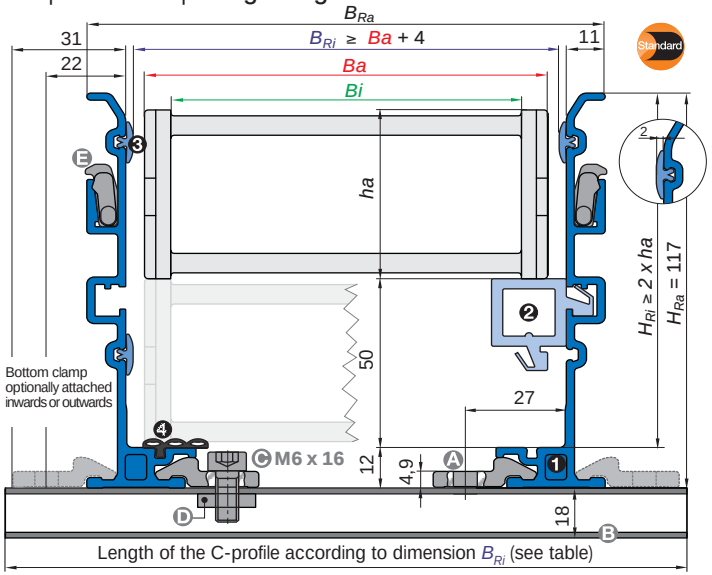
Part No. 972.30.SL | 972.32.SL | Trough height: 117 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For width index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.050	70	upon request	960.30.175
.075	95	960.30.150	960.30.200
.100	120	960.30.175	960.30.225
.125	145	960.30.200	960.30.250
.150	170	960.30.225	960.30.275
.175	195	960.30.250	960.30.300
.200	220	960.30.275	960.30.325

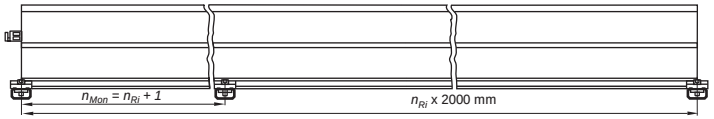
Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ Table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 58.100.100.0 with B_{Ri} = 120

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 972.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 972.32.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.175
Module for the fixed end	
Order text: 1 set	Part No. 972.81
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 972.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1200

● Trough set ● Installation set ● Glide bar ● C-Profile

Ba = Outer width e-chains® Bi = Inner width e-chains®

B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height

H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

R58 | My sketches



Small pitch, smooth running

When to use Series R68:

- If a stable e-tube with small pitch for smooth running and an inner height of 45 mm is required
- If inner widths up to 250 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 10 kg/m
- If chip-repellent features are required

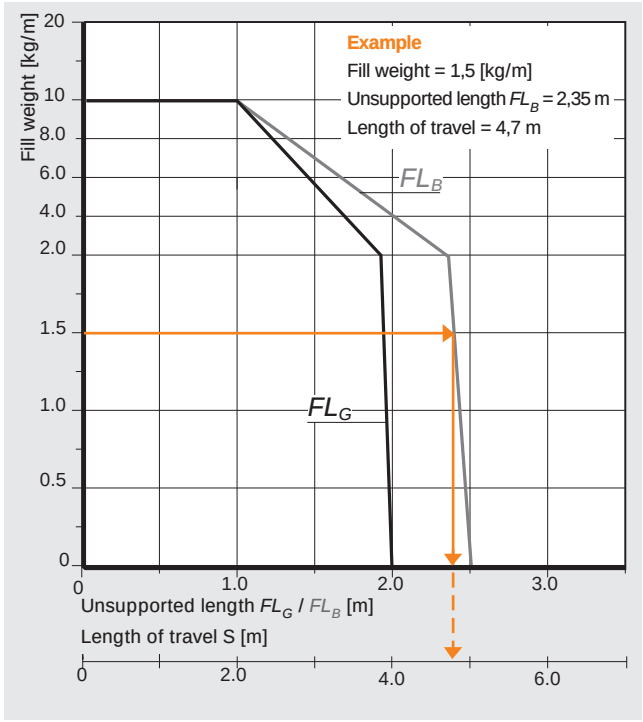
When to use a different igus® Series:

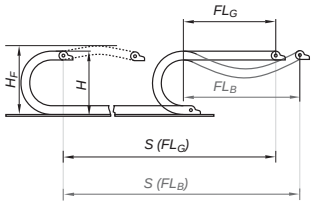
- For extremely chip repellent e-tubes
  ▶ System RX, Series RX32, page 582
- If a particularly cost-effective solution is the main factor
  ▶ e-tubes Series R167/R168, page 520
- If no chip protection is required
  ▶ E2/000 Series 3400/3500, page 462

iF product design award
1987 igus® Series R68

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/R68



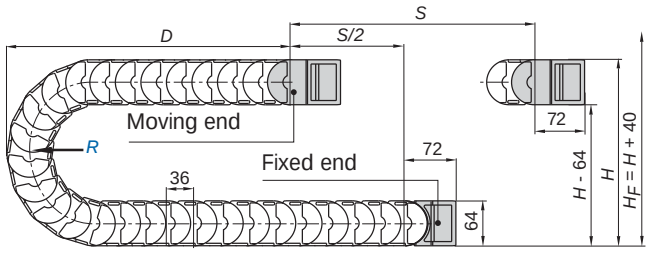


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 100 m.
More information ▶ page 571



Technical Data

Speed, material, temperature and flammability class ▶ page 536

Pitch = 36 mm/link
Links/m = 28 (1008 mm)
Chain length = $S/2 + K$

R	100	125	150	175	200	225	250	300
H	264	314	364	414	464	514	564	664
D	186	211	236	261	286	311	336	386
K	390	465	545	625	705	780	860	1015

The required clearance height: $H_F = H + 40$ mm (with 2,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series R68 | Removable lids along outer radius

e-tubes - removable lids along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
68.050.*R*.0	50	68	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 1,90
68.075.*R*.0	75	93	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,18
68.100.*R*.0	100	118	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,46
68.115.*R*.0	115	133	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,63
68.125.*R*.0	125	143	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 2,77
68.150.*R*.0	150	168	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,05
68.175.*R*.0	175	193	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,36
68.200.*R*.0	200	218	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,64
68.225.*R*.0	225	243	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 3,92
68.250.*R*.0	250	268	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 300 |	≈ 4,23

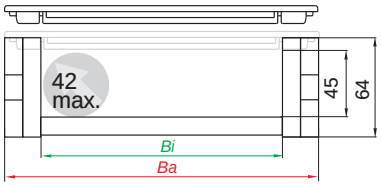
Supplement Part No. with required radius (*R*), example: 68.100.100.0

Order key

68.100.100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning

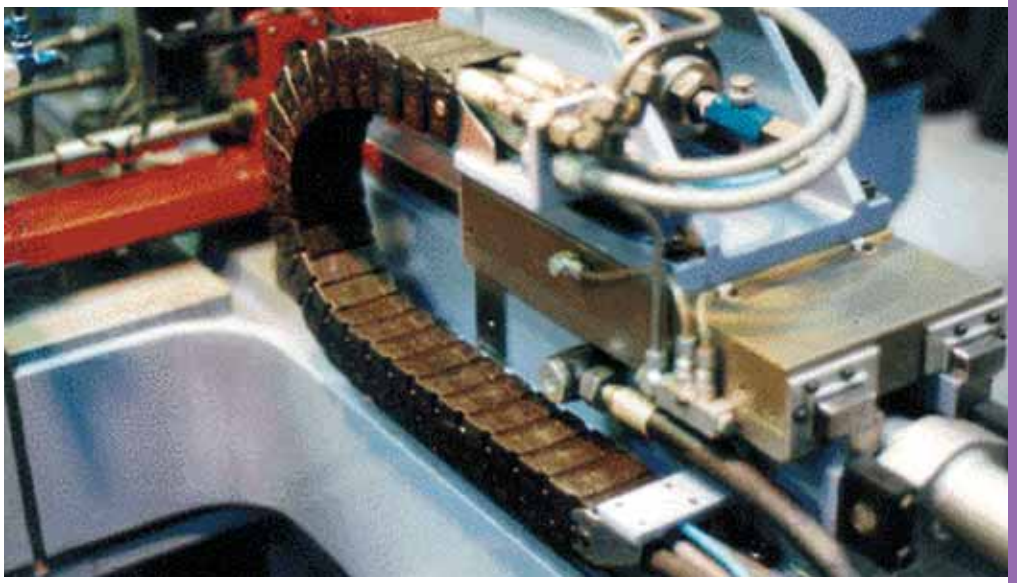


e-chain® links as single parts, overview ▶ page 537

Configuration options and order keys, overview ▶ page 538

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



e-tube series are suitable for small installation space and high speeds as well.
Here pre-harnessed with hydraulic hoses and special parts

Aluminum SuperTrough

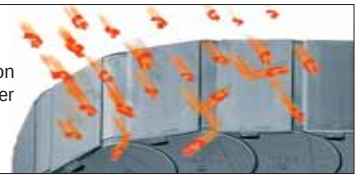
● Very simple, modular assembly ● Side-mounted glide strips for wear protection in high-speed ● Corrosion resistant, seawater resistant aluminum profile ● Independent of profile lengths and butt joints ● Plastic glide bar made of PE ● Bottom clamp can be mounted -inside or outside- directly on the bottom or on the c-profile

The complete range with order options ▶ from page 1184



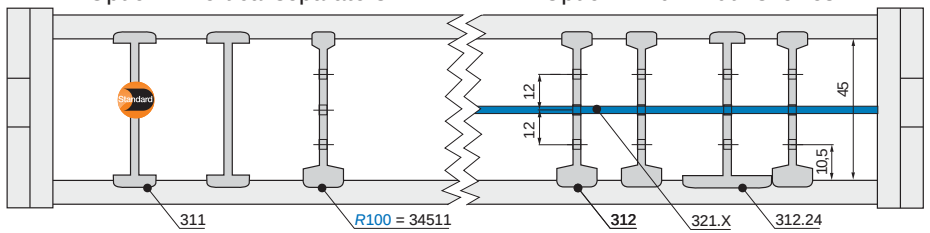
Hot Chips up to 850°C

e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶ www.igus.eu/eu/HT

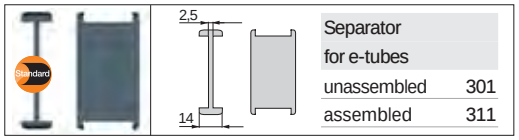


E2 e-tubes R100 | R68 | Interior separation

Option 1: Vertical separators | Option 2: Full-width shelves



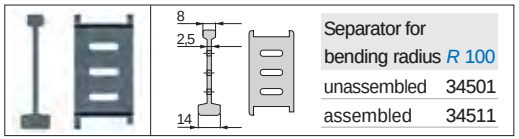
In the standard configuration separators are assembled every 2nd e-tube link.



Separator for e-tubes	
unassembled	301
assembled	311

Vertical Separator 301

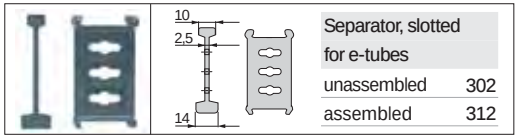
For a vertical subdivision.
Offers safe stability due to its wide base design, also when used with thick cables or hoses.
Not suitable for bending radius *R* 100!



Separator for bending radius *R* 100	
unassembled	34501
assembled	34511

Vertical Separator 34511

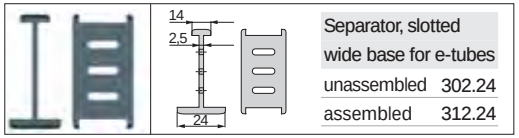
If you select bending radius *R* 100, please use Vertical Separator 34511 for a vertical subdivision.



Separator, slotted for e-tubes	
unassembled	302
assembled	312

Slotted separator 302

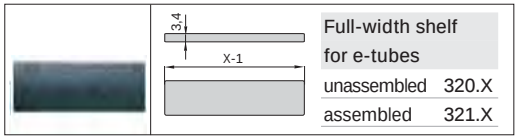
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Separator, slotted wide base for e-tubes	
unassembled	302.24
assembled	312.24

Slotted separator 302.24

If a wide space between the separators has to be kept or separators have to be fixed in their position, e.g. for side-mounted applications.



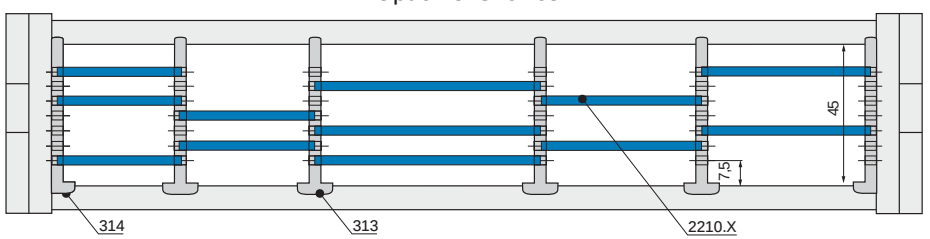
Full-width shelf for e-tubes	
unassembled	320.X
assembled	321.X

Full-width shelf 320.X

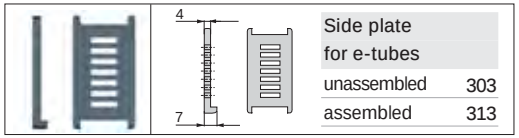
This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 12 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	320.050	321.050	150	320.150	321.150	250	320.250	321.250
075	320.075	321.075	175	320.175	321.175			
115	320.115	321.115	200	320.200	321.200			
125	320.125	321.125	225	320.225	321.225			



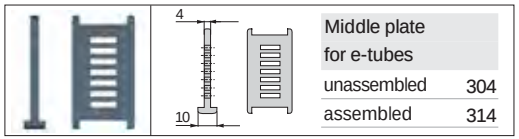
In the standard configuration separators are assembled every 2nd e-tube link.



Side plate for e-tubes	
unassembled	303
assembled	313

Side plate 303

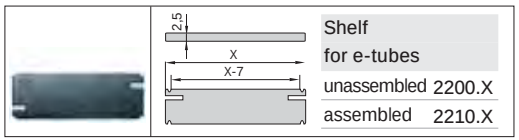
Side plate for use with shelf 2200.X and middle plate 304.



Middle plate for e-tubes	
unassembled	304
assembled	314

Middle plate 304

To achieve a modular shelving the shelf 2200.X can be arranged at 7 different heights (in 5 mm increments).



Shelf for e-tubes	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

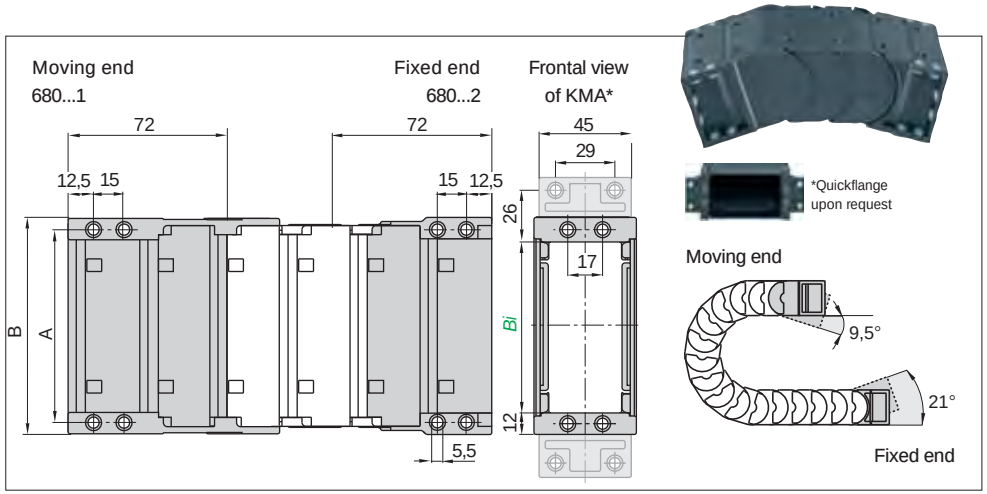
For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 7 different heights (in 5 mm increments).

Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	088	2200.88	2210.88
023	2200.23	2210.23	048	2200.48	2210.48	099	2200.99	2210.99
028	2200.28	2210.28	058	2200.58	2210.58	124	2200.124	2210.124
033	2200.33	2210.33	068	2200.68	2210.68	149	2200.149	2210.149
038	2200.38	2210.38	073	2200.73	2210.73			

E2 e-tubes R | R68 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA, pivoting | All-sides attachment | Standard - universal for e-tubes
Recommended for unsupported applications

For width index	Part No. full set **KMA pivoting**	Dim. A [mm]	Dim. B [mm]
.050. ▶	680.050.12	62	74
.075. ▶	680.075.12	87	99
.100. ▶	680.100.12	112	124
.115. ▶	680.115.12	127	139
.125. ▶	680.125.12	137	149
.150. ▶	680.150.12	162	174
.175. ▶	680.175.12	187	199
.200. ▶	680.200.12	212	224
.225. ▶	680.225.12	237	249
.250. ▶	680.250.12	262	274

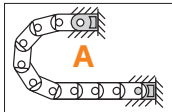
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF

▶ e.g. Part No. 680.100.12.QF. Unassembled Quickflange: Part No. 16800.QF



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ▶e.g. 680.100.12 A



- Standard
- Recommended for unsupported applications
- Bolted connection outside the e-chain's cross-section possible
- For tight installation conditions
- Universally mountable with attachment capability on all sides

Part no. structure, pivoting

680. 100. 12 A

- A…must be indicated on preassembled configurations
- Full set = 12
- Width index
- Mounting bracket for selected width index

Single-part order:

Mounting bracket Moving end

680.100.1 A (preassembled)

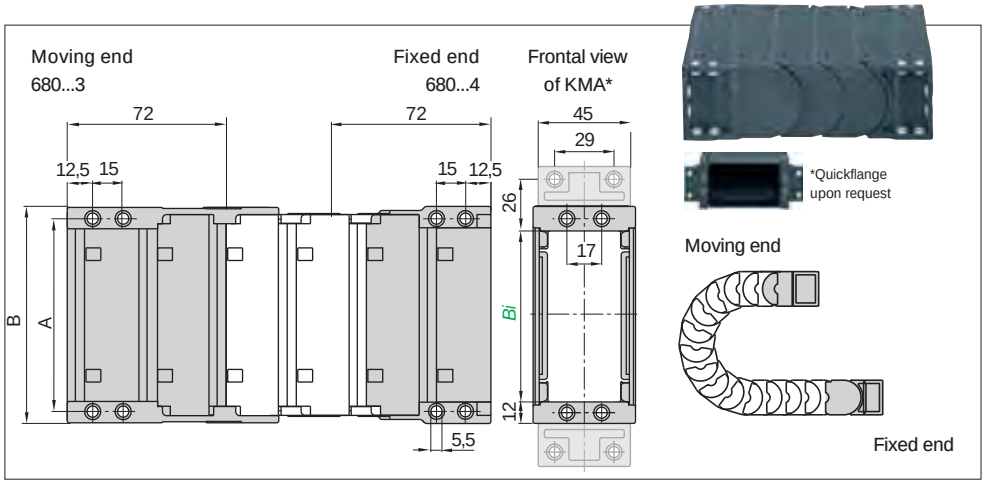
Mounting bracket Fixed end

680.100.2 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

E2 e-tubes R | R68 | KMA mounting brackets locking

For high speed and acceleration, all-sides attachment



KMA, locking | All-sides attachment - universal for e-tubes
Recommended for vertical hanging and standing applications

For width index	Part No. full set **KMA locking**	Dim. A [mm]	Dim. B [mm]
.050. ▶	680.050.34	62	74
.075. ▶	680.075.34	87	99
.100. ▶	680.100.34	112	124
.115. ▶	680.115.34	127	139
.125. ▶	680.125.34	137	149
.150. ▶	680.150.34	162	174
.175. ▶	680.175.34	187	199
.200. ▶	680.200.34	212	224
.225. ▶	680.225.34	237	249
.250. ▶	680.250.34	262	274

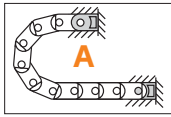
(KMA = Polymer Metal Mounting Bracket)

The following parts are required for attachment of the mounting brackets:

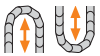
- Socket head cap bolt M5 DIN 912-8.8 Length depends on the thickness of the attachment base
- Washer 5,3 DIN 125-ST ● Hexagon nut M5 DIN 934-8

Full set with assembled Quickflange, please add index QF

▶ e.g. Part No. 680.100.34.QF. Unassembled Quickflange: Part No. 16800.QF



These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index A. ▶e.g. 680.100.34 A



- Recommended for vertical hanging and standing applications
- Bolted connection outside the e-chain's cross-section possible
- For high speed and acceleration
- Universally mountable with attachment capability on all sides

Part no. structure, locking

680. 100. 34 A

- A…must be indicated on preassembled configurations
- Full set = 34
- Width index
- Mounting bracket for selected width index

Single-part order:

Mounting bracket Moving end

680.100.3 A (preassembled)

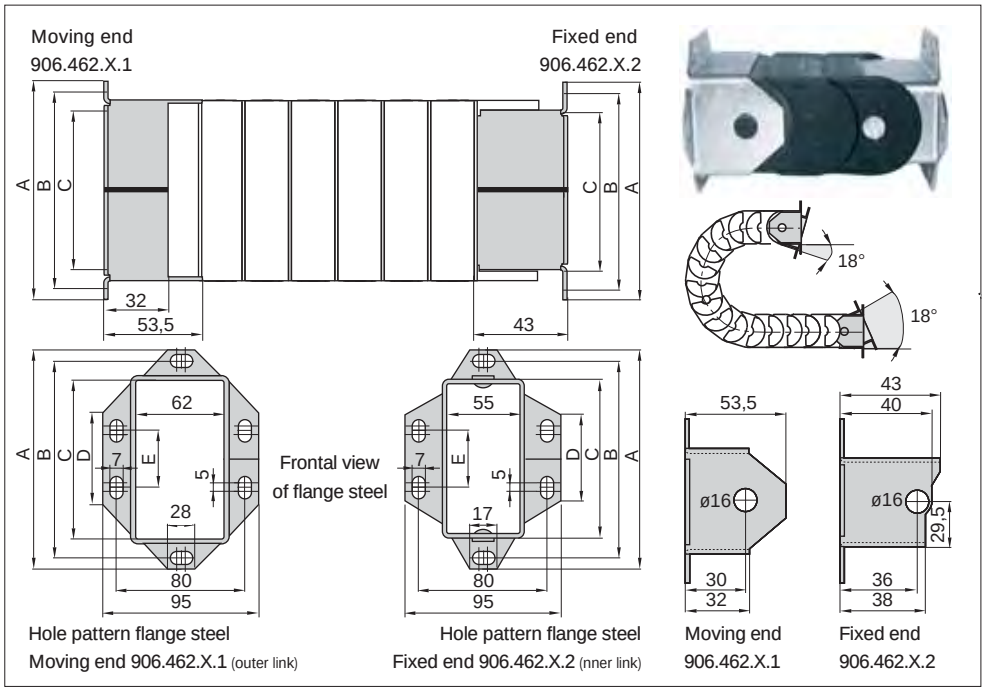
Mounting bracket Fixed end

680.100.4 A (preassembled)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

R68 | Mounting brackets, flange steel, pivoting

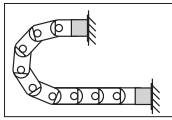
Flush mounting possibilities



Flange steel mounting brackets, pivoting | For e-tubes

Width index	Hole pattern	Part No. **Moving end**	*Bi* [mm]	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
.075. ▶	68.1	906.462.1.1	75	116	104	83,3	50	30
.115. ▶	68.2	906.462.2.1	115	156	144	123,3	90	50
.175. ▶	68.3	906.462.3.1	175	216	204	183,3	150	100
Width index	Hole pattern	Part No. **Fixed end**	*Bi* [mm]	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
.075. ▶	68.1	906.462.1.2	75	116	104	83,4	38	30
.115. ▶	68.2	906.462.2.2	115	156	144	123,4	78	50
.175. ▶	68.3	906.462.3.2	175	216	204	183,4	138	100

- Bolted connection outside the e-chain's cross-section possible
- Flush mounting possibilities
- Galvanized steel
- One-piece
- Robust

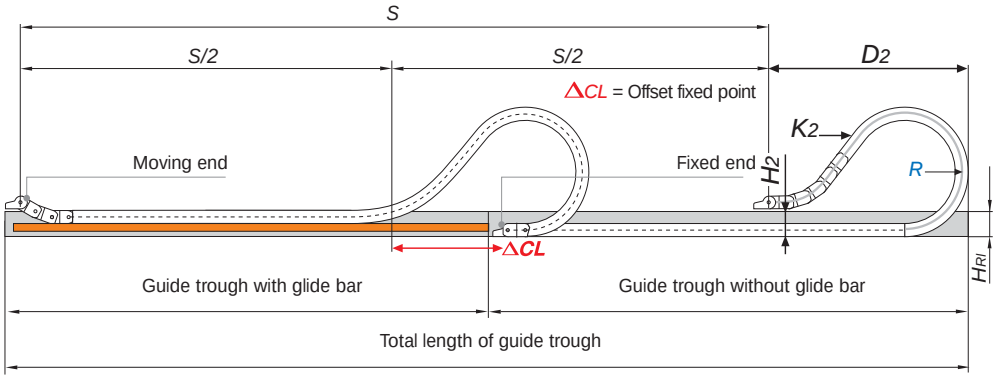


Metallic flange brackets with common hole patterns, easily be replaced by their modern successors, without having to alter the hole pattern. Flush mounting possibilities at both ends of the e-tube for flange mounting brackets made of steel.

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Gliding applications | For long travels from 6 m to max. 100 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. We recommend to realize the engineering of such a plant by our technicians. In case of travels between 4,0 m and 6,0 m we recommend a longer unsupported length. More information ▶ Design, from page 106.
For gliding applications, please consult igus®.



Pitch = 36 mm/link · Links/m = 28 (1008 mm) · Chain length = $S/2 + K_2$

R	100	125	150	175	200	225	250	300
H	86	220	220	220	220	220	220	220
D_2	200	370	440	540	650	700	850	1050
K_2	500	648	792	900	1116	1269	1476	1800
ΔCL	*	164	204	294	364	439	514	664

*Values upon request.

H_2 = Mounting height (if the moving end is set lower)
D_2 = Over length - long travels, gliding
K_2 = Further add-on (if the moving end is set lower)
R = Bending radius
ΔCL = Offset fixed point
H_{RI} = Inner trough height
S = Length of travel
S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

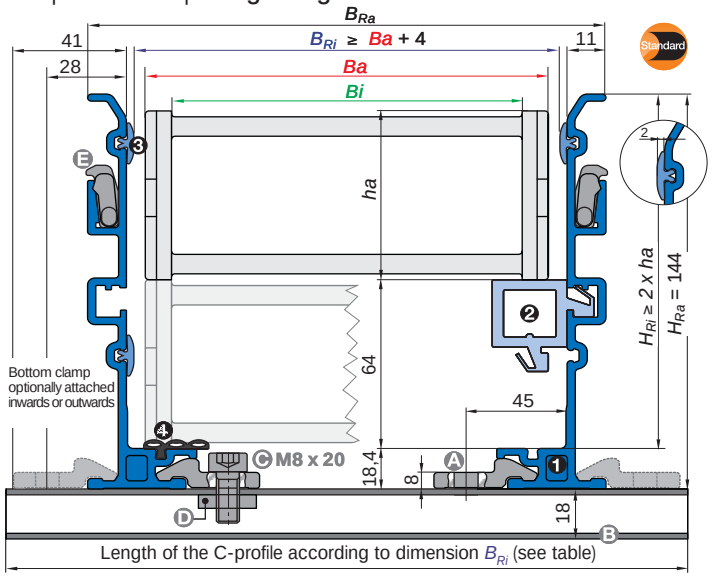
Part No. 973.30.SL | 973.31.SL | Trough height: 144 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For width index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.050	72	upon request	960.40.200
.075	97	upon request	960.40.225
.100	122	960.40.175	960.40.250
.115	137	960.40.200	960.40.275
.125	147	960.40.200	960.40.275
.150	172	960.40.225	960.40.300
.175	197	960.40.250	960.40.325
.200	222	960.40.275	960.40.350
.225	247	960.40.300	960.40.375
.250	272	960.40.325	960.40.400

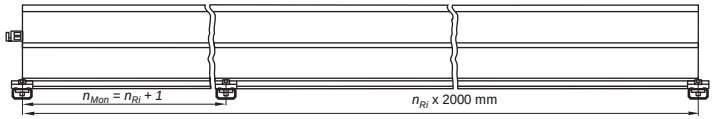
Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of 960.40.XXX on the right column "attached outwards"



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ Table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 68.100.100.0 with B_{Ri} = 122

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 973.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 973.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.40.175
Module for the fixed end	
Order text: 1 set	Part No. 973.80
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 973.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1202

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains®
Bi = Inner width e-chains®
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets

R68 | My sketches

R68



igus®
System RX

extremely chip repellent e-tubes,
removable lids along outer radius

Extremely chip repellent e-tubes - System RX

Problem solver for energy supply systems in areas with chips - available in 4 sizes

Chips and dirt can significantly reduce the service life of cables and hoses. With System RX igus® presents an extremely dense but nonetheless uniquely shaped polymer e-tube that can easily be opened along the outer radius.

- Removable lids along outer radius
- Round contour prevents chip accumulation
- Injection-molded "sealing lip" all around
- No holes, cracks or undercuts
- Degree of protection tested (IP40) by TÜV NORD CERT GmbH - Series RX40
- Interior separation and Support Tray tool kit available
- Covered pin/bore connection and stop dogs
- "RBR"-Version with reverse bending radius available



Typical industries and applications

- Tooling machines
- All applications with direct chip appearance
- Applications with dirt and dust
- General machinery

IP40 RX e-tubes - IP tested
www.igus.eu/eu/RX_tested

EX Special equipment: Electrically conductive ESD/ATEX version upon request

UL94-V0 classifications upon request

Optional available with HT-Material for hot chips up to 850°C

if product design award 2010

reddot design award honourable mention 2011



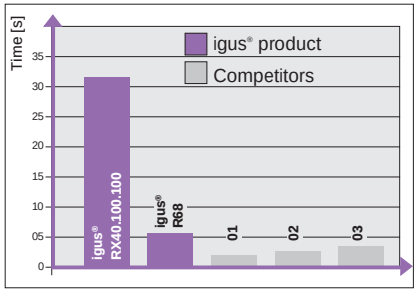
With the extreme tight igus® RX e-tube and the harnessed chainflex®-cables, the lifetime of this woodworking machine could be considerably increased. Because of dust and dirt, most after one month previously installed cables failed



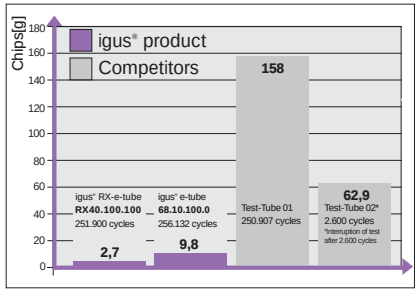
Chip testing by the igus® lab demonstrates the superior chip-proofing capability of igus® RX tubes...



...which is proving its value in the field. Shown here: in the immediate chip area of a machine tool



Test: Drowning - Various tube styles were drowned under water. For the RX e-tube, it takes more than 30 sec. to fill up with water

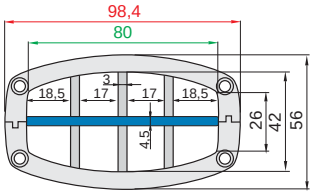


Test: Chip intrusion - Various tube styles were charged with a defined quantity of chips. Only 2,7 g of chips were found inside the RX e-tube after 251.900 cycles

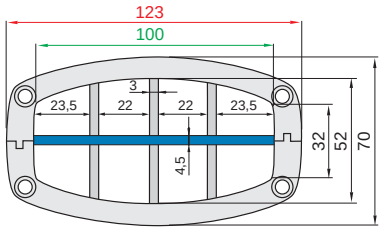
Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	Page
 **System RX - Extremely chip repellent e-tubes** Removable lids along outer radius							
RX32	26 / 42	80	98,4	56	80 - 150	1,7	582
RX40	32 / 52	100	123	70	100 - 300	1,8	588
RX48	35 / 62	120	147,6	84	120 - 150	2,1	594
RX56	41 / 73	140	172,2	98	140	2,3	600

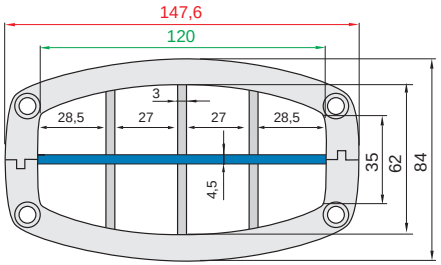
RX32



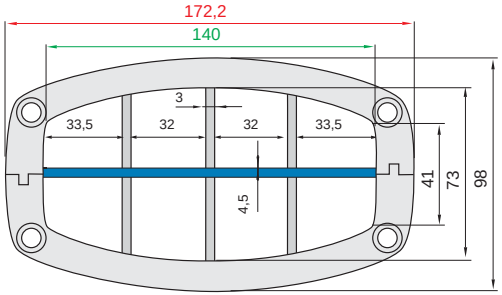
RX40



RX48



RX56



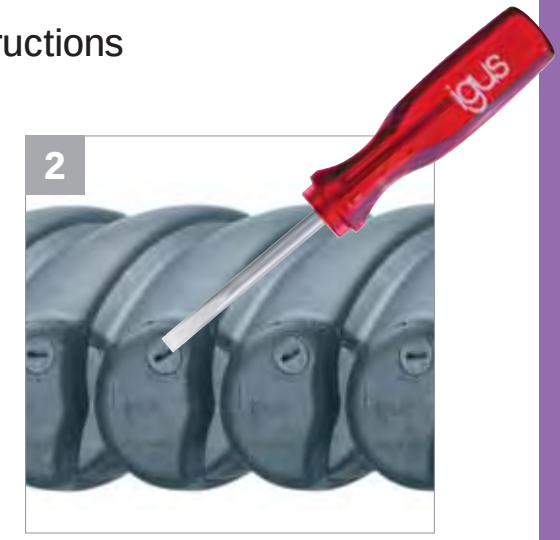
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

1



Open the excentric locking mechanism...

2



...by simply turning with a screwdriver

3



...then take away the lids along the outer radius - ready!

Technical Data, overview ▶ page 580

e-chain® links as single parts, overview ▶ page 580

Configuration options and order keys, overview ▶ page 581

You can find an assembly video on the web ▶ www.igus.eu/eu/RX_assembly

Technical Data - RX e-tubes

Speed / acceleration FL_G max.	max. 10 [m/s] / max. 100 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

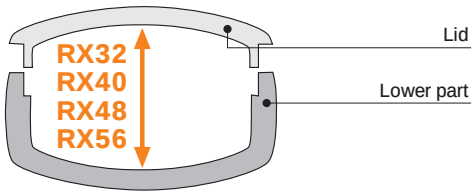
FL_G = with straight upper run FL_B = with permitted sag

Installation methods overview, maximum travels - RX e-tubes

e-tube Series	Unsupported application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application
RX32	≤ 1,20 m	upon request	upon request	upon request	upon request	upon request
RX40	≤ 1,50 m	upon request	upon request	upon request	upon request	upon request
RX48	≤ 1,80 m	upon request	upon request	upon request	upon request	upon request
RX56	≤ 2,00 m	upon request	upon request	upon request	upon request	upon request

Part No. 2-piece e-chain® links as single parts - RX e-tubes

2-piece, Removable lids along outer radius



*Lower parts: supplement Part No. with required Radius (*R*) Example: RX56.140.140

e-tube Series	e-tube Lid	e-tube Lower parts*
RX32	RX32.080.2	RX32.080.*R*
RX40	RX40.100.2	RX40.100.*R*
RX48	RX48.120.2	RX48.120.*R*
RX56	RX56.140.2	RX56.140.*R*

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Standard	*Reverse bending radius for circular movements*	*No burning-in of hot chips up to 850°C (1562° F)*	*ATEX / ESD classified e-chains® - Ⅱ 2 GD*
Part No. **Standard** RX e-tubes	Part No. **RBR** RX e-tubes	Part No. **HT-Material** RX e-tubes	Part No. **ESD-Material** RX e-tubes
RX56.140.*R*.0	RX56.140.*R1/R2*.0	RX56.140.*R*.0.**HT**	RX56.140.*R*.0.**ESD**
Delivery time* 24h or today!	(2-5 work days with express surcharge) Delivery time* 5-10 work days	Delivery time* 24h or today!	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-tube Series RX56 (1,0 m), color black, with mounting brackets and interior separation:

e-tube (1,0 m)	Please indicate e-tube length or number of links: 1,0 m or 18 links	RX56.140.140.0
+ Mounting brackets	1 set (+ tiewrap plates)	RX561.140.12
+ Interior separation	with 1 separator (central positioning) assembled every 2nd link	1 x RX56.1.1
+ Interior separation	with 2 separators (lateral positioning) assembled every 2nd link	2 x RX56.2.1

Order text: 1,0 m RX56.140.140.0 + RX561.140.12 + 1 x RX56.1.1 + 2 x RX56.2.1

Order key
RX56.140.140.0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Flush attachment:
Mounting bracket with strain relief option

Smooth:
Without undercuts, projecting edges or gaps

Dirt repellent:
Round contour prevents chip accumulation

Keep order:
Interior separation available

Quick assembly:
Removable lids along outer radius

Easy opening:
With embedded excentric locking mechanism

Safe:
Covered pin/bore connection and stop dogs

Extremely chip repellent

When to use the Series RX32:

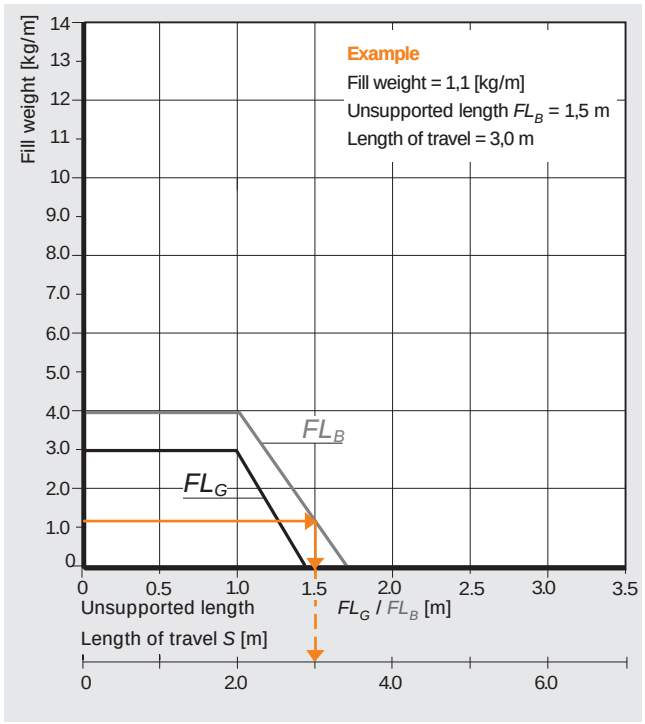
- If a small, chip protected e-tube without undercuts, projecting edges or gaps with an inner height of 42 mm is required
- Inner width 80 mm
- For unsupported lengths up to 1,7 m and fill weights up to 4,0 kg/m
- If easy access from the outside is required

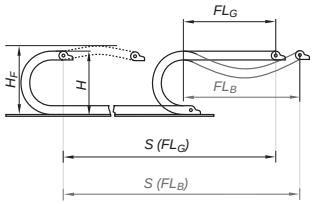
When to use a different igus® Series:

- For chip protection in gliding applications
► E4.1 Series R4.42, page 662
- If a particularly cost-effective solution is the main factor
► e-tube Series R157/R158, page 508

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

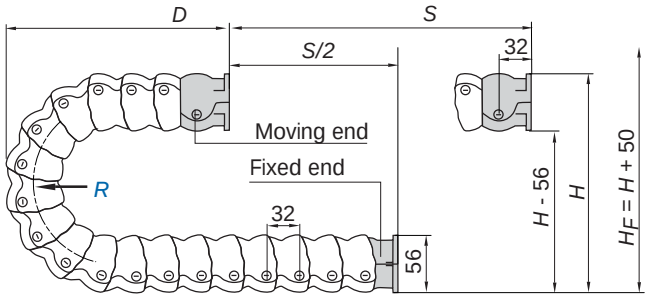
3D-CAD files, configurators, PDF ► www.igus.eu/eu/RX32





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted.
More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 580

Pitch = 32 mm/link
Links/m = 32 (1024 mm)
Chain length = $S/2 + K$

R	080	100*	125*	150	175*	200*	225*	250*
H	216	256	306	356	406	456	506	556
D	156	176	201	226	251	276	301	326
K	320	380	460	540	615	695	775	850

The required clearance height: $H_F = H + 50$ mm (with 0,5 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series RX32 | Removable lids along outer radius

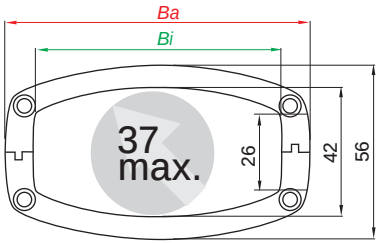
Removable lids along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	RX32 [kg/m]
RX32. 080 . R .0	80	98,4	| 080 | 100* | 125* | 150 | 175* | 200* | 225* | 250* |	≈ 1,23

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*). Example: RX32.080.080.0

Order key
RX32.080.080. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶page 580

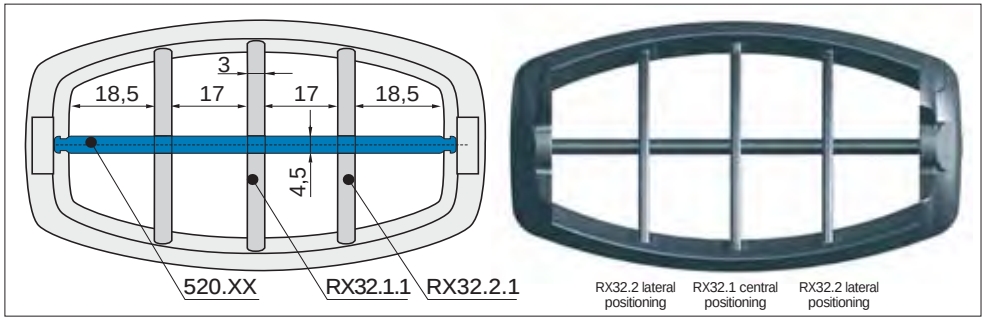
Configuration options and order keys, overview ▶page 581

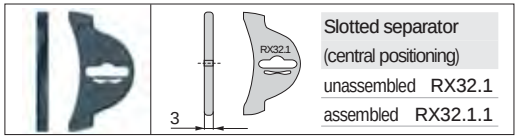
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Hot Chips up to 850°C

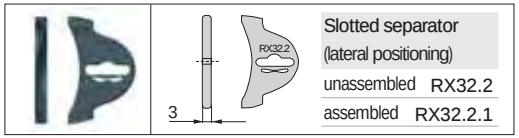
RX e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT



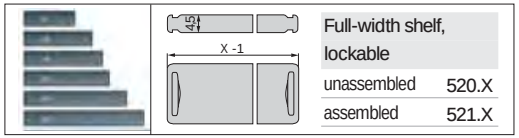




Slotted separator (central positioning)	
unassembled	RX32.1
assembled	RX32.1.1



Slotted separator (lateral positioning)	
unassembled	RX32.2
assembled	RX32.2.1



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Vertical separation - slotted separators:
RX32.1 (central positioning)
RX32.2 (lateral positioning)

Vertical separation of the large filling space by cable-friendly, polymer separators. Due to their slots, basic vertical/horizontal shelving arrangements are possible. In the standard configuration separators are assembled every 2nd e-chain® link!

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

Lockable full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
029	520.24	521.24	079	520.64	521.64
054	520.44	521.44	104	520.84	521.84

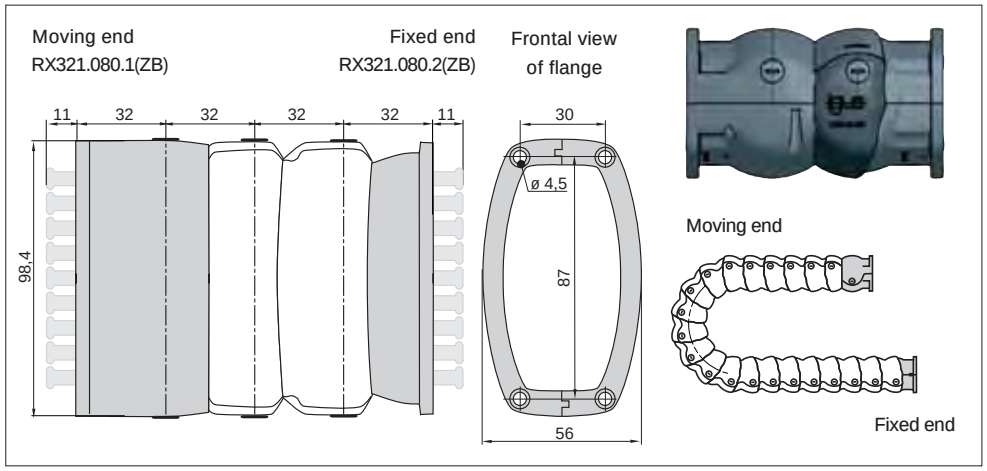


Optional: Support tray tool kit
For support of the lower run

- Open trough design for safe guidance of the RX e-tube
- Chips can fall through
- Available in different lengths

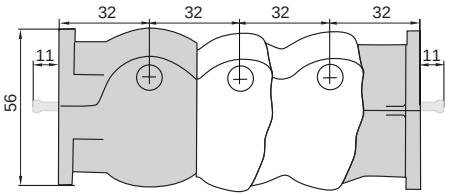
More information ▶www.igus.eu/eu/RX





Flange mounting brackets for RX32 | Polymer locking, 2-piece

e-tube Series	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Number of teeth
RX32. ▶	RX321.080.12ZB	RX321.080.12	8



Lateral view of igus® RX32 e-tube with flange mounting brackets and optional strain relief



2-piece mounting bracket with flange attachment



Flush attachment - here shown with strain relief



Tight strain relief block according to your specifications. Please consult igus®!

- Universally mountable with flange attachment capability
- Mounting brackets (optional with strain relief)
- Perfect fastening with flange mounting brackets
- Easy openable
- Optional M4 insert nuts

Part No. structure

RX321.080.12 ZB

- With integrated strain relief tiewrap plates
- Full set locking = 12
- Mounting bracket for selected width index

Single-part order

Mounting bracket Moving end

RX321.080.1 ZB (+ tiewrap plate)

Mounting bracket Fixed end

RX321.080.2 ZB (+ tiewrap plate)



Despite the restricted installation space, the RX e-tube is used in this compact turning machine with reverse bending radius (RBR)



Flush attachment:
Mounting bracket with strain relief option

Smooth:
Without undercuts, projecting edges or gaps

Dirt repellent:
Round contour prevents chip accumulation

Keep order:
Interior separation available

Quick assembly:
Removable lids along outer radius

Easy opening:
With embedded excentric locking mechanism

Safe:
Covered pin/bore connection and stop dogs

Extremely chip repellent

When to use the Series RX40:

- If a chip protected e-tube without undercuts, projecting edges or gaps with an inner height of 52 mm is required
- Inner width 100 mm
- For unsupported lengths up to 1,8 m and fill weights up to 6,0 kg/m
- If easy access from the outside is required

When to use a different igus® Series:

- If a particularly cost-effective solution is the main factor

► e-tube Series R167/R168, page 520

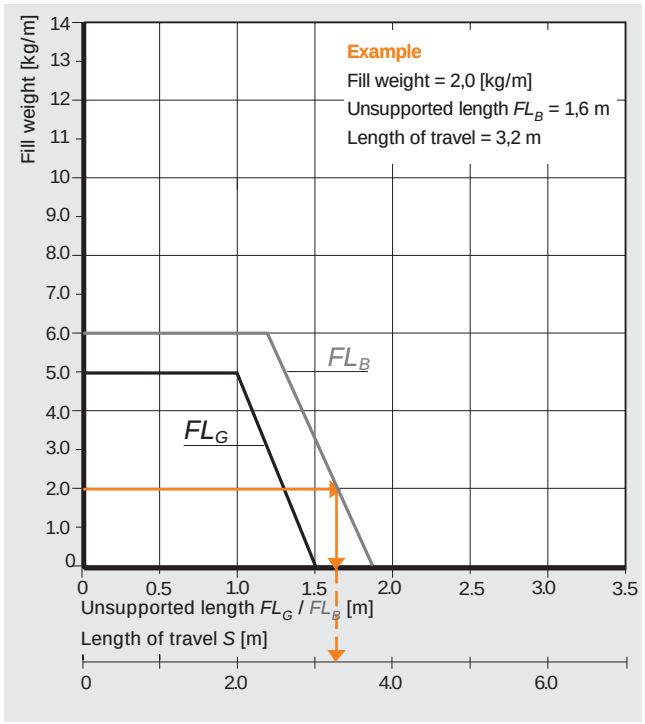
- For chip protection in gliding applications

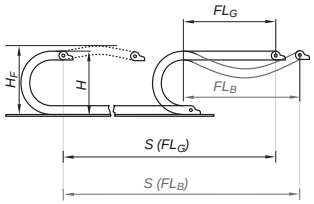
► E4.1 Series R4.56, page 678

iF product design award
2010 igus® Series RX40

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/RX40

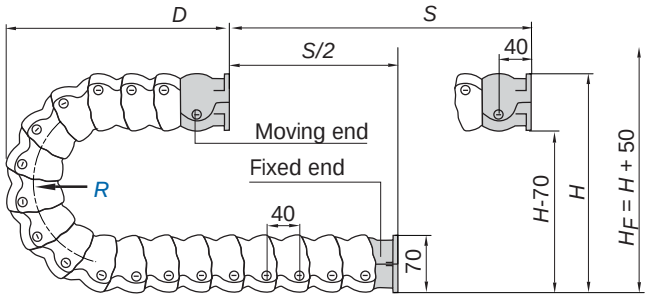




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted.

More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 580

Pitch = 40 mm/link
Links/m = 25 (1000 mm)
Chain length = $S/2 + K$

R	100	125	150	175	200	225	250	275	300
H	270	320	370	420	470	520	570	620	670
D	195	220	245	270	295	320	345	370	395
K	395	475	555	630	710	790	870	945	1025

The required clearance height: $H_F = H + 50$ mm (with 0,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



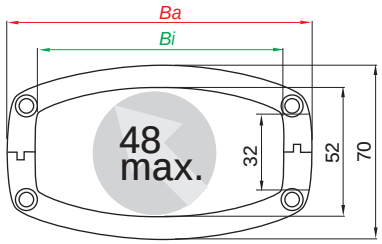
Series RX40 | Removable lids along outer radius

Removable lids along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	RX40 [kg/m]
RX40.100.R.0	100	123	| 100 | 125 | 150 | 175 | 200 | 225 | 250 | 275 | 300	≈ 1,89

Supplement Part No. with required radius (*R*). Example: RX40.100.100.0

Order key
RX40. 100. 100. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶page 580

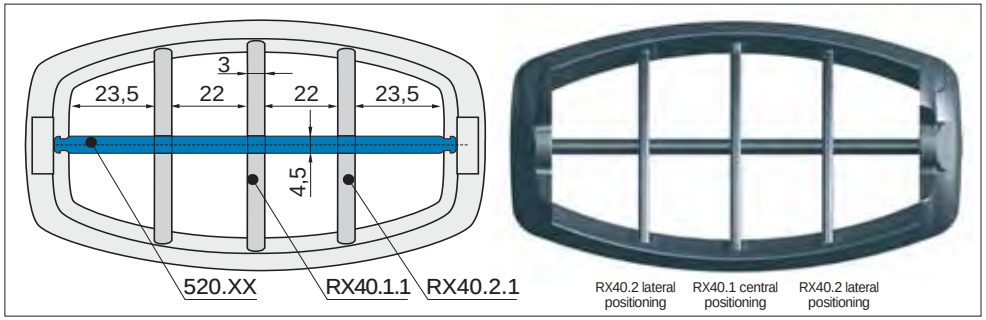
Configuration options and order keys, overview ▶page 581

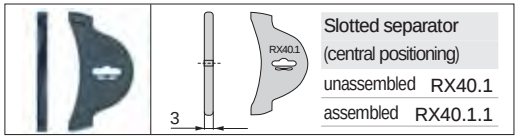
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

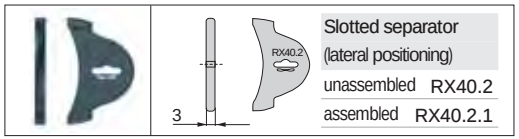
Hot Chips up to 850°C

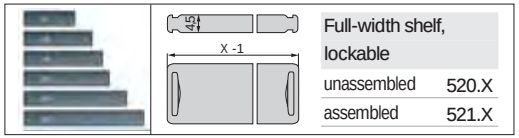
RX e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT











Vertical separation - slotted separators:
RX40.1 (central positioning)
RX40.2 (lateral positioning)

Vertical separation of the large filling space by cable-friendly, polymer separators. Due to their slots, basic vertical/horizontal shelving arrangements are possible. In the standard configuration separators are assembled every 2nd e-chain® link!

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

Lockable full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
029	520.29	521.29	079	520.79	521.79
054	520.54	521.54	104	520.104	521.104

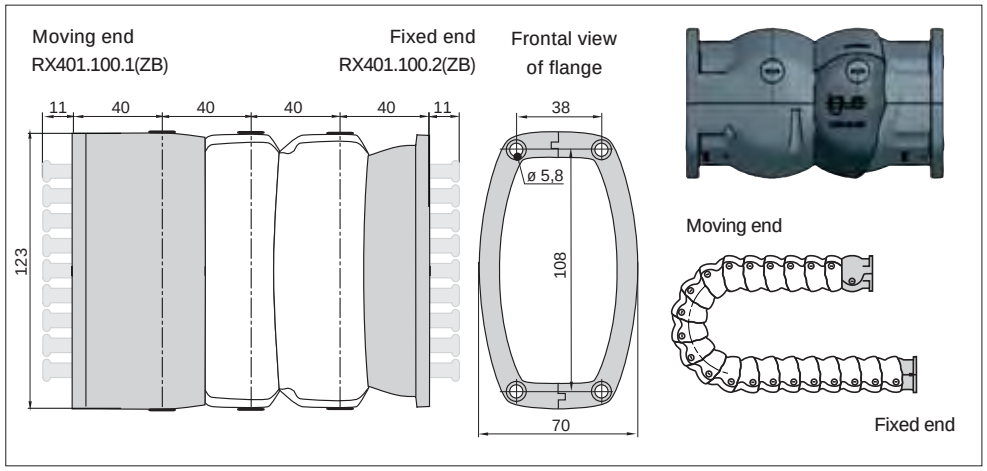


Optional: Support tray tool kit
For support of the lower run

- Open trough design for safe guidance of the RX e-tube
- Chips can fall through
- Available in different lengths

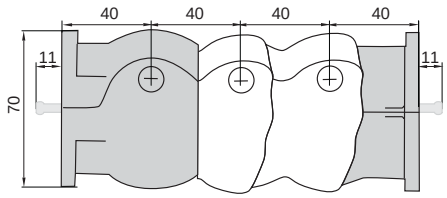
More information ▶www.igus.eu/eu/RX





Flange mounting brackets for RX40 | Polymer locking, 2-piece

e-tube Series	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Number of teeth
RX40. ▶	RX401.100.12ZB	RX401.100.12	10



Lateral view of igus® RX40 e-tube with flange mounting brackets and optional strain relief



2-piece mounting bracket with flange attachment



Flush attachment - here shown with strain relief



Tight strain relief block according to your specifications. Please consult igus®!

- Universally mountable with flange attachment capability
- Mounting brackets (optional with strain relief)
- Perfect fastening with flange mounting brackets
- Easy openable
- Optional M5 insert nuts

Part No. structure
RX401.100.12 ZB
With integrated strain relief tiewrap plates
Full set locking = 12
Mounting bracket for selected width index

Single-part order
Mounting bracket Moving end
RX401.100.1 ZB (+ tiewrap plate)
Mounting bracket Fixed end
RX401.100.2 ZB (+ tiewrap plate)



The almost one hundred percent tight RX e-tube is used in a CNC precision turning and milling center



Flush attachment:
Mounting bracket
(strain relief upon request)

Smooth:
Without undercuts,
projecting edges or gaps

Dirt repellent:
Round contour prevents
chip accumulation

Keep order:
Interior separation
available

Quick assembly:
Removable lids
along outer radius

Easy opening:
With embedded
excentric locking
mechanism

Safe:
Covered pin/bore
connection and
stop dogs

Extremely chip repellent

When to use the Series RX48:

- If a chip protected e-tube without undercuts, projecting edges or gaps with an inner height of 62 mm is required
- Inner width 120 mm
- For unsupported lengths up to 2,1 m and fill weights up to 9,0 kg/m
- If easy access from the outside is required

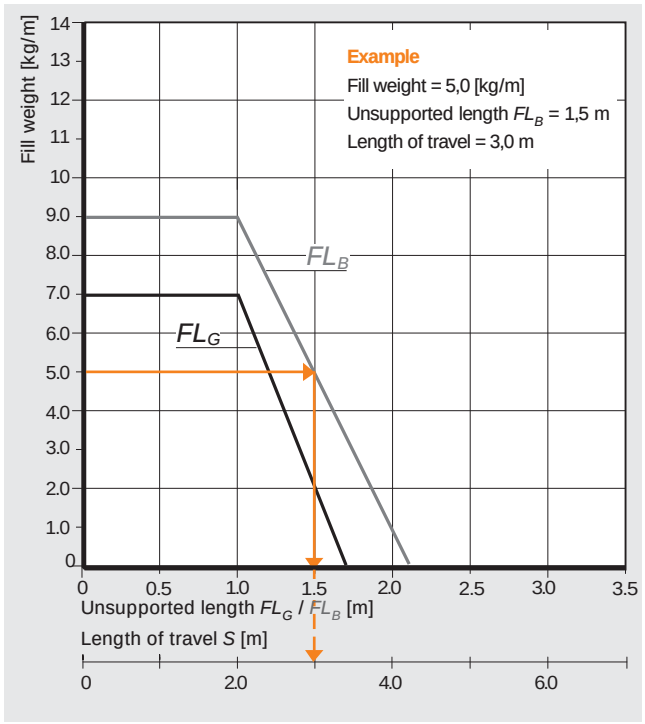
When to use a different igus® Series:

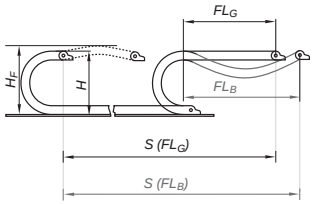
- For chip protection in gliding applications

► E4/light Series R18840, page 784

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/RX48

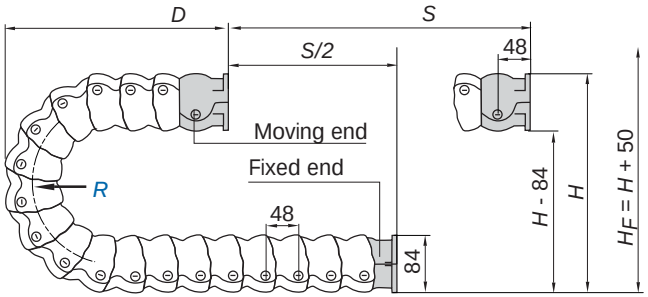




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted.

More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 580

Pitch = 48 mm/link
Links/m = 21 (1008 mm)
Chain length = $S/2 + K$

R	120	150	175*	200*	225*	250*	275*	300*	325*
H	324	384	434	484	534	584	634	684	734
D	234	264	289	314	339	364	389	414	439
K	475	570	650	725	805	885	960	1040	1120

The required clearance height: $H_F = H + 50$ mm (with 0,5 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



Series RX48 | Removable lids along outer radius

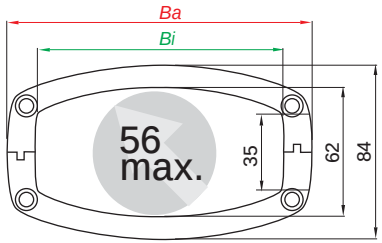
Removable lids along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	RX48 [kg/m]
RX48. 120 . R.0	120	147,6	120 | 150 | 175*| 200*| 225*| 250*| 275*| 300*| 325*|	≈ 2,76

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (R). Example: RX48.120.120.0

Order key
RX48. 120. 120. 0

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



e-chain® links as single parts, overview ▶page 580

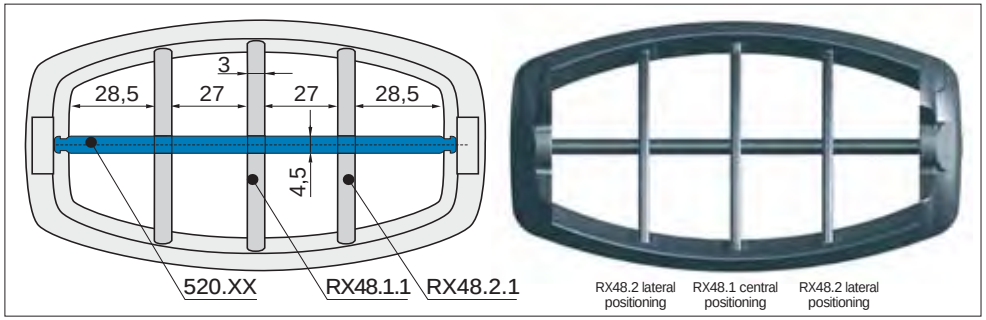
Configuration options and order keys, overview ▶page 581

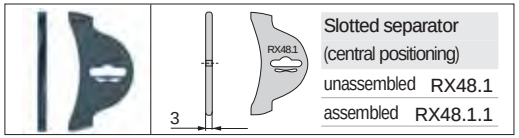
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

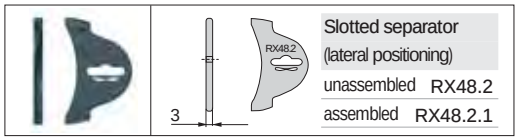
Hot Chips up to 850°C

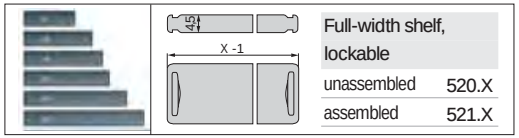
RX e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶www.igus.eu/eu/HT











Vertical separation - slotted separators:
RX48.1 (central positioning)
RX48.2 (lateral positioning)

Vertical separation of the large filling space by cable-friendly, polymer separators. Due to their slots, basic vertical/horizontal shelving arrangements are possible. In the standard configuration separators are assembled every 2nd e-chain® link!

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

Lockable full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
034	520.34	521.34	094	520.94	521.94
064	520.64	521.64	124	520.124	521.124

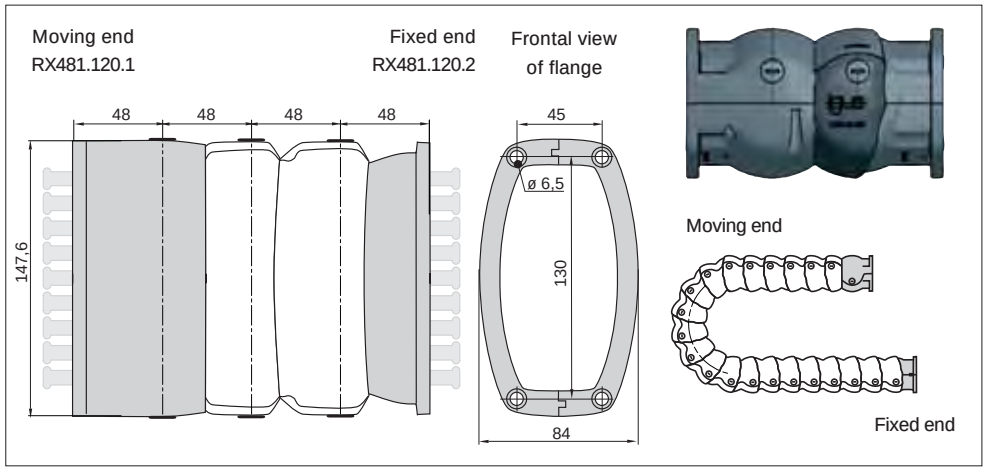


Optional: Support tray tool kit
For support of the lower run

- Open trough design for safe guidance of the RX e-tube
- Chips can fall through
- Available in different lengths

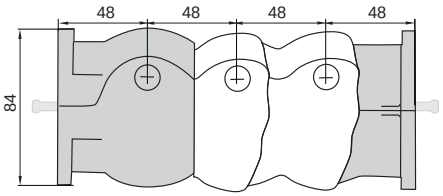
More information ▶www.igus.eu/eu/RX





Flange mounting brackets for RX48 | Polymer locking, 2-piece

e-tube Series	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Number of teeth
RX48. ▶	upon request	RX481.120.12	upon request



Lateral view of igus® RX48 e-tube with flange mounting brackets and optional strain relief (upon request)



2-piece mounting bracket with flange attachment



Flush attachment - here shown with strain relief. Tiewrap plates upon request. Please consult igus®!



Tight strain relief block according to your specifications. Please consult igus®!



- Universally mountable with flange attachment capability
- Mounting brackets (optional with strain relief)
- Perfect fastening with flange mounting brackets
- Easy openable
- Optional M6 insert nuts

Part No. structure
RX481.120.12

Single-part order
Mounting bracket Moving end
RX481.120.1
Mounting bracket Fixed end
RX481.120.2



Supply of the main spindle in a tooling machine with igus® RX e-tube.
The rounded contour of the energy supply repels all kind of chips



Flush attachment: Mounting bracket (strain relief upon request)

Smooth: Without undercuts, projecting edges or gaps

Dirt repellent: Round contour prevents chip accumulation

Keep order: Interior separation available

Quick assembly: Removable lids along outer radius

Easy opening: With embedded excentric locking mechanism

Safe: Covered pin/bore connection and stop dogs

Extremely chip repellent

When to use the Series RX56:

- If a chip protected e-tube without undercuts, projecting edges or gaps with an inner height of 73 mm is required
- Inner width 140 mm
- For unsupported lengths up to 2,3 m and fill weights up to 11 kg/m
- If easy access from the outside is required

When to use a different igus® Series:

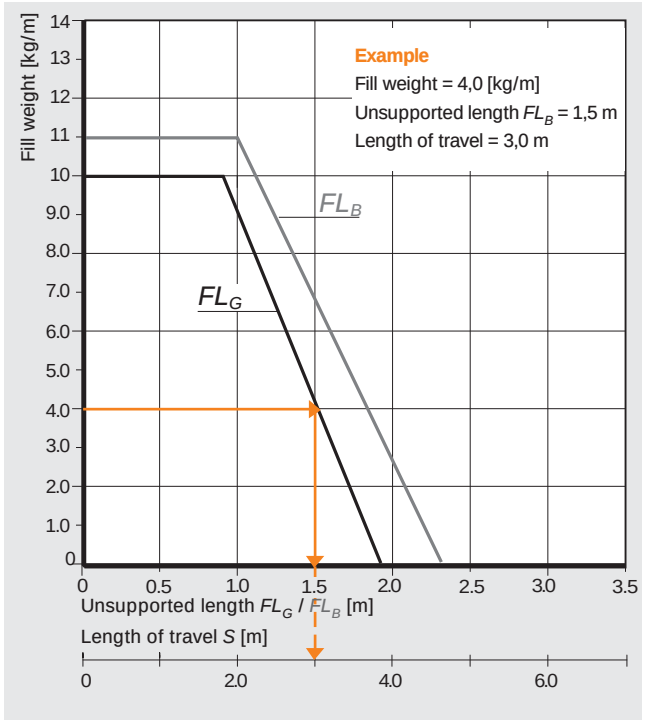
- For chip protection in gliding applications

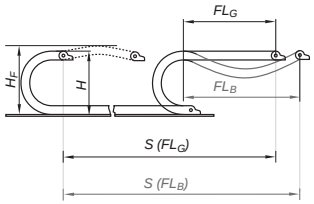
► System E4/light, Series 19050, page 816

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/RX56

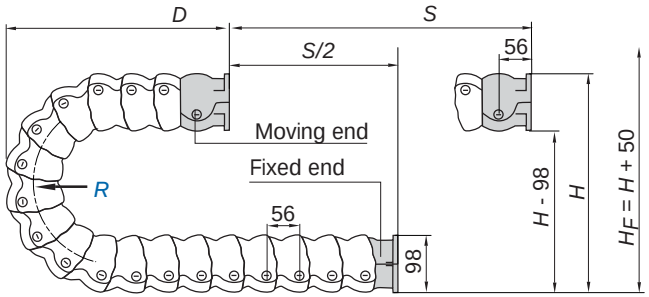




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted.

More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 580

Pitch = 56 mm/link
Links/m = 18 (1008 mm)
Chain length = $S/2 + K$

R	140	175*	200*	225*	250*	275*	300*	325*	350*
H	378	448	498	548	598	648	698	748	798
D	273	308	333	358	383	408	433	458	483
K	555	665	745	820	900	980	1055	1135	1215

The required clearance height: $H_F = H + 50$ mm (with 0,5 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



Series RX56 | Removable lids along outer radius

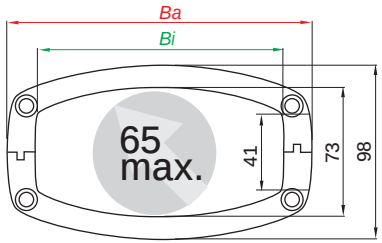
Removable lids along outer radius	Bi [mm]	Ba [mm]	R Bending radii [mm]	RX56 [kg/m]
RX56.140.R.0	140	172,2	| 140 | 175* | 200* | 225* | 250* | 275* | 300* | 325* | 350* |	≈ 3,83

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*). Example: RX56.140.140.0

Order key
RX56. 140. 140. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



e-chain® links as single parts, overview ▶ page 580

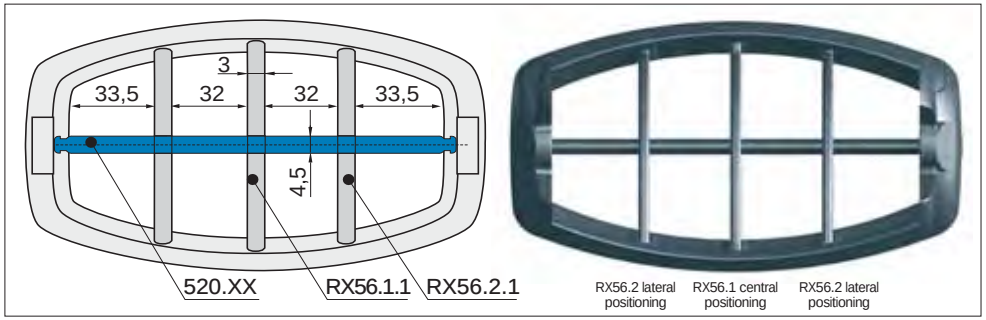
Configuration options and order keys, overview ▶ page 581

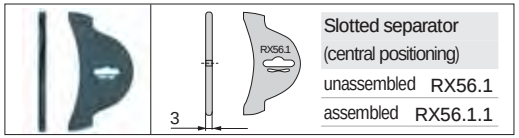
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

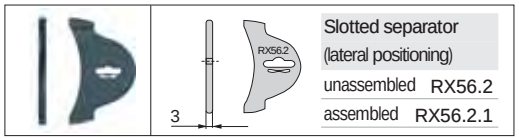
Hot Chips up to 850°C

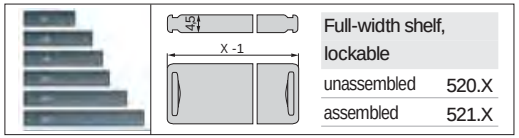
RX e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ▶ www.igus.eu/eu/HT











Vertical separation - slotted separators:
RX56.1 (central positioning)
RX56.2 (lateral positioning)

Vertical separation of the large filling space by cable-friendly, polymer separators. Due to their slots, basic vertical/horizontal shelving arrangements are possible. In the standard configuration separators are assembled every 2nd e-chain® link!

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

Lockable full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
039	520.39	521.39	109	520.109	521.109
074	520.74	521.74	144	520.144	521.144

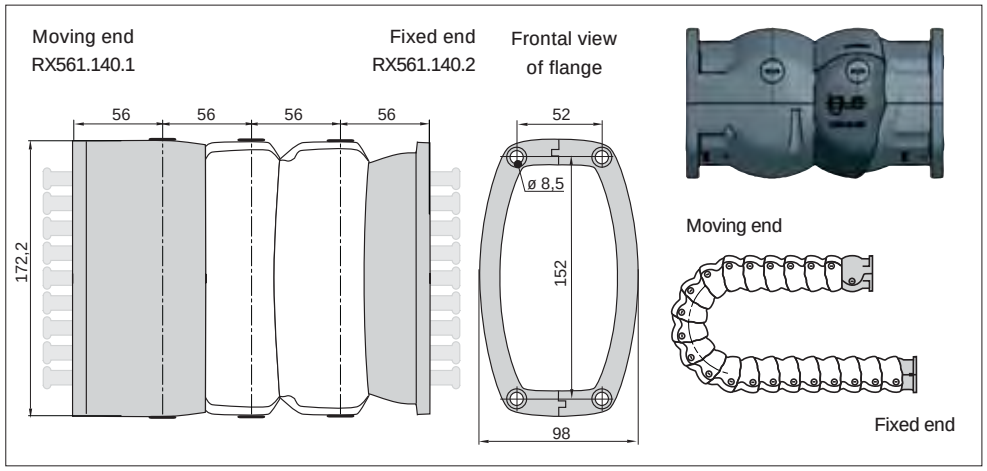


Optional: Support tray tool kit
For support of the lower run

- Open trough design for safe guidance of the RX e-tube
- Chips can fall through
- Available in different lengths

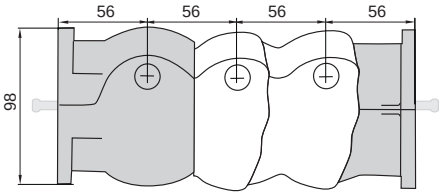
More information ▶ www.igus.eu/eu/RX





Flange mounting brackets for RX56 | Polymer locking, 2-piece

e-tube Series	Part No. full set **with tiewrap plates**	Part No. full set **without tiewrap plates**	Number of teeth
RX56. ▶	upon request	RX561.140.12	upon request



Lateral view of igus® RX48 e-tube with flange mounting brackets and optional strain relief (upon request)



2-piece mounting bracket with flange attachment



Flush attachment - here shown with strain relief. Tiewrap plates upon request. Please consult igus®!



Tight strain relief block according to your specifications. Please consult igus®!

- Universally mountable with flange attachment capability
- Mounting brackets (optional with strain relief)
- Perfect fastening with flange mounting brackets
- Easy openable
- Optional M6 insert nuts

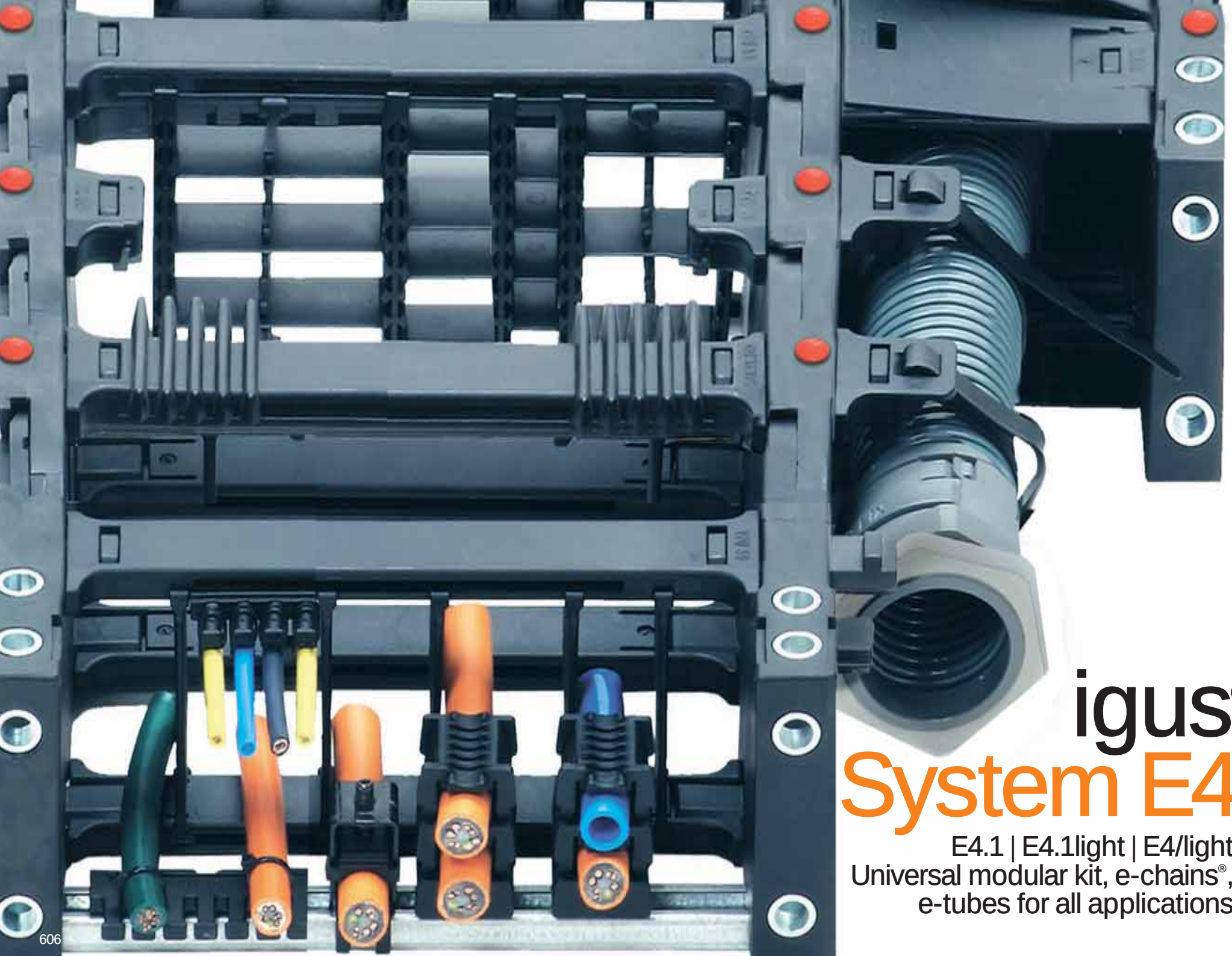
Part No. structure
RX561.140.12
Full set locking = 12
Mounting bracket for selected width index

Single-part order
Mounting bracket Moving end
RX561.140.1
Mounting bracket Fixed end
RX561.140.2



RX e-tubes, no undercuts and awkward edges. Chips cannot be embedded on the concealed pin/hole mounting brackets and stop dogs. Here RX e-tube in long-term chip test





igus®
System E4

E4.1 | E4.1light | E4/light
Universal modular kit, e-chains®,
e-tubes for all applications



Standard for almost all applications - System E4.1

Long travels, large unsupported lengths, simple installation and quiet operation

- Optimum lateral stability and high push/pull force on long travels due to the undercut design
- Ideal for side-mounted applications
- Large unsupported lengths due to stable, double stop dog
- Noise dampening pads as additional noise-reducing option
- Outer and inner links for fast assembly

► **www.igus.eu/eu/E4.1**



High dynamics and cost effective - E4.1 light New in this catalog

The E4.1 light series incorporates the advantages of both E2/000 and E4.1 series

- Less weight, enhanced dynamics possible
- Optimized interior-exterior dimensions ratio due to narrow outer links
- Inner diameter completely accessible for easy filling
- Crossbars are swivelable on both sides and openable in inner- and outer radius
- Cost-effective
- Short assembly time

► **www.igus.eu/eu/E4.1L**

System E4 | Universal modular kit for all applications



Light and stable - System E4/light

Low weight, stable and cost-effective. Smaller outer links for reduction of weight and costs

- For short travels and vertical hanging/standing applications
- With undercut for high stability
- Optimized ratio of interior and exterior dimension

► **www.igus.eu/eu/E4/light**

E4/00 and E4/4 are still available!



System E4/00 - The predecessor of the E4.1 system for low-noise operation and simple installation. E4/00 continues to be available on the long term. Please select the igus® E4.1 system for new designs ► **www.igus.eu/eu/E4-00**



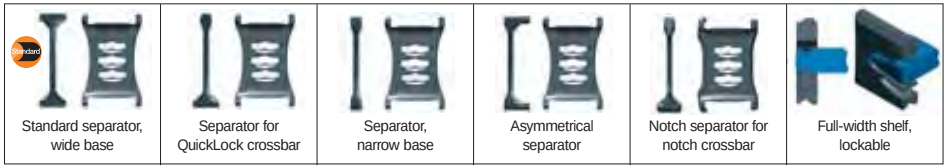
System E4/4 - The predecessor of the E4.1 system for long travels and side-mounted applications. E4/4 continues to be available on the long term. Please select the igus® E4.1 system for new designs ► **www.igus.eu/eu/E4-4**



Legacy products are available over the long-term

For new designs, we recommend the equivalent, technically improved, and identical e-chain® series. The entire product range is available over the long-term. The entire product range can be found on-line using the corresponding quicklink, along with all relevant data for odering and configuring. Or in the separate igus® classics catalogue ► **www.igus.eu/eu/classics**

New generation interior separation - Standard for new designs



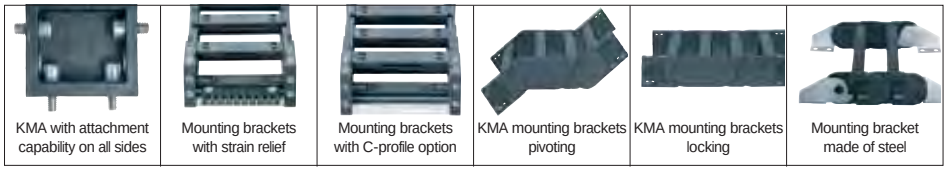
Standard separator, wide base | Separator for QuickLock crossbar | Separator, narrow base | Asymmetrical separator | Notch separator for notch crossbar | Full-width shelf, lockable

Previous interior separation - still available



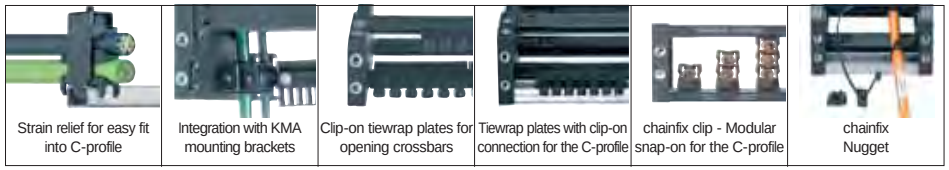
Separator, wide base | Separator, slotted | Middle plate for e-chains® | Side plate for e-chains® | Spacer for e-chains® | Clip-on shelf

Mounting brackets



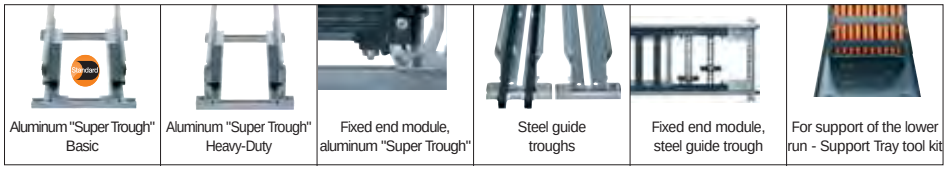
KMA with attachment capability on all sides | Mounting brackets with strain relief | Mounting brackets with C-profile option | KMA mounting brackets pivoting | KMA mounting brackets locking | Mounting bracket made of steel

chainfix strain relief elements



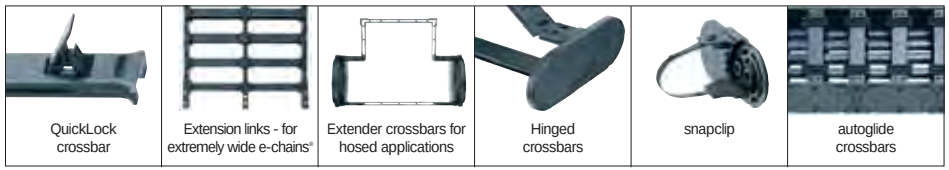
Strain relief for easy fit into C-profile | Integration with KMA mounting brackets | Clip-on tiewrap plates for opening crossbars | Tiewrap plates with clip-on connection for the C-profile | chainfix clip - Modular snap-on for the C-profile | chainfix Nugget

Guide troughs



Aluminum "Super Trough" Basic | Aluminum "Super Trough" Heavy-Duty | Fixed end module, aluminum "Super Trough" | Steel guide troughs | Fixed end module, steel guide trough | For support of the lower run - Support Tray tool kit

Additional features ► use product link on each page for details



QuickLock crossbar | Extension links - for extremely wide e-chains® | Extender crossbars for hosed applications | Hinged crossbars | snapclip | autoglide crossbars

Application Profile

E4 System	E4.1	E4.1 light	E4/light
Application			
High tensile forces	++	o	o
High shearing forces	++	o	o
Long unsupported length through special stop dogs, undercut	++	+	+
Unsupported length, straight	++	o	o
Unsupported length, with sag	++	+	+
Unsupported, side-mounted	++	+	+
Gliding, side-mounted	++	+	+
High speeds	++	++	++
High accelerations	++	++	++
Ratio of inner dimension to outer dimension (space required)	+	++	++
Low fill weight required	+	++	++
Zig-zag applications	+	–	–
Rotary motions	++	o	o
Hanging and standing installation	++	++	++
Installation space	++	++	++
Environment			
Rolling noise generation	++	+	+
Gliding noise generation	++	–	+
High, constant humidity and temperature	++	–	–
Dirt resistance	++	++	++
Chip protection	++	–	+
Insensitivity to vibration and shock	++	–	–
Closed exterior and stop dogs	++	++	++
ESD, ATEX (Special version in conductive material)	++	+	++
Cleanroom	++	++	++
Service life			
Unsupported, straight	++	++	++
Unsupported, with sag	++	+	+
Gliding	++	+	+
Increase service life of cable	++	++	++
Installation			
Opening/closing	++	++	++
Separating/joining	+	++	+

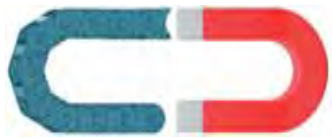
++ very well-suited
+ well-suited
o conditionally suitable
– not suitable

Magnetically detectable plastic e-chains®

For the food- and tobaccoindustry | New in this catalog

● The material igumid DT is detected to the tiniest fragment all common metal detection systems and can therefore be selected automatically ● Particles as small as 1.0 mm can be recognized for fragments passing at speeds of 20 m/min

More information ►www.igus.eu/eu/detectable-chain





igus® E4.1

The Standard of the E4 program!
igus® e-chains® and e-tubes for almost all applications

ONE e-chain® series for almost all applications - System E4.1

The E4.1 system combines all the advantages of its three predecessors. E4.1 profits from 25 years of igus® experience in 4-piece e-chains® and is the best igus® e-chain® in the product range. The E4.1 series is more stable with the same or smaller dimensions than their predecessors. Almost all accessory components and mounting dimensions are identical. With the E4.1, the service life of your application can be still increased with lower costs.

- Undercut design for ideal lateral stability, high shear force on long travels and for large unsupported lengths
- Well suited for side-mounted applications
- Noise dampening pads
- Outer and inner links for quick assembly, with or without pretension
- Dirt repellant, with smooth, wear-resistant surface and side wear pads

Typical industries and applications

● Crane ● Indoor crane ● Composting plants ● Sewage plants ● Machine tools ● General mechanical engineering ● Materials handling technology ● Refrigeration engineering ● Construction machinery ● Wood working ● Any type of machines ● Robotics and handling systems



IPA Qualification Certificate - Report IG 1303-640-1:
ISO Class 2, according to DIN EN ISO 14644-1
for System E4.1, Series E4.32.10.063.0.CR
at v = 0,5 / 1,0 / 2,0



41 dB(A) tested at igus® lab, v = 1,8 m/s
unsupported, Series E4.21.060.038.0



ESD classification: Electrically conductive
ESD/ATEX version upon request



e-tubes available as special design with
HT material for 850°C (1562° F) hot chips





The E4.42 Series in a machine tool, completely assembled with igus® chainflex® cables

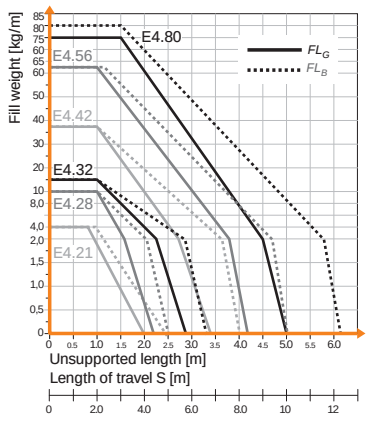
Application	Design feature
Large unsupported length	Special stop dogs, undercut
Low-noise, unsupported gliding	Integrated "brake", smooth gliding surfaces - rubber dampers optional
Hanging and standing installation	Torsional stability through undercut, "no camber" option by flipping the outer link
Long travels	High push/pull forces through undercut design and stop dogs, large and smooth gliding surfaces
Side-mounted, unsupported	Undercut increases unsupported length by about 30% mounted on the side
Fast assembly	"Inner link/outer link" design
Rotary motion	Through simple flipping of links or easy modification, gliding surfaces on the side
Increase service life of cable	Smooth, wide solid polymer support for cables, many quick-mounting shelving options
Increase service life of e-chains®	Large pins, optimized material, high stability
ESD, ATEX	Undercut for secure contact surfaces in motion (special version in conductive material)
Operation under dirt, chips, humidity	Undercut design prevents e-chain® breakage, dirt-resistant design

E4.1 e-chains®: You can "do away" with expensive additional components

- Up to 133% more tensile strenght
- Up to 33% more unsupported length*. Save in the purchase cost, as you can now use smaller e-chains®
- Due to the large unsupported lengths or loads, oversized energy supply systems can be optimized with the igus® E4.1 system
- Best of class - Utmost stability** compared to other polymer e-chains®

* Compared to the igus® E4/00 system series

** Test at igus® laboratory: Sag tested with defined weight and length over 96h



Contents, selection table and assembly instructions ► page 620

The design principle of the undercut combined with the inner/ outer-link solution - Series E4.1 - All applications with one e-chain®

Smooth, cable-friendly inner surfaces

Low noise operation through integrated "brake" on the radial stop dogs

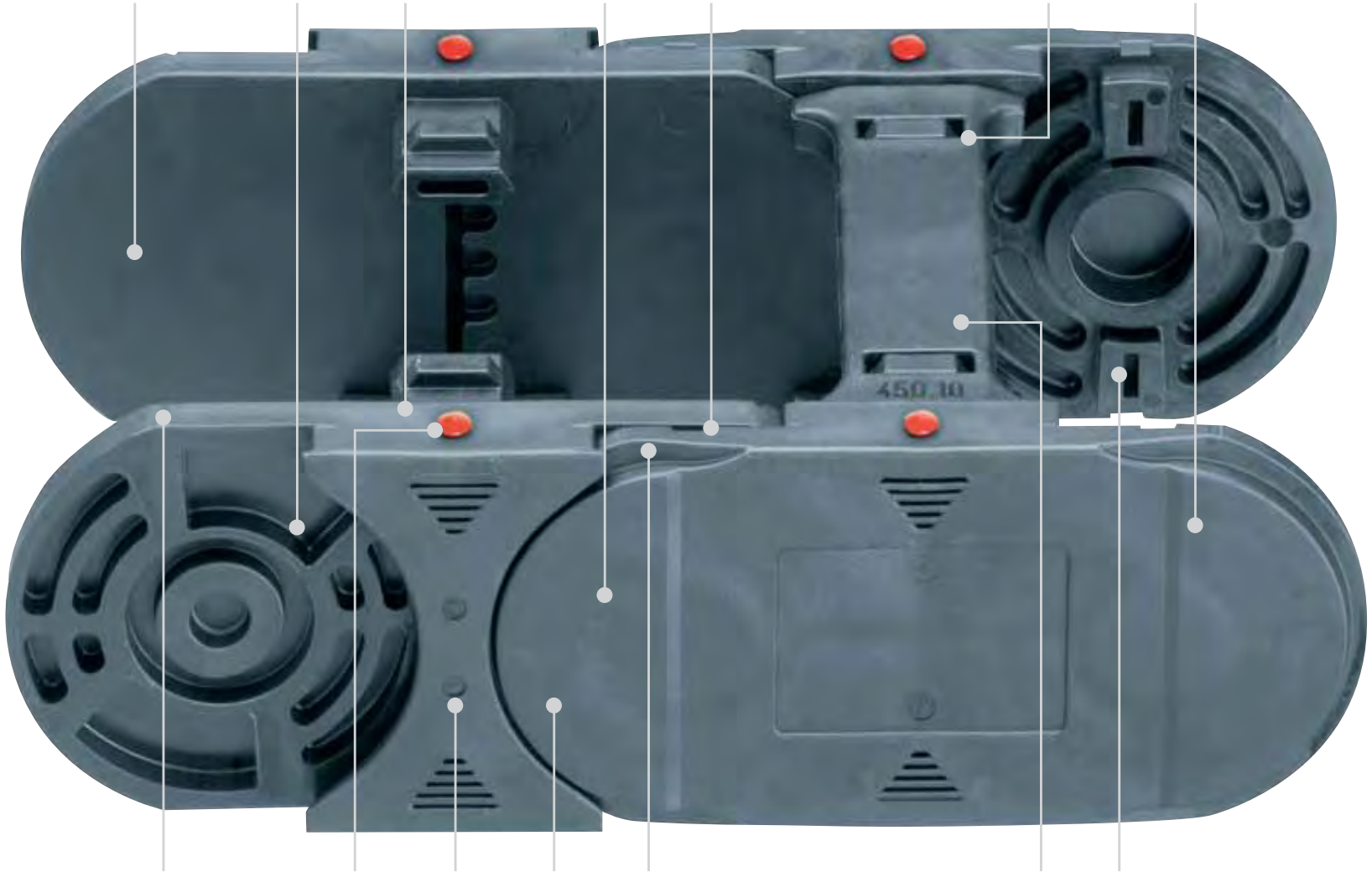
Smooth and wear-resistant gliding surface - no additional gliding shoe

Lateral wear pads for a long service life (also for side-mounted applications)

Perfect ESD suitability due "tongue and groove" design

Stable crossbars with double locking

Types with or without pretension due to flipping outer links



Special e-chain® link contour provide for low rolling noise

Additional noise dampening pads

Straight run and fast assembly due to inner- / outer-link design

Very high stiffening and carrying capacity when shear forces appear due to the undercut design

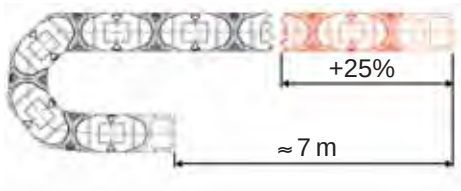
Cable-friendly, rounded crossbar

Vertical stop dog system for larger unsupported lengths

E4.1 | Utilized advantages of the approved E4 Series

Still more unsupported length with the igus® XXL plastic*



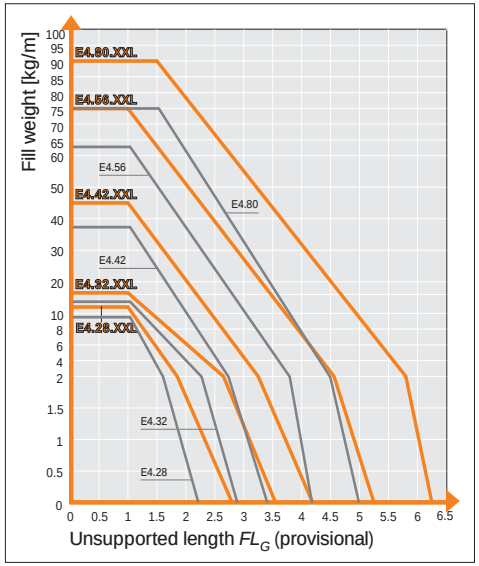


Up to 25% more unsupported length

The new igus® XXL material for igus® E4.1 e-chains® offers you the potential to implement 7 m of travel without troughs and supports, or to implement higher fill weights with constant unsupported length.

- Larger unsupported lengths
- Higher fill weights
- Eliminates guide troughs and supports
- Less space requirement

*optional upon request



For detailed information: www.igus.eu/eu/XXL-Material

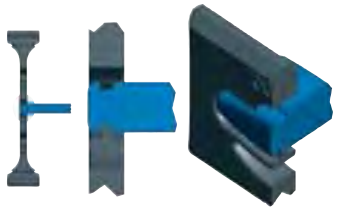




Realize a better separation,
with fewer, standardized parts

Optimized and extended interior separation range for E4.1.
The very cable friendly design increases your cables
cycle life even further.

- Same separation for e-chains® and e-tubes
- Safe force closure connection
- Cable friendly plastic crossbars, optimized for low cable wear and long cycle life
- Fast assembly



For horizontal separation: full-width shelves

- Shelf locks safely into separators on both ends due to special locking clip
- Separators can be moved freely over the shelf in horizontal direction
- No side plates necessary
- Multilayer separation continous or in single divisions with only one part possible



Notch crossbars, notch bottoms and lids

New standardized crossbar. Notch teeth in 5 mm gaps on the crossbar ensure safe fit against the notch separators, for side-mount applications. The additional, plane surface scaling makes exact positioning of the separator easy, without increasing cable wear.

- No additional spacers necessary for side-mounted applications
- Approx. 25 kg holding force of separator in raster position
- Clearly visible, plane scaling
- Clearly notches and scaling on crossbars for e-chains® and bottoms and lids of e-tubes



QuickLock Crossbar "Q"

- One-click opening of the QuickLock crossbar:
  = 25 % faster assembly compared to standard crossbars
- Faster assembly with less effort
- Free access to the top, e-chain® can remain in the guide trough

► www.igus.eu/eu/E4quickassembly



Cables last up to 4 times longer

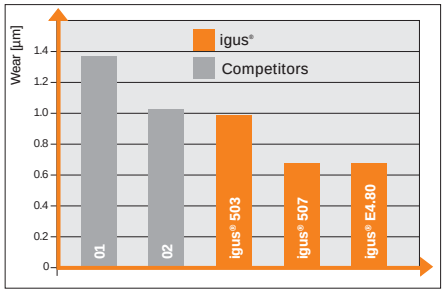
The new separators can increase cycle life of cables by a factor of 4 - their rounded base ensures a smooth junction to the crossbar and avoids edges, which could increase cable wear. A strong force closure fit for e-chains® and e-tubes. Tests in the igus® lab have shown the lowest cable wear in e-chains® with the new plastic separators.



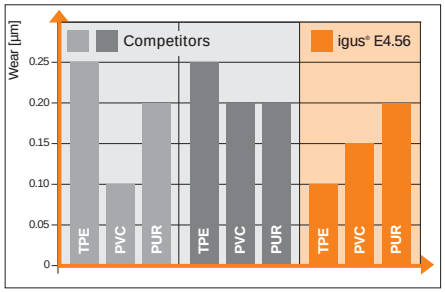
Longer life with Polymer Crossbars

Tests in the igus® lab have shown, that minimized cable wear is achieved in e-chains® with plastic crossbars which are designed cable friendly, with rounded contours. All igus® e-chains®/e-tubes are equipped with plastic crossbars. Where it makes sense, other material can be considered, subject to prior test runs. The locking strength of igus® crossbars is also convincing. Crossbars from different materials underwent a pull-out strength test in the igus® lab. The locking strength is evident. Also, plastic crossbars are elastic yet very torsion resistant and do not plastically deform, like i.e. aluminum crossbars.

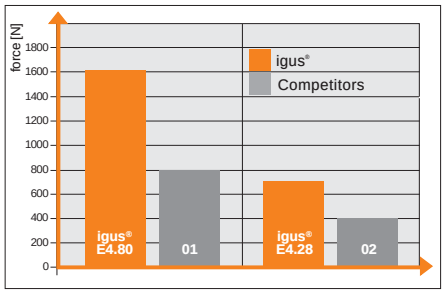
Cable wear tests at igus® lab



Wear on plastic separators:
Wear could be reduced to nearly half
with the new separators



Wear on plastic crossbars:
Longest service life
with igus® polymer crossbars



Retention force comparison polymer-/aluminum-crossbars - longest service life!
Maximum holding force of the crossbars

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
							
Crossbars every link Recommemdation: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)							
E4.21	21	30 - 140	44 - 154	28	38 - 200	2,50	626
E4.28	28	40 - 300	60 - 320	42	55 - 250	2,50	634
E4.32	32	50 - 400	73 - 423	54	63 - 300	3,30	646
E4.42	42	50 - 400	76 - 426	64	75 - 350	4,00	662
E4.56	56	50 - 600	84 - 634	84	135 - 500	5,00	678
E4.80	80	50 - 600	100 - 650	108	150 - 1000	6,20	694
E4.112 New*	112	50 - 600	102 - 652	140	200 - 1000	6,50	710
800	200	200 - 600	260 - 660	236	325 - 1000	8,00	724
840	204	100 - 563	160 - 623	236	325 - 1000	8,00	732
E4.350	350	400 - 800	540 - 940	450	500 - 1000	6,20	740
							
Crossbars every 2nd link Standard: ● Suitable for nearly all applications ● Lower price							
H4.32	32	50 - 400	73 - 423	54	63 - 300	3,30	646
H4.42	42	50 - 400	76 - 426	64	75 - 350	4,00	662
H4.56	56	50 - 600	84 - 634	84	135 - 500	5,00	678
H4.80	80	50 - 600	100 - 650	108	150 - 1000	6,20	694
H4.112 New*	112	50 - 600	102 - 652	140	200 - 1000	6,50	710
							
e-tubes Recommemdation: ● Excellent cable protection ● Lids along the entire inner radius are completely removable							
R4.28	28	50 - 300	70 - 320	42	75 - 250	2,50	634
R4.32	32	50 - 300	73 - 323	54	125 - 300	3,30	646
R4.42	42	50 - 300	76 - 326	64	125 - 350	4,00	662
R4.56	56	75 - 462	109 - 497	84	135 - 500	5,00	678
R4.80	80	150 - 462	200 - 513	108	200 - 1000	6,20	694
R4.112 New*	112	200 - 400	252 - 452	140	250 - 1000	6,50	710

*New in this catalog

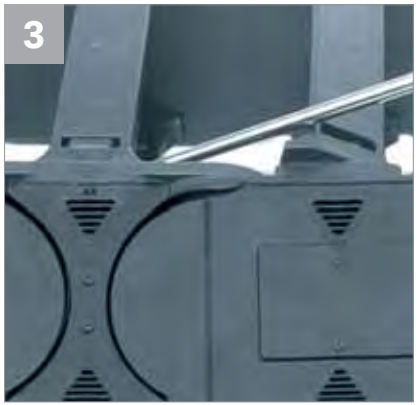
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Line up two inner side links, side by side...



...attach an outer side link between



Assemble crossbars - push down and snap in by using a screwdriver



Assemble e-tube lids/bottoms - attach to the connector at an angle - snap in

The E4 e-chain® opener reduces assembly time

e-chain® opener tools for convenient opening and closing of E4 series igus® e-chains® ● Especially for e-chains® with many crossbars the assembly is much easier ● Especially in areas difficult to access mounting is simplified big savings in assembly time. More information ▶**www.igus.eu/E4savetime**



Technical Data, overview ▶page 622

e-chain® links as single parts, overview ▶page 623

Configuration options and order keys, overview ▶page 624

Assembly video available online at ▶ www.igus.eu/eu/E4_assembly

Technical data - E4.1

Gliding speed / acceleration (maximum)	max. 10 [m/s] / max. 50 [m/s²]
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

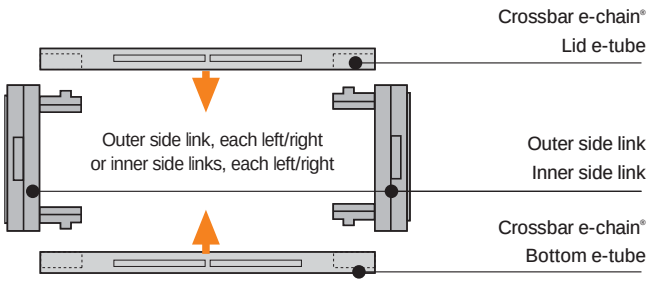
FL_G = unsupported with straight upper run FL_B = unsupported with permitted sag

Installation methods overview, maximum travels - E4.1

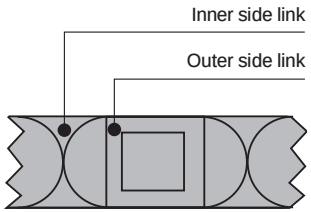
Series e-chain® / e-tube	Unsupported application	Gliding application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application	Unsupported length lower run
E4.21	≤ 2,5 m	≤ 120 m	≤ 40 m	≤ 3,0 m	≤ 1,0 m	with rework	upon request	upon request
E4.28/R4.28	≤ 2,5 m	≤ 200 m	≤ 80 m	≤ 5,0 m	≤ 1,2 m	with rework	upon request	upon request
E4.32/H4.32/R4.32	≤ 3,3 m	≤ 200 m	≤ 80 m	≤ 5,0 m	≤ 1,5 m	with rework	upon request	upon request
E4.42/H4.42/R4.42	≤ 4,0 m	≤ 300 m	≤ 100 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
E4.56/H4.56/R4.56	≤ 5,0 m	≤ 400 m	≤ 100 m	≤ 6,0 m	≤ 2,5 m	with rework	upon request	upon request
E4.80/H4.80/R4.80	≤ 6,2 m	≤ 400 m	≤ 120 m	≤ 6,0 m	≤ 3,0 m	with rework	upon request	upon request
New* E4.112/H4.112/R4.112	≤ 6,5 m	≤ 450 m	≤ 120 m	≤ 6,0 m	≤ 3,0 m	with rework	upon request	upon request
800	≤ 8,0 m	≤ 450 m	≤ 120 m	≤ 6,0 m	≤ 6,0 m	with rework	upon request	upon request
840	≤ 8,0 m	≤ 450 m	≤ 120 m	≤ 6,0 m	≤ 6,0 m	with rework	upon request	upon request
E4.350	upon request	upon request	upon request	upon request	upon request	with rework	upon request	upon request

*New in this catalog

Part No. 4-piece e-chain® links as single parts - E4.1



Inner-/outer-link design



Series	Crossbar[1] e-chain®	Lid[1] e-tube	Bottom[1] e-tube	Outer side link[2]	Inner side link[3]
E4.21	2105.*Bi*	–	–	210.01	210.02.*R*
E4.28/R4.28	225.*Bi*	765.*Bi*	766.*Bi*	E4.28.01	E4.28.02.*R*
E4.32/R4.32	385.*Bi*	775.*Bi*	776.*Bi*	E4.32.01	E4.32.02.*R*
E4.42/R4.42	385.*Bi*	785.*Bi*	786.*Bi*	E4.42.01	E4.42.02.*R*
E4.56/R4.56	450.*Bi*	885.*Bi*	886.*Bi*	E4.56.01	E4.56.02.*R*
E4.80/R4.80	450.*Bi*	E4.805.*Bi*	E4.806.*Bi*	E4.80.01	E4.80.02.*R*
E4.112/R4.112 New*	450.*Bi*	16085.*Bi*	16086.*Bi*	E4.112.01	E4.112.02.*R*
800	850.*Bi*	–	–	800.01	800.02.*R*
840	450.*Bi*	–	–	800.01	800.02.*R*

*New in this catalog

1) Crossbar / lid / bottom - supplement Part No. with required width index (*Bi*), example: 450.150

2) Outer side link - suitable for all radii

3) Inner side link - supplement Part No. with required width index (*Bi*) and required radius (*R*), example: E4.56.02.100

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Configuration options and order key (based on Series E4.56)

Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
Part No. **Standard** e-chains®/e-tubes	Part No. **Low noise (with pads)** e-chains®/e-tubes	Part No. **QuickLock crossbar for inner radius**	Part No. **QuickLock crossbar for outer radius**	Part No. **QuickLock crossbar for both radii**
		QuickLock crossbars: inner widths from Bi 15 (150 mm)!		
E4.56.30.*R*.0 Crossbar every link	ES4.56.30.*R*.0 Crossbar every link	E4.56.30QZ.*R*.0 Crossbar every link	E4.56.30QE.*R*.0 Crossbar every link	E4.56.30Q.*R*.0 Crossbar every link
H4.56.30.*R*.0 Crossbar every 2nd link	HS4.56.30.*R*.0 Crossbar every 2nd link	H4.56.30QZ.*R*.0 Crossbar every 2nd link	H4.56.30QE.*R*.0 Crossbar every 2nd link	H4.56.30Q.*R*.0 Crossbar every 2nd link
R4.56.30.*R*.0 e-tube, closed	RS4.56.30.*R*.0 e-tube, closed			
Delivery time* 24h or today!	Delivery time* 3-5 work days	Delivery time* 3-5 work days	Delivery time* 3-5 work days	Delivery time* 3-5 work days

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Configuration options and order key (based on Series E4.56)

Simply turn outer side link without additional work	*Reverse bending radius for circular movements*	*Unsupported lengths +25% possible*	*No burning-in of hot chips up to 850°C (1562° F)*	*ATEX/ESD classified e-chains® - II 2 GD*
Part No. **NC-version** e-chains®/e-tubes	Part No. **RBR** e-chains®/e-tubes	Part No. **XXL-Material** 1) e-chains®/e-tubes	Part No. **HT-Material** only for e-tubes	Part No. **ESD-Material** e-chains®/e-tubes
E4.56.30.*R*.0.NC Crossbar every link	E4.56.30.*R1/R2*.0 Crossbar every link	E4.56.30.*R*.0.XXL Crossbar every link	R4.56.30.*R*.0.HT Complete e-tube2)	E4.56.30.*R*.0.ESD Crossbar every link
H4.56.30.*R*.0.NC Crossbar every 2nd link	H4.56.30.*R1/R2*.0 Crossbar every 2nd link	H4.56.30.*R*.0.XXL Crossbar every 2nd link	R4.56.30HT.*R*.0 Lid and bottom	H4.56.30.*R*.0.ESD Crossbar every 2nd link
R4.56.30.*R*.0.NC e-tube, closed	*RBR* for e-tubes - please consult igus®	R4.56.30.*R*.0.XXL e-tube, closed	R4.56.30HTZ.*R*.0 Bottom only	R4.56.30.*R*.0.ESD e-tube, closed
			R4.56.30HTE.*R*.0 Lid only	
Delivery time* 24h or today!	Delivery time* 5-10 work days	Delivery time* 5 work days	Delivery time* 7-10 work days	Delivery time* - Some E4.1 series from stock

(2-5 work days with express surcharge)

1) Sidebands made from XXL-Material

2) for gliding applications please consult igus®

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material1)	ESD-Material
Low-noise option		ES4.56.30Q.*R*.0	ES4.56.30.*R*.0.NC	–	ES4.56.30.*R*.0.XXL	RS4.56.30.*R*.0.HT	ES4.56.30.*R*.0.ESD
QuickLock crossbar	ES4.56.30Q.*R*.0		E4.56.30Q.*R*.0.NC	E4.56.30Q.*R1/R2*.0	E4.56.30Q.*R*.0.XXL	–	E4.56.30Q.*R*.0.ESD
NC-Version	ES4.56.30.*R*.0.NC	E4.56.30Q.*R*.0.NC		–	–	R4.56.30.*R*.0.HT.NC	E4.56.30.*R*.0.ESD.NC
RBR-Version	–	E4.56.30Q.*R1/R2*.0	–		–	R4.56.30.*R1/R2*.0.HT	E4.56.30.*R1/R2*.0.ESD
XXL-Material	ES4.56.30.*R*.0.XXL	E4.56.30Q.*R*.0.XXL	–	–		–	–
HT-Material1)	RS4.56.30.*R*.0.HT	–	R4.56.30.*R*.0.HT.NC	R4.56.30.*R1/R2*.0.HT	–		–
ESD-	ES4.56.30.*R*.0.ESD	E4.56.30Q.*R*.0.ESD	E4.56.30.*R*.0.ESD.NC	E4.56.30.*R1/R2*.0.ESD	–	–	

*for gliding applications please consult igus®

Extreme glider with up to 70% larger gliding surfaces. For high additional loads and high surface speeds. Gliding applications without additional elements as well as 150% more wear allowance and enhancement of service life by factor 4! Order example: E4.56.35G.250.0 / E4.56.45G.250.0

Order example | Order key and color options

Order example for complete e-chain® series E4.56 (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 33 links	E4.56.30.300.0
+ Mounting brackets	1 set (with odd number of links and integrated C-profiles)	E4.560.30.1.12.C
+ Interior separation	with 2 separators assembled every 2nd link	2 x 56.1.1

Order text: 3,0 m E4.56.30.300.0 + E4.560.30.1.12.C + 2 x 56.1.1

Order key
E4.56.30.300.0

- Standard color black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	.0	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Stable due to undercut design, small inner height

When to use Series E4.21:

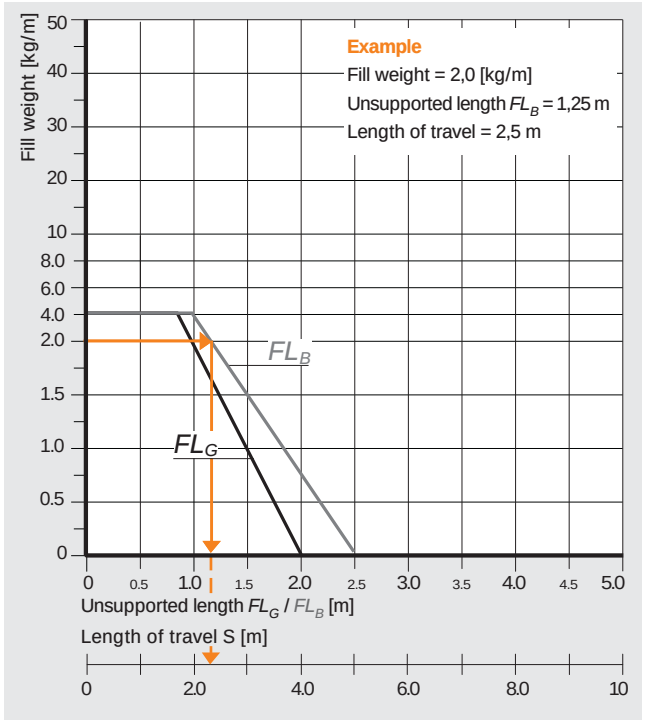
- If a robust e-chain® with an inner height of 21 mm is required
- If inner widths up to 140 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 4,0 kg/m
- For long travels up to 120 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired
- If a crossbar with locking function is required

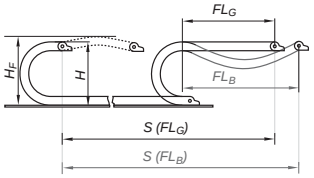
When to use a different igus® Series:

- If an extremely low-noise and low-vibration e-chain® is required
  ▶ Series E3.22, page 912
- If the e-chain® shall be used in cleanroom applications
  ▶ Series E3.22, page 912
- If snap-open capability from one side (e-chains® / e-tubes) is desired for economic reasons
  ▶ Series 1400/1450/1480/1500, page 412
  ▶ Series R117/R118, page 502

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.21



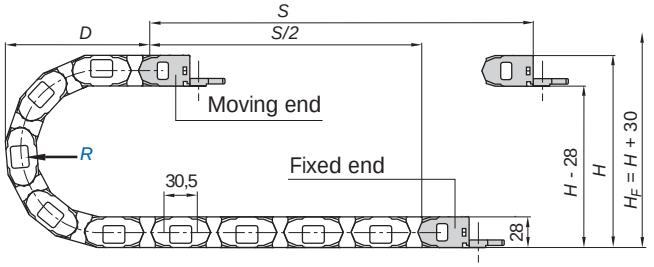


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 120 m.
More information ▶ page 632



Technical Data

Speed, material, temperature and flammability class ▶ page 622

Pitch = 30,5 mm/link
Links/m = 33 (1007 mm)
Chain length = $S/2 + K$

R	038	048	063	075	100	150	200
H	104	124	154	178	228	328	428
D	98	108	123	135	160	210	260
K	185	215	260	300	380	535	690

The required clearance height: $H_F = H + 30$ mm (with 1,5 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R + $ "safety"



e-chains® | Series E4.21 with crossbars every link

Part No. crossbars every link	Bi [mm]	Ba [mm]	E4.21 [kg/m]
E4.21. 030. R.0	30	44	≈ 0,60
E4.21. 040. R.0	40	54	≈ 0,64
E4.21. 050. R.0	50	64	≈ 0,67
E4.21. 060. R.0	60	74	≈ 0,71
E4.21. 070. R.0	70	84	≈ 0,74
E4.21. 080. R.0	80	94	≈ 0,78

Part No. crossbars every link	Bi [mm]	Ba [mm]	E4.21 [kg/m]
E4.21. 090. R.0	90	104	≈ 0,82
E4.21. 100. R.0	100	114	≈ 0,85
E4.21. 110. R.0	110	124	≈ 0,89
E4.21. 120. R.0	120	134	≈ 0,92
E4.21. 140. R.0	140	154	≈ 0,99

Available bending radii R [mm] 038 | 048 | 063 | 075 | 100 | 150 | 200

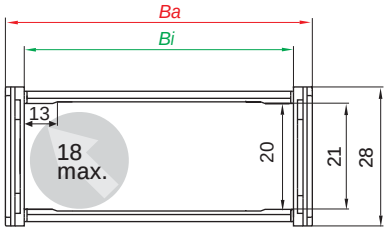
Supplement Part No. with required radius (R). Example: E4.21.120.100.0

Order key

E4 .21. 120. 100. 0

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Inner height
- Series / Type

Dimensioning

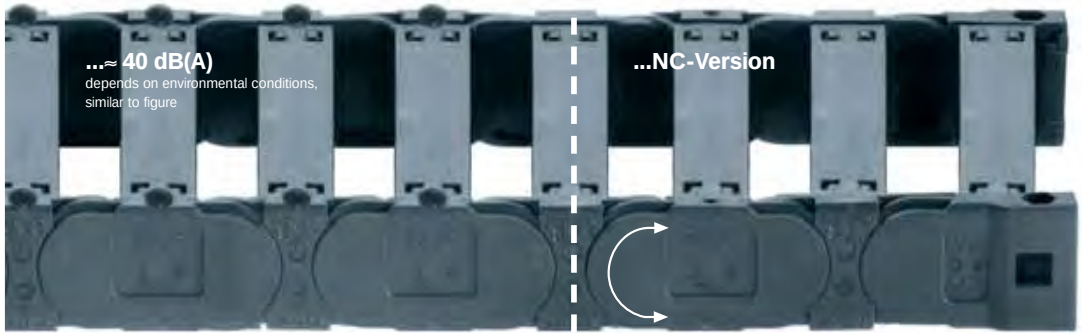


e-chain® links as single parts, overview ▶page 623

Configuration options and order keys, overview ▶page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≈ 40 dB(A)

With pads crossbars every link	Bi [mm]
ES4 .21. 030. R.0	30
ES4 .21. 040. R.0	40
ES4 .21. 050. R.0	50
ES4 .21. 060. R.0	60
ES4 .21. 070. R.0	70
ES4 .21. 080. R.0	80

With pads crossbars every link	Bi [mm]
ES4 .21. 090. R.0	90
ES4 .21. 100. R.0	100
ES4 .21. 110. R.0	110
ES4 .21 120. R.0	120
ES4 .21 140. R.0	140

NC-Version | Without pretension

NC-Version crossbars every link	Bi [mm]
E4 .21. 030. R.0.NC	30
E4 .21. 040. R.0.NC	40
E4 .21. 050. R.0.NC	50
E4 .21. 060. R.0.NC	60
E4 .21. 070. R.0.NC	70
E4 .21. 080. R.0.NC	80

NC-Version crossbars every link	Bi [mm]
E4 .21. 090. R.0.NC	90
E4 .21. 100. R.0.NC	100
E4 .21. 110. R.0.NC	110
E4 .21 120. R.0.NC	120
E4 .21 140. R.0.NC	140

Available bending radii R [mm] 038 | 048 | 063 | 075 | 100 | 150 | 200

Supplement Part No. with required radius (R). Example: ES4.21.120.100.0 or E4.21.120.100.0.NC

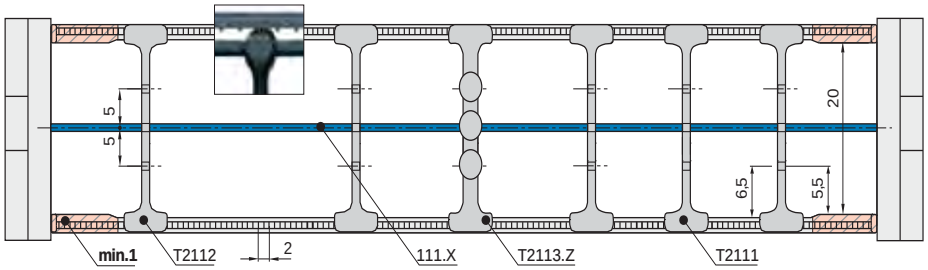
Configuration options and order keys, overview ▶page 624

Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

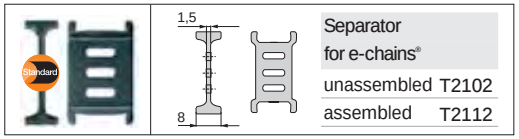
*Delivery time means time until shipping of goods (after technical release)

Full and half e-tubes with an inner height of 21 mm: E2/000 Series 1450/1480 ▶from page 412

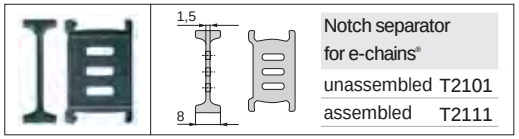
ESD/ATEX permanently conductive e-chains® - E4.21 several widths with delivery from stock: Inner widths Bi 30 - 70 mm, radii R 048 - 100 mm. Full ESD product range ► www.igus.eu/ESD



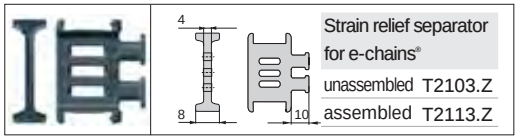
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



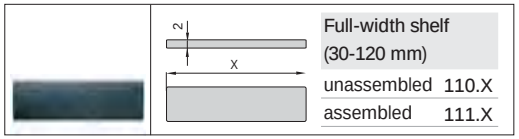
Separator for e-chains®	
unassembled	T2102
assembled	T2112



Notch separator for e-chains®	
unassembled	T2101
assembled	T2111



Strain relief separator for e-chains®	
unassembled	T2103.Z
assembled	T2113.Z



Full-width shelf (30-120 mm)	
unassembled	110.X
assembled	111.X

Standard separator T2102

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Notch separator T2101

can be locked in 2 mm increments due to gaps on the crossbars of e-chains®. The separator cannot slide sideways during the operation.

Strain relief separator T2103.Z

can be integrated into the mounting bracket and can be placed there at any point of the e-chain®. It combines strain relief and interior separation.

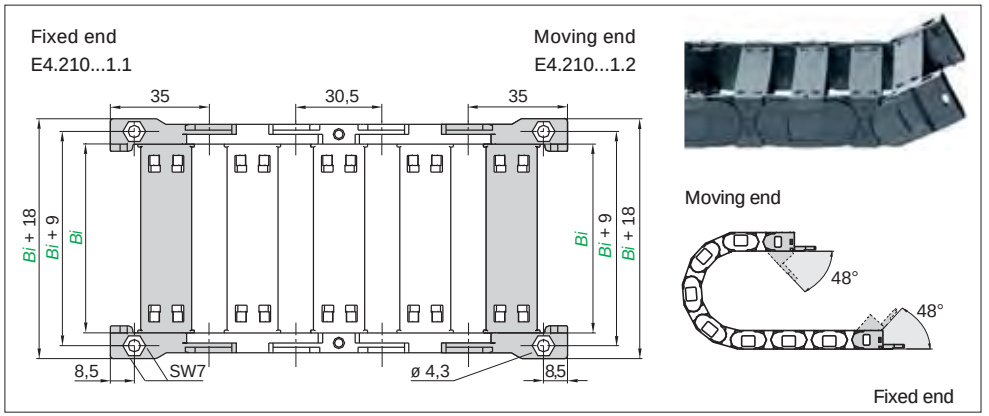
Full-width shelf 110.X

this option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Full-width shelf

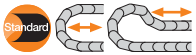
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
030	110.30	111.30	070	110.70	111.70	110	110.110	111.110
040	110.40	111.40	080	110.80	111.80	120	110.120	111.120
050	110.50	111.50	090	110.90	111.90			
060	110.60	111.60	100	110.100	111.100			

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting**	*Bi* [mm]	Width index	Part No. full set **pivoting**	*Bi* [mm]
030. ▶	E4.210. 030.1.12	30	090. ▶	E4.210. 090.1.12	90
040. ▶	E4.210. 040.1.12	40	100. ▶	E4.210. 100.1.12	100
050. ▶	E4.210. 050.1.12	50	110. ▶	E4.210. 110.1.12	110
060. ▶	E4.210. 060.1.12	60	120. ▶	E4.210. 120.1.12	120
070. ▶	E4.210. 070.1.12	70	140. ▶	E4.210. 140.1.12	140
080. ▶	E4.210. 080.1.12	80			



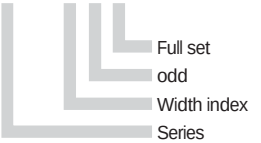
- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Special feature mounting brackets: Series E4.21

- Mounting brackets with attachment points on all sides
  Note: Series E4.21: mounting brackets always need to end with an inner plate (odd number of links)!
- Special design of the counterbore as hexagon - the inlay of the nut (M4) and the counterboring of the hexagon socket head srew (M4), is consequently possible



Part No. structure (pivoting)
E4.210.120.1.12

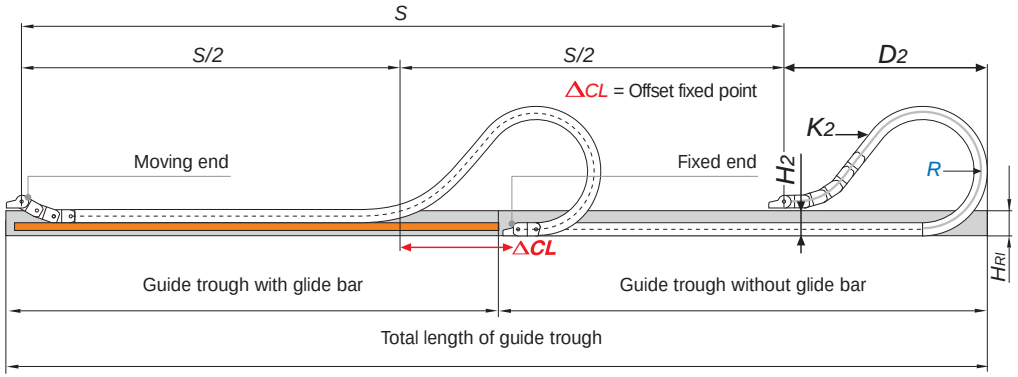


Single-part order:
Mounting bracket Moving end
E4.210.120.1.2 (odd number of links)
Mounting bracket Fixed end
E4.210.120.1.1 (odd number of links)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

Gliding applications | For long travels from 10 m to max. 120 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 4 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 30,5 mm/link · Links/m = 33 (1007 mm) · Chain length = $S/2 + K_2$

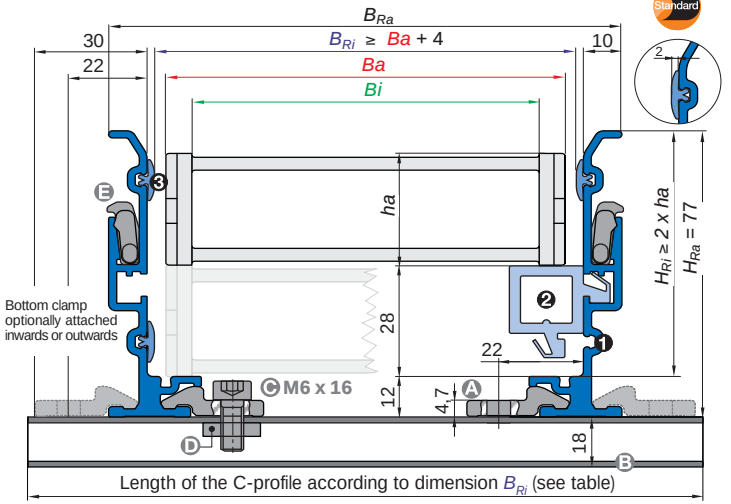
R	038	048	063	075	100	150	200
H_2	76	96	126	152	135	135	135
D_2 +25	085	095	110	120	490	530	665
K_2	185	215	260	300	782	920	1104
ΔCL	–	–	–	–	270	370	470

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

Part No. 970.30.SL | 970.32.SL | Trough height: 77 mm



Installation set "Basic" with C-Profile

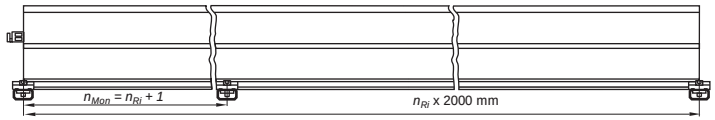
Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	48	upon request	960.30.150
.040	58	960.30.125	960.30.150
.050	68	960.30.125	960.30.175
.060	78	960.30.125	960.30.175
.070	88	960.30.150	960.30.175
.080	98	960.30.150	960.30.200
.090	108	960.30.175	960.30.200
.100	118	960.30.175	960.30.225
.110	128	960.30.175	960.30.225
.120	138	960.30.200	960.30.225
.140	158	960.30.225	960.30.250

● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.21.050.100.0 with B_{Ri} = 68

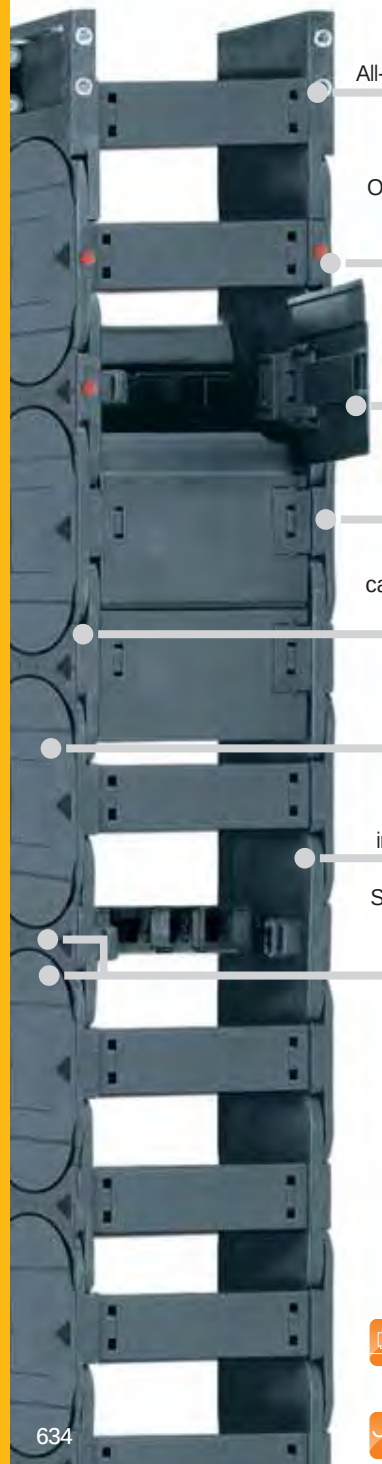
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	970.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	970.32.SL
Installation set "Basic" complete (guide trough-sets + 1)		
Order text: 17 installation sets	Part No.	960.30.125



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail ▶ from page 1192

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



Stable due to undercut design, small inner height

When to use Series E4.28:

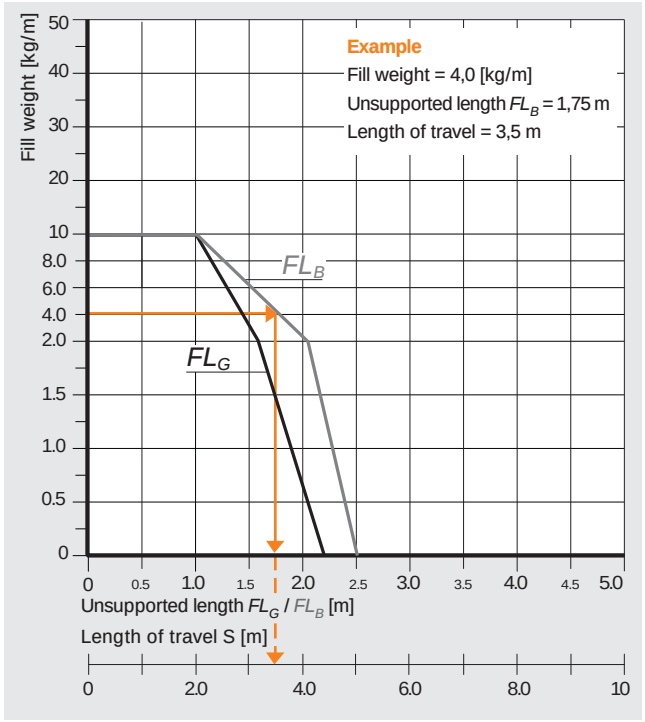
- If a robust e-chain®/e-tube with an inner height of 28 mm is required
- If inner widths up to 300 mm are required
- For unsupported lengths up to 2,5 m and fill weights up to 10 kg/m
- For long travels up to 200 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired

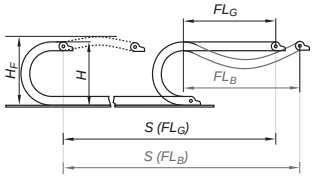
When to use a different igus® Series:

- If an extremely low-noise and low-vibration e-chain® is required
- ▶ Series E6.29, page 928
- ▶ Series R6.29, page 928
- If the e-chain® shall be used in cleanroom applications (ISO Class 1 - for E6.29.060.150.0.CR with special material "cleanroom"")
- ▶ Series E6.29, page 928
- If a less stable e-chain® can be used for economical reasons
- ▶ Series 2400/2450/2480/2500, page 426

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.28



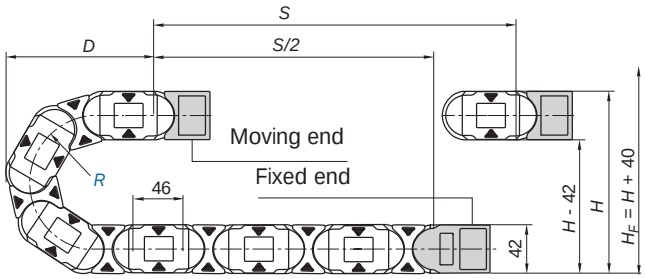


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 200 m.
More information ▶ page 644



Technical Data

Speed, material, temperature and flammability class ▶ page 622

Pitch = 46 mm/link
Links/m = 22 (1012 mm)
Chain length = $S/2 + K$

R	055*	063*	075	100	125	150	175	200	250
H	152	168	192	242	292	342	392	442	542
D	145	153	165	190	215	240	265	290	340
K	265	290	330	410	485	565	645	725	880

The required clearance height: $H_F = H + 40$ mm (with 1,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series E4.28 with crossbars every link

Part No. crossbars every link	Bi [mm]	Ba [mm]	E4.28 [kg/m]
E4.28. 040. R.0	40	60	≈ 1,06
E4.28. 050. R.0	50	70	≈ 1,11
E4.28. 062. R.0	62	82	≈ 1,17
E4.28. 070. R.0	70	90	≈ 1,20
E4.28. 075. R.0	75	95	≈ 1,23
E4.28. 087. R.0	87	107	≈ 1,28
E4.28. 100. R.0	100	120	≈ 1,37
E4.28. 125. R.0	125	145	≈1,51

Part No. crossbars every link	Bi [mm]	Ba [mm]	E4.28 [kg/m]
E4.28. 150. R.0	150	170	≈ 1,61
E4.28. 175. R.0	175	195	≈ 1,71
E4.28. 200. R.0	200	220	≈ 1,84
E4.28. 225. R.0	225	245	≈ 1,99
E4.28. 250. R.0	250	270	≈ 2,14
E4.28. 275. R.0	275	295	≈ 2,27
E4.28. 300. R.0	300	320	≈ 2,39

Available bending radii *R* [mm] 055 | 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250

Supplement Part No. with required radius (*R*). Example: E4.28.100.100.0

e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.28 | Product range | Standard

E4.28
R4.28



e-tubes | Series R4.28 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.28 [kg/m]
R4.28. 050. R.0	50	70	2,20
R4.28. 075. R.0	75	95	2,32
R4.28. 100. R.0	100	120	2,54
R4.28. 125. R.0	125	145	2,78
R4.28. 150. R.0	150	170	3,02

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.28 [kg/m]
R4.28. 175. R.0	175	195	3,26
R4.28. 200. R.0	200	220	3,50
R4.28. 225. R.0	225	245	3,82
R4.28. 250. R.0	250	270	3,98
R4.28. 300. R.0	300	320	4,46

Available bending radii *R* [mm] 075 | 100 | 125 | 150 | 175 | 200 | 250

Supplement Part No. with required radius (*R*). Example: R4.28.100.100.0

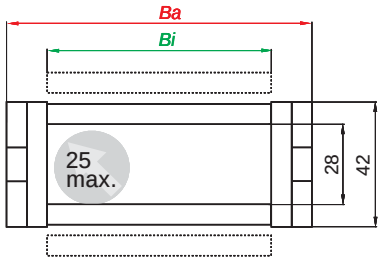
Order key for all types

E4 .28. 100. 100. 0 e-chain® (crossbars every link)

R4 .28. 100. 100. 0 Fully enclosed e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning

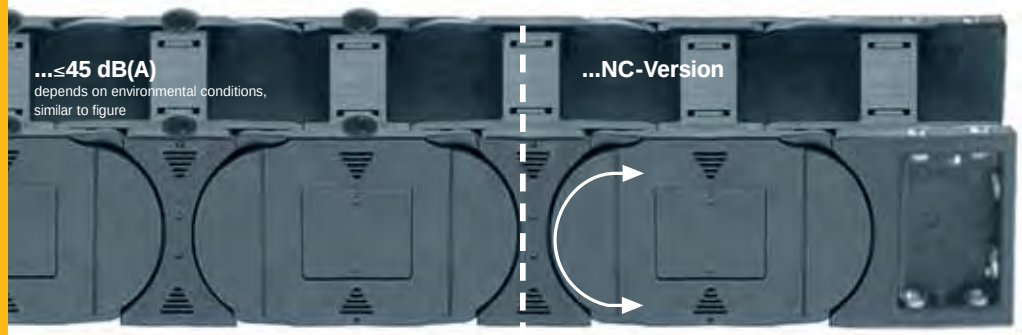


e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≤45 dB(A)

With pads E4[1] | R4[1]	Bi [mm]	With pads E4[1] | R4[1]	Bi [mm]
ES4 – .28. 040. R.0	40	ES4 RS4 .28. 150. R.0	150
ES4 RS4 .28. 050. R.0	50	ES4 RS4 .28. 175. R.0	175
ES4 – .28. 062. R.0	62	ES4 RS4 .28. 200. R.0	200
ES4 – .28. 070. R.0	70	ES4 RS4 .28. 225. R.0	225
ES4 RS4 .28. 075. R.0	75	ES4 RS4 .28. 250. R.0	250
ES4 – .28. 087. R.0	87	ES4 – .28. 275. R.0	275
ES4 RS4 .28. 100. R.0	100	ES4 RS4 .28. 300. R.0	300
ES4 RS4 .28. 125. R.0	125		

NC-Version | Without pretension

NC-Version E4[1] | R4[1]	Bi [mm]	NC-Version E4[1] | R4[1]	Bi [mm]
E4 – .28. 040. R.0.NC	40	E4 R4 .28. 150. R.0.NC	150
E4 R4 .28. 050. R.0.NC	50	E4 R4 .28. 175. R.0.NC	175
E4 – .28. 062. R.0.NC	62	E4 R4 .28. 200. R.0.NC	200
E4 – .28. 070. R.0.NC	70	E4 R4 .28. 225. R.0.NC	225
E4 R4 .28. 075. R.0.NC	75	E4 R4 .28. 250. R.0.NC	250
E4 – .28. 087. R.0.NC	87	E4 – .28. 275. R.0.NC	275
E4 R4 .28. 100. R.0.NC	100	E4 R4 .28. 300. R.0.NC	300
E4 R4 .28. 125. R.0.NC	125		

Available bending radii *R* [mm] 055* | 063* | 075 | 100 | 125 | 150 | 175 | 200 | 250

*Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: ES4.28.100.100.0 or E4.28.100.100.0.NC

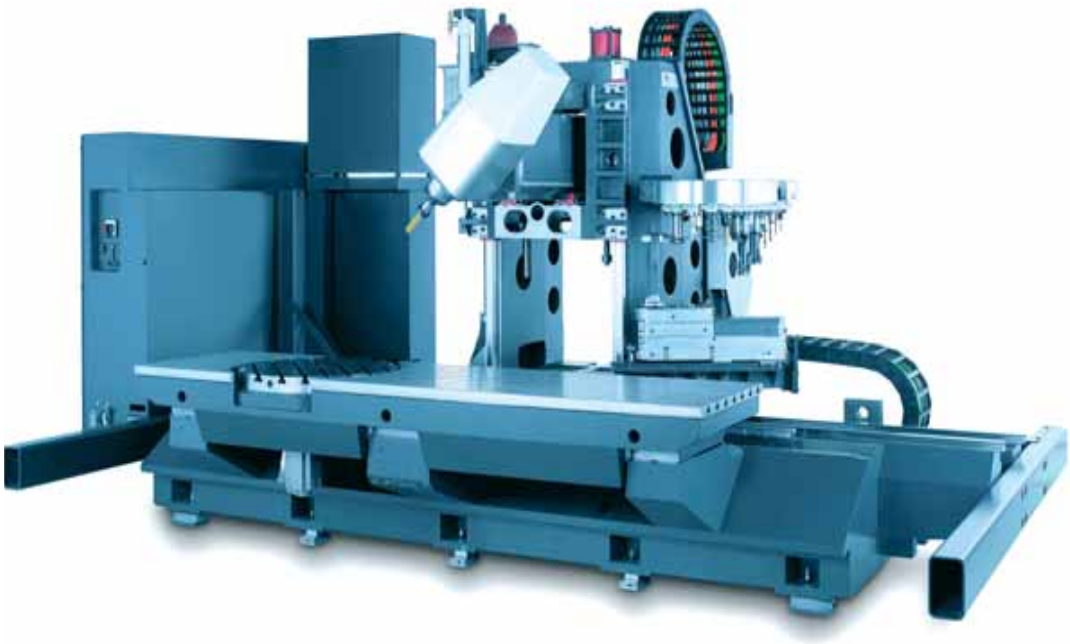
1) E4 = e-chain® with crossbars every link R4 = e-tube fully enclosed

Configuration options and order keys, overview ► page 624

Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

ESD/ATEX permanently conductive e-chains® - E4.28 several widths with delivery from stock: Inner widths *Bi* 40 - 125 mm, radii *R* 055 - 125 mm. Full ESD product range ► www.igus.eu/ESD

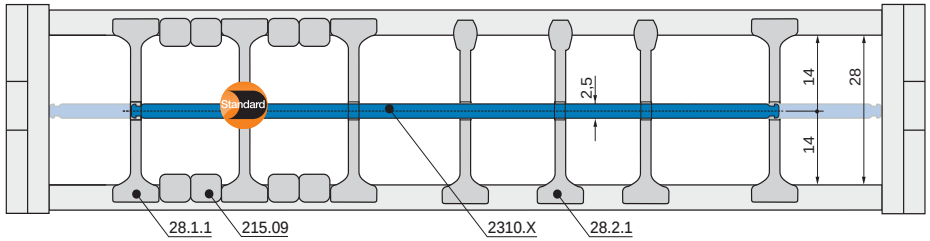


Due to the "undercut design" igus® E4.1 series feature high lateral stability.
High lateral accelerations of up to 8 m/s² can be managed on this milling maschine for bicycles

E4.1 | Series E4.28 | e-chains® Interior separation | New in this catalog

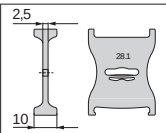
New generation interior separation - Only for e-chains®

Previous interior separation - All elements can still be ordered ► www.igus.eu/eu/E4.28



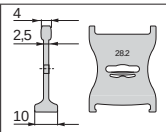
In the standard configuration separators are assembled every 2nd e-chain® link.





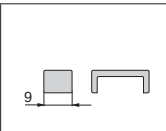
Standard separator, wide base	
unassembled	28.1
assembled	28.1.1





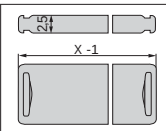
Separator, narrow head	
unassembled	28.2
assembled	28.2.1





Spacer for e-chains®	
unassembled	205.09
assembled	215.09





Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Standard - for all applications

Separator with wide base for maximum locking strength and safe standing in e-chains®.

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).

Spacer 205.09

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications).

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.

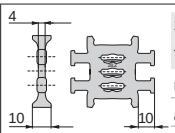


Width X [mm]	unassembled	assembled
015	2300.015	2310.015
025	2300.025	2310.025
030	2300.030	2310.030
038	2300.038	2310.038
040	2300.040	2310.040
050	2300.050	2310.050
057	2300.057	2310.057

Width X [mm]	unassembled	assembled
060	2300.060	2310.060
062	2300.062	2310.062
065	2300.065	2310.065
070	2300.070	2310.070
075	2300.075	2310.075
077	2300.077	2310.077
080	2300.080	2310.080

Width X [mm]	unassembled	assembled
087	2300.87	2310.087
090	2300.90	2310.090
100	2300.100	2310.100
103	2300.103	2310.103
110	2300.110	2310.110
120	2300.120	2310.120
125	2300.125	2310.125





Strain relief separator for e-chains®	
unassembled	28.Z
assembled	28.Z.1

Additional elements for interior separation

Strain relief separator 28.Z (e-chains® only)

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

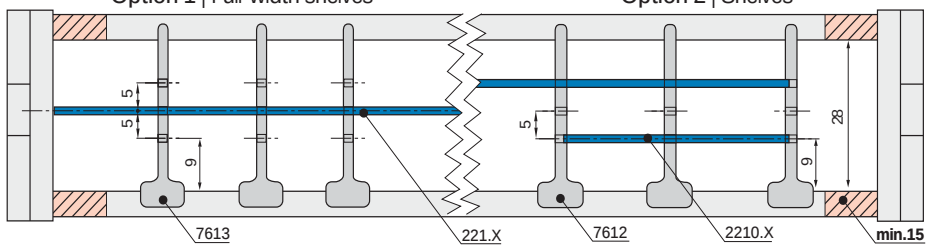
Interior separation with single-part order. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series R4.28 | e-tubes Interior separation

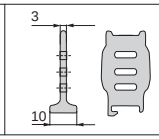
Previous interior separation - Only for e-tubes

Previous interior separation - All elements can still be ordered ► www.igus.eu/eu/E4.28



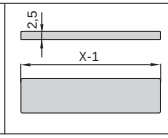
Note e-tube: Please observe a lateral spacing of **15 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link.





Separator for e-tubes	
unassembled	7603
assembled	7613





Full-width shelf for e-tubes	
unassembled	220.X
assembled	221.X

Separator 7603 (e-tubes only)

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.

Full-width shelf 220.X

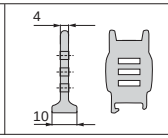
This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 5 mm increments).

Width X [mm]	unassembled	assembled
040	220.40	221.40
050	220.50	221.50
062	220.62	221.62
070	220.70	221.70

Width X [mm]	unassembled	assembled
075	220.75	221.75
087	220.87	221.87
100	220.100	221.100
125	220.125	221.125

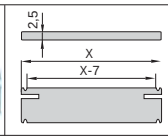
Width X [mm]	unassembled	assembled
150	220.150	221.150
175	220.175	221.175
200	220.200	221.200





Middle plate for e-tubes	
unassembled	7602
assembled	7612





Shelf for e-tubes	
unassembled	2200.X
assembled	2210.X

Middle plate 7602 (e-tubes only)

To achieve a modular shelving by shelf 2200.X arranged at 3 different heights (in 5 mm increments).

Shelf 2200.X

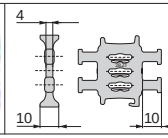
For horizontal separation. Shelves of various widths can be arranged at 3 different heights (in 5 mm increments).

Width X [mm]	unassembled	assembled
018	2200.18	2210.18
023	2200.23	2210.23
028	2200.28	2210.28
033	2200.33	2210.33
038	2200.38	2210.38

Width X [mm]	unassembled	assembled
043	2200.43	2210.43
048	2200.48	2210.48
058	2200.58	2210.58
068	2200.68	2210.68
073	2200.73	2210.73

Width X [mm]	unassembled	assembled
088	2200.88	2210.088
099	2200.99	2210.099
124	2200.124	2210.124
149	2200.149	2210.149





Strain relief separator for e-tubes	
unassembled	28.ZT
assembled	28.ZT.1

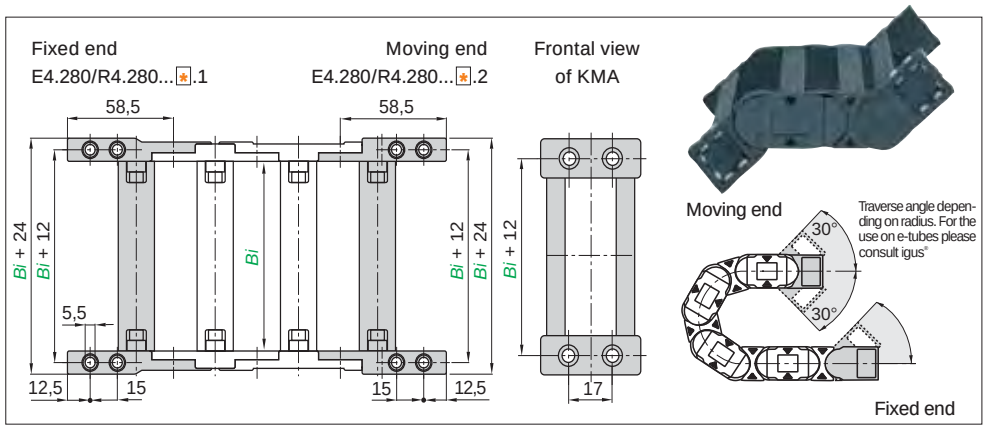
Additional elements for interior separation

Strain relief separator 28.ZT (e-tubes only)

Can be integrated into the mounting bracket and can be placed there at any point. It combines strain relief and interior separation.

E4.1 | Series E4.28 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting**	Bi [mm]
040.	E4.280. – 040.*.12	40
050.	E4.280. R4.280. 050.*.12	50
062.	E4.280. – 062.*.12	62
070.	E4.280. – 070.*.12	70
075.	E4.280. R4.280. 075.*.12	75
087.	E4.280. – 087.*.12	87
100.	E4.280. R4.280. 100.*.12	100
125.	E4.280. R4.280. 125.*.12	125

Width index	Part No. full set **pivoting**	Bi [mm]
150.	E4.280. R4.280. 150.*.12	150
175.	E4.280. R4.280. 175.*.12	175
200.	E4.280. R4.280. 200.*.12	200
225.	E4.280. R4.280. 225.*.12	225
250.	E4.280. R4.280. 250.*.12	250
275.	E4.280. – 275.*.12	275
300.	E4.280. R4.280. 300.*.12	300

Standard

- Standard
- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)
E4.280.100.2.12

- Full set
- even
- Width index
- Series

Single-part order:
Mounting bracket Moving end
E4.280.100.2.2 (even number of links)
Mounting bracket Fixed end
E4.280.100.2.1 (even number of links)

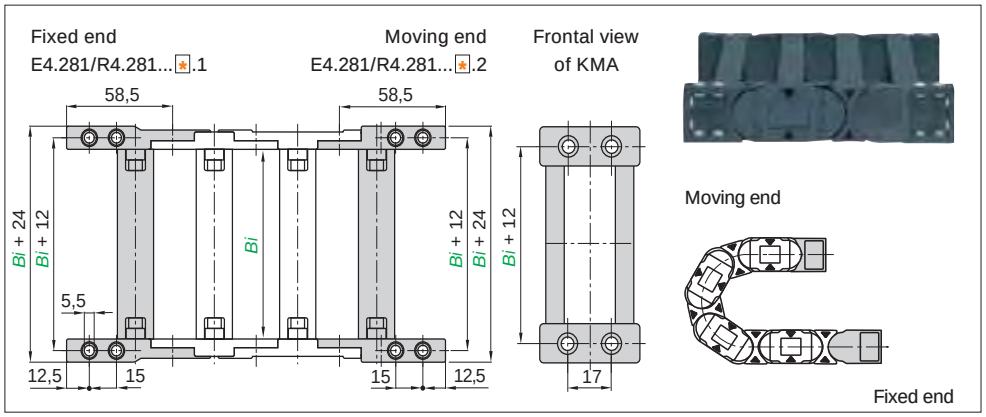
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

E4.1 | Series E4.28 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking**	Bi [mm]
040.	E4.281. – 040.*.12	40
050.	E4.281. R4.281. 050.*.12	50
062.	E4.281. – 062.*.12	62
070.	E4.281. – 070.*.12	70
075.	E4.281. R4.281. 075.*.12	75
087.	E4.281. – 087.*.12	87
100.	E4.281. R4.281. 100.*.12	100
125.	E4.281. R4.281. 125.*.12	125

Width index	Part No. full set **locking**	Bi [mm]
150.	E4.281. R4.281. 150.*.12	150
175.	E4.281. R4.281. 175.*.12	175
200.	E4.281. R4.281. 200.*.12	200
225.	E4.281. R4.281. 225.*.12	225
250.	E4.281. R4.281. 250.*.12	250
275.	E4.281. – 275.*.12	275
300.	E4.281. R4.281. 300.*.12	300

- Locked connections
- At high acceleration
- Universally mountable
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)
E4.281.100.2.12

- Full set
- even
- Width index
- Series

Single-part order:
Mounting bracket Moving end
E4.281.100.2.2 (even number of links)
Mounting bracket Fixed end
E4.281.100.2.1 (even number of links)

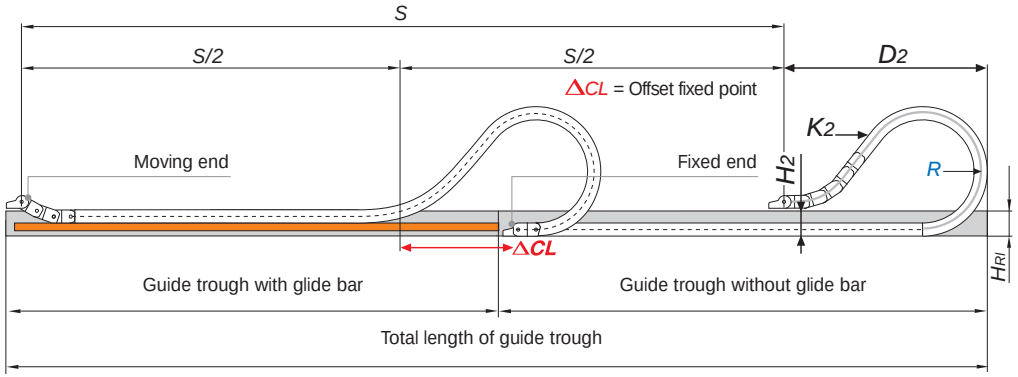
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Gliding applications | For long travels from 10 m to max. 200 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 5 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 46 mm/link · Links/m = 22 (1012 mm) · Chain length = $S/2 + K_2$

R	055*	063*	075	100	125	150	175	200	250
H_2	110	126	150	158	158	158	158	158	158
D_2^{+25}	122	130	142	350	490	530	665	730	935
K_2	265	290	330	598	782	920	1104	1242	1610
ΔCL	–	–	–	150	270	300	400	450	600

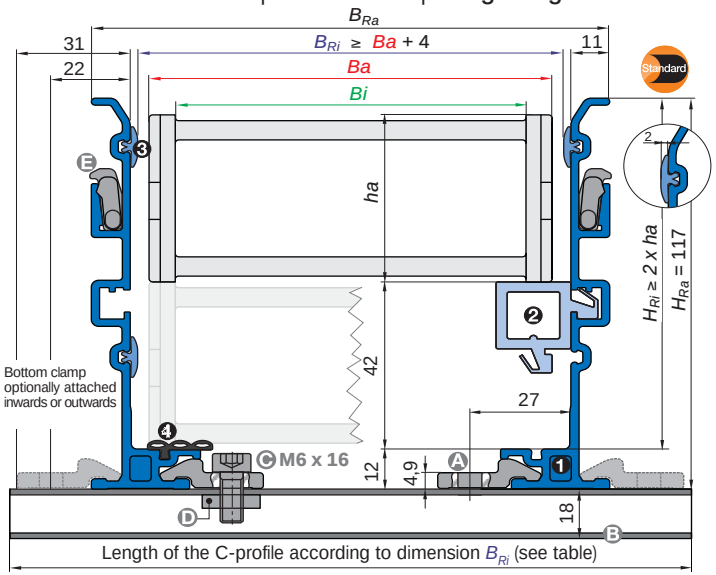
*Radius not available for e-tubes

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) · K_2 = Further add-on (if the moving end is set lower) · ΔCL = Offset fixed point · S = Length of travel
D_2 = Over length - long travels, gliding · R = Bending radius · H_{Ri} = Inner trough height · S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

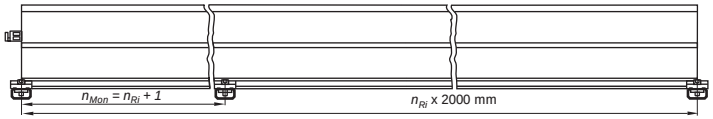
Part No. 972.02.30.SL | 972.02.31.SL | Trough height: 117 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.28.070.250.0 with B_{Ri} = 94

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	972.02.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	972.02.31.SL
Installation set "Basic" complete (guide trough-sets + 1)		
Order text: 17 installation sets	Part No.	960.30.150
Module for the fixed end		
Order text: 1 set	Part No.	972.80.4
Option: For an additional noise dampening		
with silencer profile, please add Index A - Example:	Part No.	972.02.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1196

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® · Bi = Inner width e-chains®
B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height
H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	64	upon request	960.30.175
.050	74	960.30.125	960.30.175
.062	86	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.075	99	960.30.150	960.30.200
.087	111	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.125	149	960.30.200	960.30.250
.150	174	960.30.225	960.30.275
.175	199	960.30.250	960.30.300
.200	224	960.30.275	960.30.325
.225	249	960.30.300	960.30.350
.250	274	960.30.325	960.30.375
.275	299	960.30.350	960.30.400
.300	324	960.30.375	960.30.425

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"



All-sides attachment

Cleanroom ISO Class 2[1]: Suitable for clean-room applications

Optional with noise dampening pads ≤50 dB(A)

Chip protection

Gliding surfaces, long travels

Very high capacity due to the undercut design

25% faster assembly with QuickLock system

NC without pretension

Straight run due to the inner/outer link principle

Low noise operation due to integrated "brake"

Notch crossbar with backside scaling

Stable due to undercut design, medium inner height

When to use Series E4.32:

- If a robust e-chain®/e-tube with an inner height of 32 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 3,25 m and fill weights up to 15 kg/m
- For long travels up to 200 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired

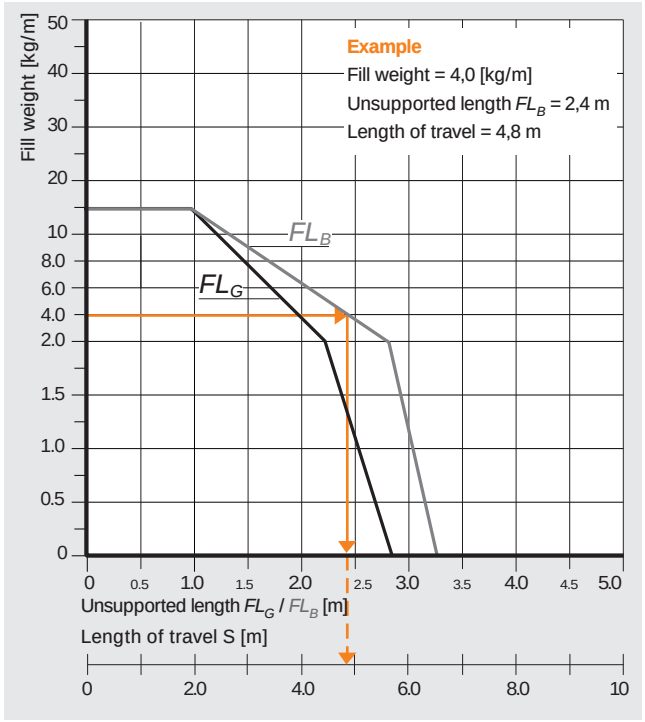
1) Cleanroom - Series E4.32.10.063.0.CR, more details ▶ page 132

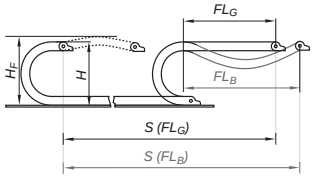
When to use a different igus® Series:

- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.35, page 938
- If the e-chain® shall be used in cleanroom applications
  ▶ Series E6.35, page 938
- If a less stable e-chain® can be used for economical reasons
  ▶ Series 2600/2650/2680/2700, page 444
- If a larger inner height at same outer dimensions is neccessary
  ▶ Series E4.38L, page 754

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.32



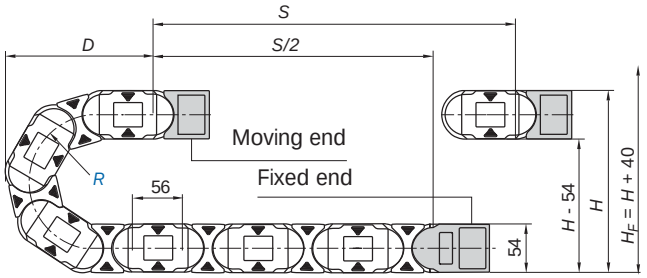


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 200 m.
More information ▶ page 660



Technical Data

Speed, material, temperature and flammability class ▶ page 622

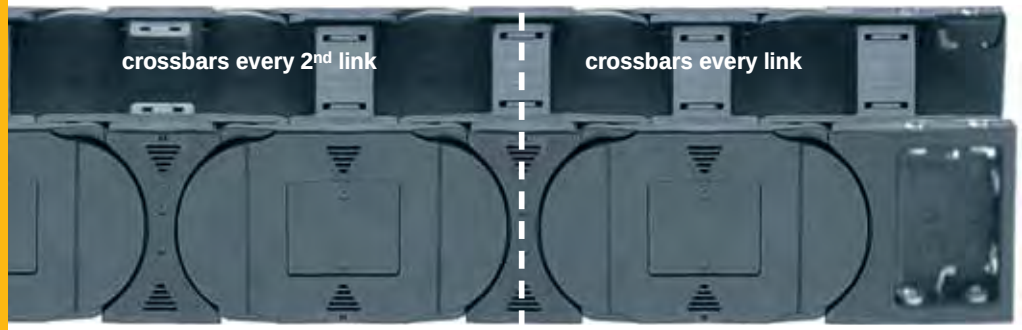
Pitch = 56 mm/link
Links/m = 18 (1008 mm)
Chain length = $S/2 + K$

R	063*	075*	100*	125	150	175	200	220	250	300
H $^{+20}_{0}$	180	204	254	304	354	404	454	494	554	654
D	174	186	211	236	261	286	311	331	361	411
K	310	350	430	505	585	665	745	805	900	1055

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E4.32 crossbars every link | Series H4.32 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	E4.32 [kg/m]	H4.32 [kg/m]
E4.32. 05. R.0	H4.32. 05. R.0	50	73	1,567	1,425
E4.32. 06. R.0	H4.32. 06. R.0	68	91	1,697	1,490
E4.32. 07. R.0	H4.32. 07. R.0	75	98	1,730	1,507
E4.32. 087. R.0	H4.32. 087. R.0	87	110	1,803	1,543
E4.32. 097. R.0	H4.32. 097. R.0	97	120	1,867	1,575
E4.32. 10. R.0	H4.32. 10. R.0	100	123	1,886	1,584
E4.32. 11. R.0	H4.32. 11. R.0	108	131	1,942	1,612
E4.32. 112. R.0	H4.32. 112. R.0	112	136	1,956	1,619
E4.32. 12. R.0	H4.32. 12. R.0	125	148	2,069	1,676
E4.32. 137. R.0	H4.32. 137. R.0	137	161	2,122	1,702
E4.32. 15. R.0	H4.32. 15. R.0	150	173	2,212	1,747
E4.32. 162. R.0	H4.32. 162. R.0	162	186	2,240	1,762
E4.32. 17. R.0	H4.32. 17. R.0	168	191	2,323	1,803
E4.32. 18. R.0	H4.32. 18. R.0	175	198	2,345	1,814
E4.32. 187. R.0	H4.32. 187. R.0	187	211	2,392	1,837
E4.32. 20. R.0	H4.32. 20. R.0	200	223	2,518	1,900
E4.32. 212. R.0	H4.32. 212. R.0	212	236	2,568	1,925
E4.32. 23. R.0	H4.32. 23. R.0	225	248	2,669	1,976
E4.32. 237. R.0	H4.32. 237. R.0	237	261	2,698	1,990
E4.32. 25. R.0	H4.32. 25. R.0	250	273	2,834	2,059
E4.32. 262. R.0	H4.32. 262. R.0	262	286	2,917	2,100
E4.32. 28. R.0	H4.32. 28. R.0	275	298	2,989	2,136
E4.32. 29. R.0	H4.32. 29. R.0	287	311	3,023	2,153
E4.32. 30. R.0	H4.32. 30. R.0	300	323	3,151	2,217
E4.32. 312. R.0	H4.32. 312. R.0	312	336	3,175	2,229
E4.32. 325. R.0	H4.32. 325. R.0	325	348	3,277	2,280
E4.32. 337. R.0	H4.32. 337. R.0	337	361	3,338	2,311
E4.32. 350. R.0	H4.32. 350. R.0	350	373	3,565	2,424
E4.32. 362. R.0	H4.32. 362. R.0	362	386	3,662	2,473
E4.32. 375. R.0	H4.32. 375. R.0	375	398	3,735	2,509
E4.32. 387. R.0	H4.32. 387. R.0	387	411	3,803	2,543
E4.32. 400. R.0	H4.32. 400. R.0	400	423	3,868	2,575

Available bending radii *R* [mm] 063 | 075 | 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300

Supplement Part No. with required radius (*R*). Example: E4.32.30.300.0

e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series R4.32 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.32 [kg/m]
R4.32. 05. R.0*	50	73	2,450
R4.32. 07. R.0	75	98	2,570
R4.32. 10. R.0	100	123	2,650
R4.32. 11. R.0	108	131	2,760
R4.32. 12. R.0	125	148	2,850
R4.32. 15. R.0	150	173	3,010
R4.32. 17. R.0	168	191	3,210
R4.32. 20. R.0	200	223	3,410
R4.32. 25. R.0	250	273	3,860
R4.32. 30. R.0	300	323	4,250

*Removable lid only, no hinged option

Available bending radii *R* [mm] 125 | 150 | 175 | 200 | 220 | 250 | 300

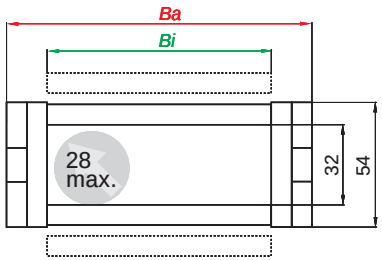
Supplement Part No. with required radius (*R*). Example: R4.32.30.300.0

Order key for all types

E4 .32. 30. 300. 0 e-chain® (crossbars every link)
H4 .32. 30. 300. 0 e-chain® (crossbars every 2nd link)
R4 .32. 30. 300. 0 Fully enclosed e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.32.	H4.32.	10 QZ.R.0	10 QE.R.0	10 Q.R.0	100
E4.32.	H4.32.	11 QZ.R.0	11 QE.R.0	11 Q.R.0	108
E4.32.	H4.32.	112 QZ.R.0	112 QE.R.0	112 Q.R.0	112
E4.32.	H4.32.	12 QZ.R.0	12 QE.R.0	12 Q.R.0	125
E4.32.	H4.32.	137 QZ.R.0	137 QE.R.0	137 Q.R.0	137
E4.32.	H4.32.	15 QZ.R.0	15 QE.R.0	15 Q.R.0	150
E4.32.	H4.32.	162 QZ.R.0	162 QE.R.0	162 Q.R.0	162
E4.32.	H4.32.	17 QZ.R.0	17 QE.R.0	17 Q.R.0	168
E4.32.	H4.32.	18 QZ.R.0	18 QE.R.0	18 Q.R.0	175
E4.32.	H4.32.	187 QZ.R.0	187 QE.R.0	187 Q.R.0	187
E4.32.	H4.32.	20 QZ.R.0	20 QE.R.0	20 Q.R.0	200
E4.32.	H4.32.	212 QZ.R.0	212 QE.R.0	212 Q.R.0	212
E4.32.	H4.32.	23 QZ.R.0	23 QE.R.0	23 Q.R.0	225
E4.32.	H4.32.	237 QZ.R.0	237 QE.R.0	237 Q.R.0	237
E4.32.	H4.32.	25 QZ.R.0	25 QE.R.0	25 Q.R.0	250
E4.32.	H4.32.	262 QZ.R.0	262 QE.R.0	262 Q.R.0	262
E4.32.	H4.32.	28 QZ.R.0	28 QE.R.0	28 Q.R.0	275
E4.32.	H4.32.	29 QZ.R.0	29 QE.R.0	29 Q.R.0	287
E4.32.	H4.32.	30 QZ.R.0	30 QE.R.0	30 Q.R.0	300
E4.32.	H4.32.	312 QZ.R.0	312 QE.R.0	312 Q.R.0	312
E4.32.	H4.32.	325 QZ.R.0	325 QE.R.0	325 Q.R.0	325
E4.32.	H4.32.	337 QZ.R.0	337 QE.R.0	337 Q.R.0	337
E4.32.	H4.32.	350 QZ.R.0	350 QE.R.0	350 Q.R.0	350
E4.32.	H4.32.	362 QZ.R.0	362 QE.R.0	362 Q.R.0	362
E4.32.	H4.32.	375 QZ.R.0	375 QE.R.0	375 Q.R.0	375
E4.32.	H4.32.	387 QZ.R.0	387 QE.R.0	387 Q.R.0	387
E4.32.	H4.32.	400 QZ.R.0	400 QE.R.0	400 Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

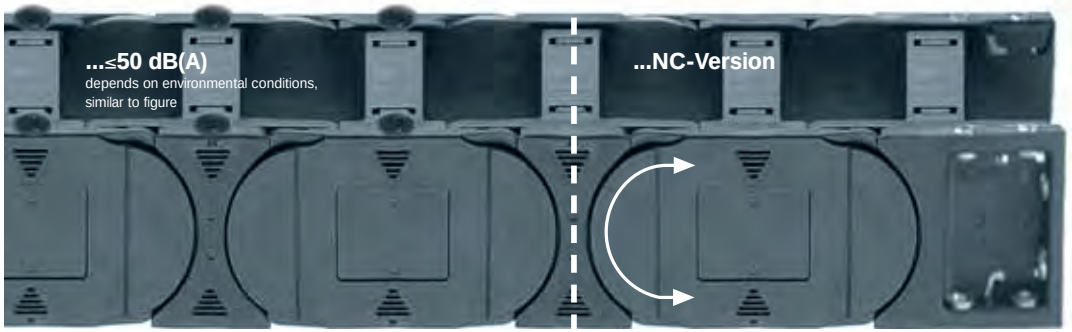
Available bending radii *R* [mm] 063 | 075 | 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300

Supplement Part No. with required radius (*R*). Example: E4.32.30QZ.300.0

Configuration options and order keys, overview ▶ page 624

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≤50 dB(A)

With pads E4[1] H4[1] R4[1]	Bi [mm]	With pads E4[1] H4[1] R4[1]	Bi [mm]
ES4 HS4 RS4 .32.05. R.0	50	ES4 HS4 – .32.212.R.0	212
ES4 HS4 – .32.06. R.0	68	ES4 HS4 – .32.23. R.0	225
ES4 HS4 RS4 .32.07. R.0	75	ES4 HS4 – .32.237.R.0	237
ES4 HS4 – .32.087.R.0	87	ES4 HS4 RS4 .32.25. R.0	250
ES4 HS4 – .32.097.R.0	97	ES4 HS4 – .32.262.R.0	262
ES4 HS4 RS4 .32.10. R.0	100	ES4 HS4 – .32.28. R.0	275
ES4 HS4 RS4 .32.11. R.0	108	ES4 HS4 – .32.29. R.0	287
ES4 HS4 – .32.112.R.0	112	ES4 HS4 RS4 .32.30. R.0	300
ES4 HS4 RS4 .32.12. R.0	125	ES4 HS4 – .32.312.R.0	312
ES4 HS4 – .32.137.R.0	137	ES4 HS4 – .32.325.R.0	325
ES4 HS4 RS4 .32.15. R.0	150	ES4 HS4 – .32.337.R.0	337
ES4 HS4 – .32.162.R.0	162	ES4 HS4 – .32.350.R.0	350
ES4 HS4 RS4 .32.17. R.0	168	ES4 HS4 – .32.362.R.0	362
ES4 HS4 – .32.18. R.0	175	ES4 HS4 – .32.375.R.0	375
ES4 HS4 – .32.187.R.0	187	ES4 HS4 – .32.387.R.0	387
ES4 HS4 RS4 .32.20. R.0	200	ES4 HS4 – .32.400.R.0	400

NC-Version | Without pretension

NC-Version E4[1] H4[1] R4[1]	Bi [mm]	NC-Version E4[1] H4[1] R4[1]	Bi [mm]
E4 H4 R4 .32.05. R.0.NC	50	E4 H4 – .32.212.R.0.NC	212
E4 H4 – .32.06. R.0.NC	68	E4 H4 – .32.23. R.0.NC	225
E4 H4 R4 .32.07. R.0.NC	75	E4 H4 – .32.237.R.0.NC	237
E4 H4 – .32.087.R.0.NC	87	E4 H4 R4 .32.25. R.0.NC	250
E4 H4 – .32.097.R.0.NC	97	E4 H4 – .32.262.R.0.NC	262
E4 H4 R4 .32.10. R.0.NC	100	E4 H4 – .32.28. R.0.NC	275
E4 H4 R4 .32.11. R.0.NC	108	E4 H4 – .32.29. R.0.NC	287
E4 H4 – .32.112.R.0.NC	112	E4 H4 R4 .32.30. R.0.NC	300
E4 H4 R4 .32.12. R.0.NC	125	E4 H4 – .32.312.R.0.NC	312
E4 H4 – .32.137.R.0.NC	137	E4 H4 – .32.325.R.0.NC	325
E4 H4 R4 .32.15. R.0.NC	150	E4 H4 – .32.337.R.0.NC	337
E4 H4 – .32.162.R.0.NC	162	E4 H4 – .32.350.R.0.NC	350
E4 H4 R4 .32.17. R.0.NC	168	E4 H4 – .32.362.R.0.NC	362
E4 H4 – .32.18. R.0.NC	175	E4 H4 – .32.375.R.0.NC	375
E4 H4 – .32.187.R.0.NC	187	E4 H4 – .32.387.R.0.NC	387
E4 H4 R4 .32.20. R.0.NC	200	E4 H4 – .32.400.R.0.NC	400

Available bending radii *R* [mm] 063* | 075* | 100* | 125 | 150 | 175 | 200 | 220 | 250 | 300 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: ES4.32.30.300.0 or E4.32.30.300.0.NC

1) E4 = e-chain® with crossbars every link H4 = e-chain® with crossbars every 2nd link R4 = e-tube fully enclosed

Configuration options and order keys, overview ▶ page 624

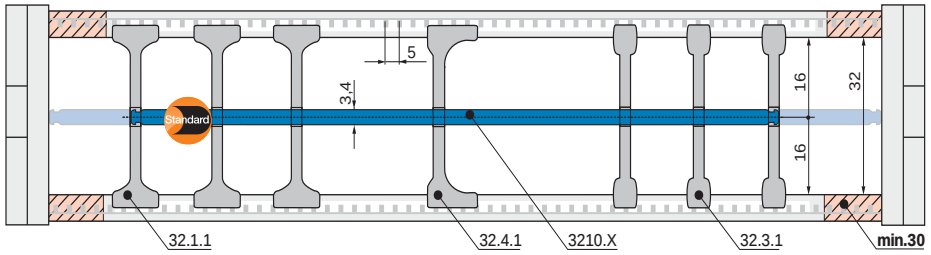
Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

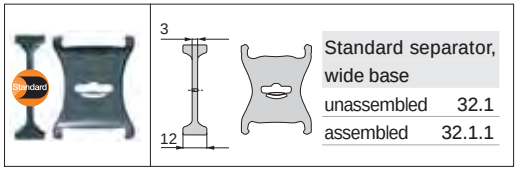
ESD/ATEX permanently conductive e-chains® - E4.32 several widths with delivery from stock: Inner widths 50 - 200 mm, radii *R* 063 - 250 mm. Full ESD product range ▶ www.igus.eu/ESD

E4.1 | Series E4.32 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



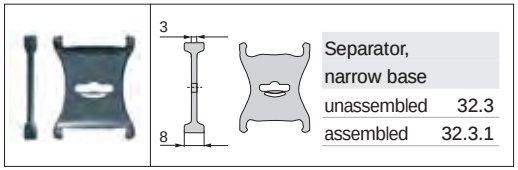
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	32.1
assembled	32.1.1

Standard - for all applications

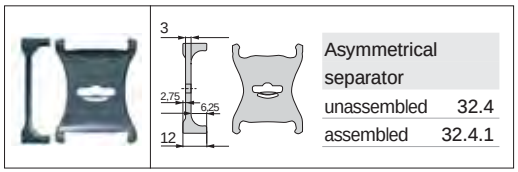
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	32.3
assembled	32.3.1

For many thin cables

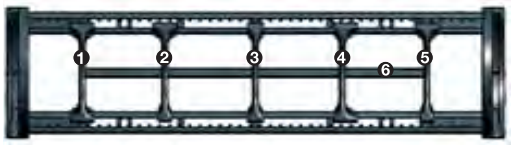
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	32.4
assembled	32.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



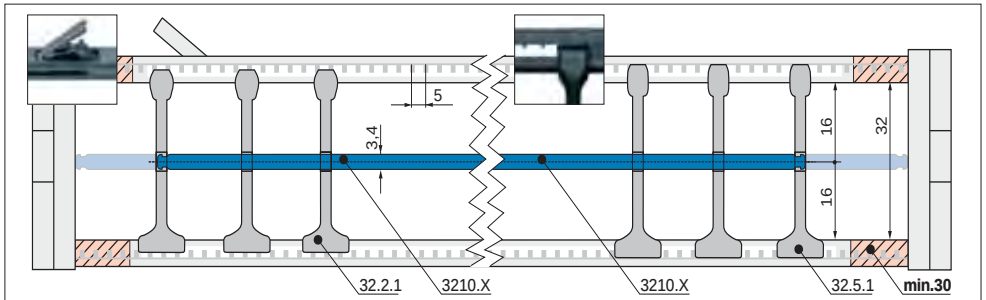


① Standard separator, wide base - Part No. 32.1 ③ Separator, narrow base - Part No. 32.3 ⑤ Notch separator - Part No. 32.5
② Separator for QuickLock crossbar - Part No. 32.2 ④ Separator, asymmetrical - Part No. 32.4 ⑥ Full-width self, lockable - Part No. 3200.X

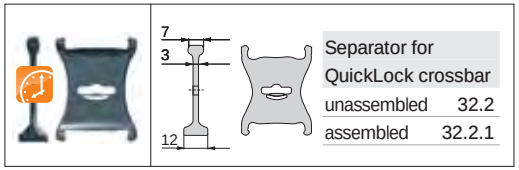
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.32 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



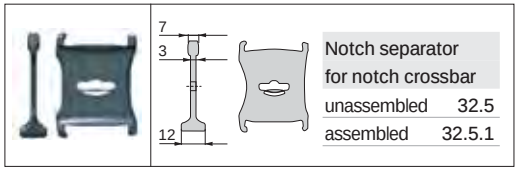
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	32.2
assembled	32.2.1

For even faster installation

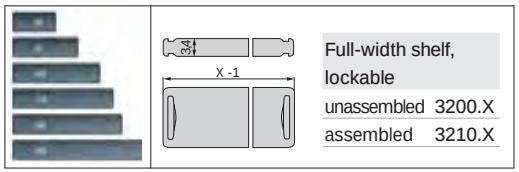
Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	32.5
assembled	32.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, With scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

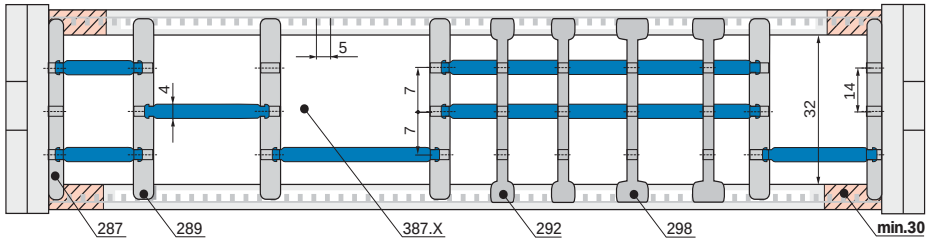
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be used at one height.



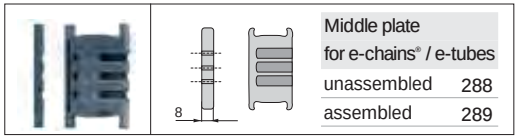
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

Option | Shelves for e-chains® and e-tubes



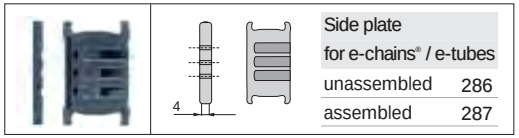
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	288
assembled	289

Middle plate 288

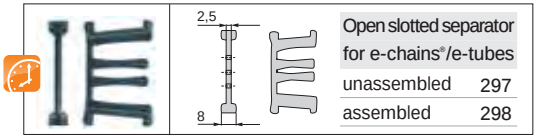
Middle plates form the basic pattern of a shelf system. Shelves 386.X (table below) can be arranged at 3 different heights (in 7 mm increments).



Side plate for e-chains® / e-tubes	
unassembled	286
assembled	287

Side plate 286

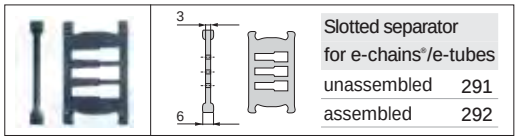
Works like middle plate.
Allows modular shelving close to the side links.



Open slotted separator for e-chains®/e-tubes	
unassembled	297
assembled	298

Open, slotted separator 297 (unilateral open)

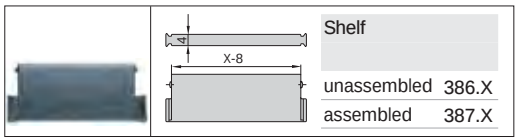
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Slotted separator for e-chains®/e-tubes	
unassembled	291
assembled	292

Slotted separator 291

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.



Shelf	
unassembled	386.X
assembled	387.X

Shelf 386.X

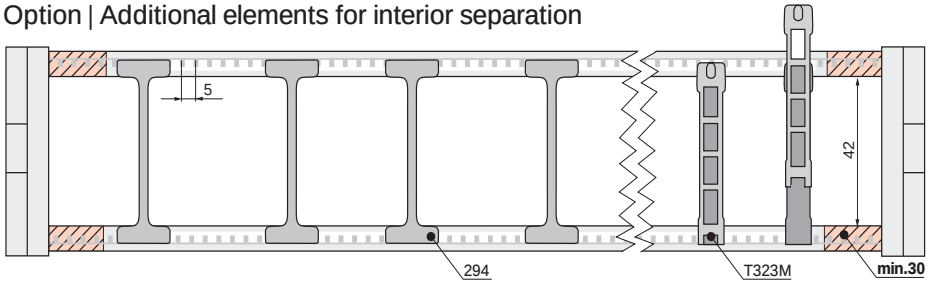
For horizontal separation. Shelves of various widths can be arranged at 3 different heights (in 7 mm increments). (not in combination with 3804, 383).

E4.32
H4.32
R4.32

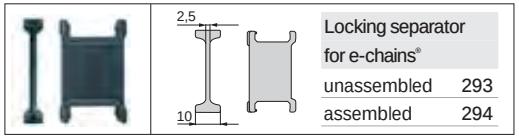
E4.1 | Series E4.32 | Interior separation | Options

Previous interior separation All elements can still be ordered ► www.igus.eu/eu/E4.32

Option | Additional elements for interior separation



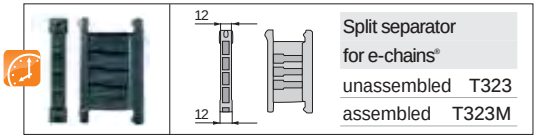
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Locking separator for e-chains®	
unassembled	293
assembled	294

Locking separator 293 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Split separator for e-chains®	
unassembled	T323
assembled	T323M

Split separator T323 (e-chains® only)

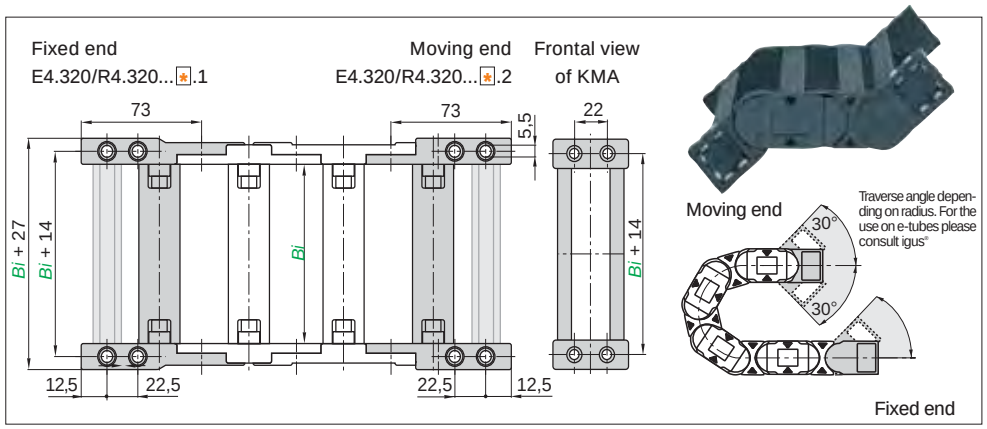
Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	054	386.54	387.54	150	386.150	387.150
023	386.23	387.23	062	386.62	387.62	175	386.175	387.175
025	386.25	387.25	075	386.75	387.75	200	386.200	387.200
028	386.28	387.28	087	386.87	387.87	208	386.208	387.208
033	386.33	387.33	100	386.100	387.100	225	386.225	387.225
043	386.43	387.43	108	386.108	387.108			
050	386.50	387.50	125	386.125	387.125			

E4.1 | Series E4.32 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05.	E4.320. R4.320.05 .*.12.C	50
06.	E4.320. – 06 .*.12.C	68
07.	E4.320. R4.320.07 .*.12.C	75
087.	E4.320. – 087.*.12.C	87
09.	E4.320. – 097.*.12.C	97
10.	E4.320. R4.320.10 .*.12.C	100
11.	E4.320. R4.320.11 .*.12.C	108
112.	E4.320. – 112.*.12.C	112
12.	E4.320. R4.320.12 .*.12.C	125
137.	E4.320. – 137.*.12.C	137
15.	E4.320. R4.320.15 .*.12.C	150
162.	E4.320. – 162.*.12.C	162
17.	E4.320. R4.320.17 .*.12.C	168
18.	E4.320. – 18 .*.12.C	175
187.	E4.320. – 187.*.12.C	187
20.	E4.320. R4.320.20 .*.12.C	200

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
212.	E4.320. – 212.*.12.C	212
23.	E4.320. – 23 .*.12.C	225
237.	E4.320. – 237.*.12.C	237
25.	E4.320. R4.320.25 .*.12.C	250
262.	E4.320. – 262.*.12.C	262
28.	E4.320. – 28 .*.12.C	275
29.	E4.320. – 29 .*.12.C	287
30.	E4.320. R4.320.30 .*.12.C	300
312.	E4.320. – 312.*.12.C	312
325.	E4.320. – 325.*.12.C	325
337.	E4.320. – 337.*.12.C	337
350.	E4.320. – 350.*.12.C	350
362.	E4.320. – 362.*.12.C	362
375.	E4.320. – 375.*.12.C	375
387.	E4.320. – 387.*.12.C	387
400.	E4.320. – 400.*.12.C	400

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.320.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket Moving end

E4.320.30.2.2.C (even number of links)

Mounting bracket Fixed end

E4.320.30.2.1.C (even number of links)

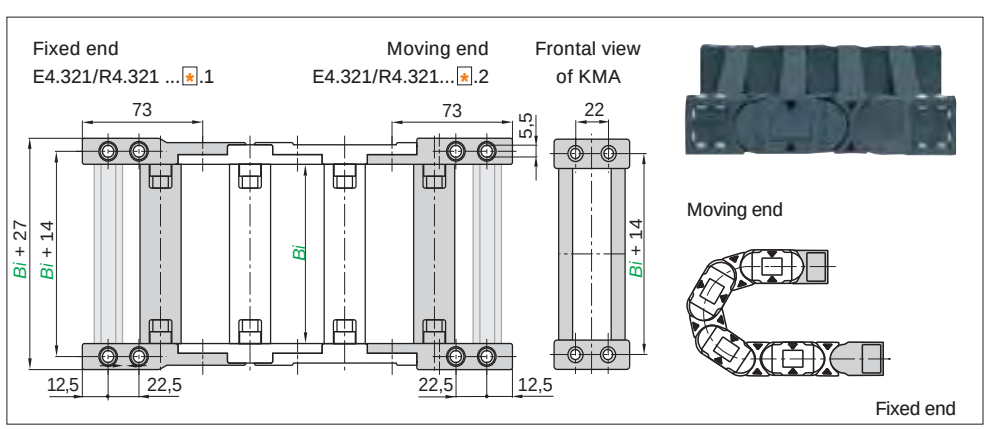
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 | Series E4.32 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05.	E4.321. R4.321.05 .*.12.C	50
06.	E4.321. – 06 .*.12.C	68
07.	E4.321. R4.321.07 .*.12.C	75
087.	E4.321. – 087.*.12.C	87
09.	E4.321. – 097.*.12.C	97
10.	E4.321. R4.321.10 .*.12.C	100
11.	E4.321. R4.321.11 .*.12.C	108
112.	E4.321. – 112.*.12.C	112
12.	E4.321. R4.321.12 .*.12.C	125
137.	E4.321. – 137.*.12.C	137
15.	E4.321. R4.321.15 .*.12.C	150
162.	E4.321. – 162.*.12.C	162
17.	E4.321. R4.321.17 .*.12.C	168
18.	E4.321. – 18 .*.12.C	175
187.	E4.321. – 187.*.12.C	187
20.	E4.321. R4.321.20 .*.12.C	200

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
212.	E4.321. – 212.*.12.C	212
23.	E4.321. – 23 .*.12.C	225
237.	E4.321. – 237.*.12.C	237
25.	E4.321. R4.321.25 .*.12.C	250
262.	E4.321. – 262.*.12.C	262
28.	E4.321. – 28 .*.12.C	275
29.	E4.321. – 29 .*.12.C	287
30.	E4.321. R4.321.30 .*.12.C	300
312.	E4.321. – 312.*.12.C	312
325.	E4.321. – 325.*.12.C	325
337.	E4.321. – 337.*.12.C	337
350.	E4.321. – 350.*.12.C	350
362.	E4.321. – 362.*.12.C	362
375.	E4.321. – 375.*.12.C	375
387.	E4.321. – 387.*.12.C	387
400.	E4.321. – 400.*.12.C	400

- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.321.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket Moving end

E4.321.30.2.2.C (even number of links)

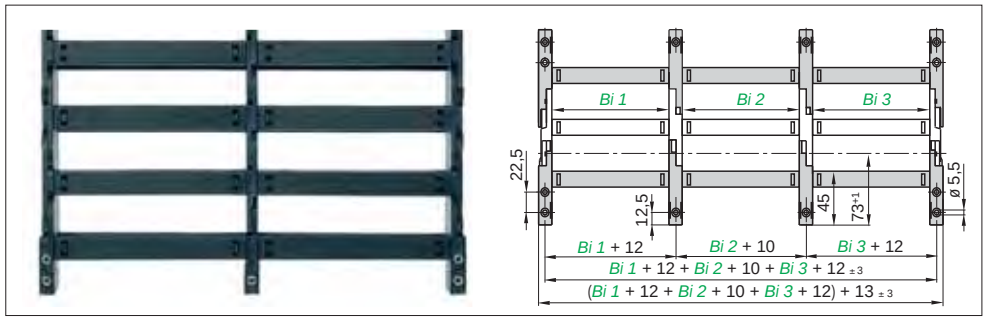
Mounting bracket Fixed end

E4.321.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



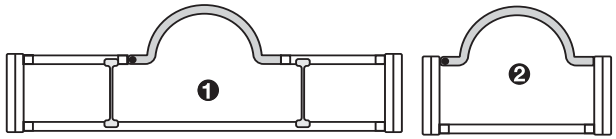
Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
E4.32.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
E4.32.10 / 20 / 10.200.0
Extension link - single-part order
284.*R*. (please indicate radius)



Round extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)



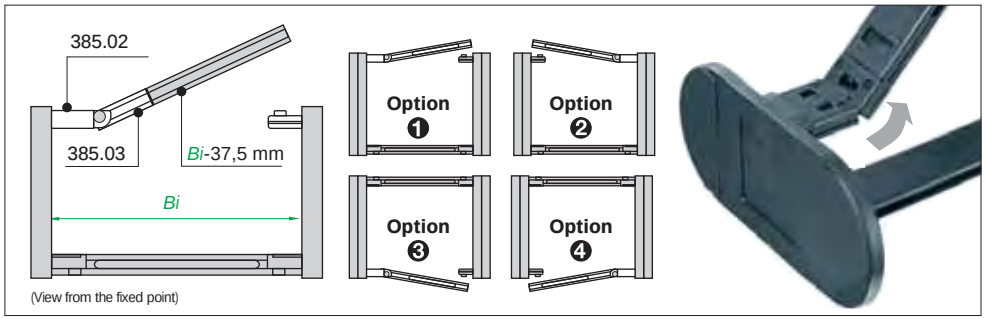
Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 105 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	105	O round	no	yes
385.18.RD115	105	O round	yes	no

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.32.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.32.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
E4.32.18RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
E4.32.18RDZ115.*R*.0

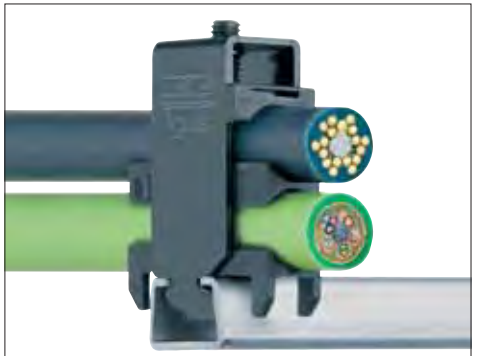


Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- Hinged crossbar: Part No. **385.02**
  Snap-open crossbar (shortened): *Bi*-37,5 mm Part No. **385.03**
  (smallest inner width *Bi* = 87,5)

Order example (here: inner width *Bi* 150)
E4.32.15.*Z*.*R*.0 =
E4.32.15.1.*R*.0
Supplement Index "Z" with required option number ①, ②, ③ or ④

E4.1 | Series E4.32 | e-chain® accessories



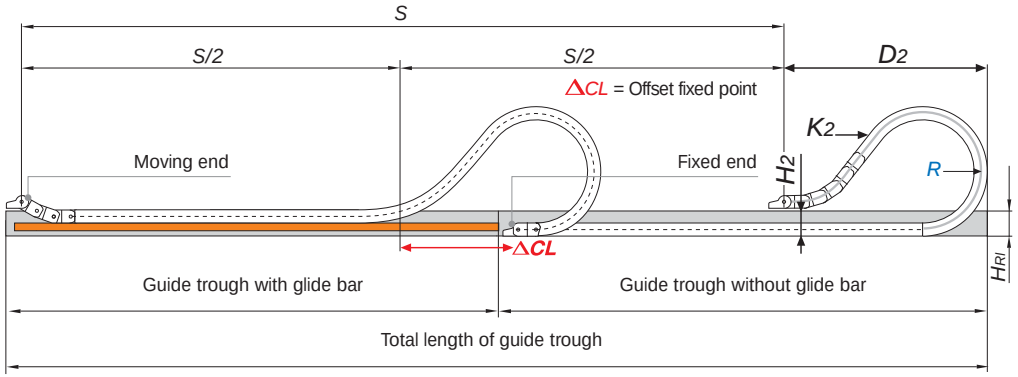
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 10 m to max. 200 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 7 and 10 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 56 mm/link · Links/m = 18 (1008 mm) · Chain length = $S/2 + K_2$

R	063*	075*	100*	125	150	175	200	220	250	300
H_2	126	150	166	166	166	166	166	166	166	166
D_2^{+25}	146	158	370	470	500	655	770	900	930	1100
K_2	310	350	616	784	896	1120	1288	1456	1568	1904
ΔCL	–	–	160	210	240	370	460	540	570	690

*Radius not available for e-tubes

More solutions | For long travel applications

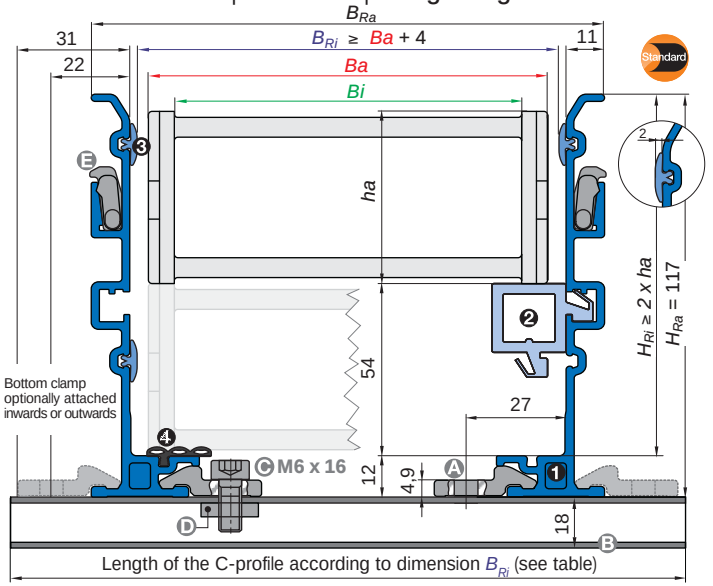
System P4.32 - profile-rol e-chain®, low-noise	Travels up to 600 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 2828R - Rolling instead of gliding	Travels up to 400 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		
autoglide E4.32.*Bi*.*R*.0.AG - Self-guiding, no guide troughs	Travels ≤ 50 m	v_{max} 1,5 m/s
Self-guiding e-chainsystems® - No guide troughs required!		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

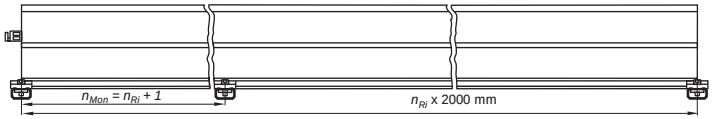
Part No. 972.30.SL | 972.31.SL | Trough height: 117 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.32.30.300.0 with B_{Ri} = 327

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 972.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 972.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.375
Module for the fixed end	
Order text: 1 set	Part No. 972.80.4
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 972.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1198

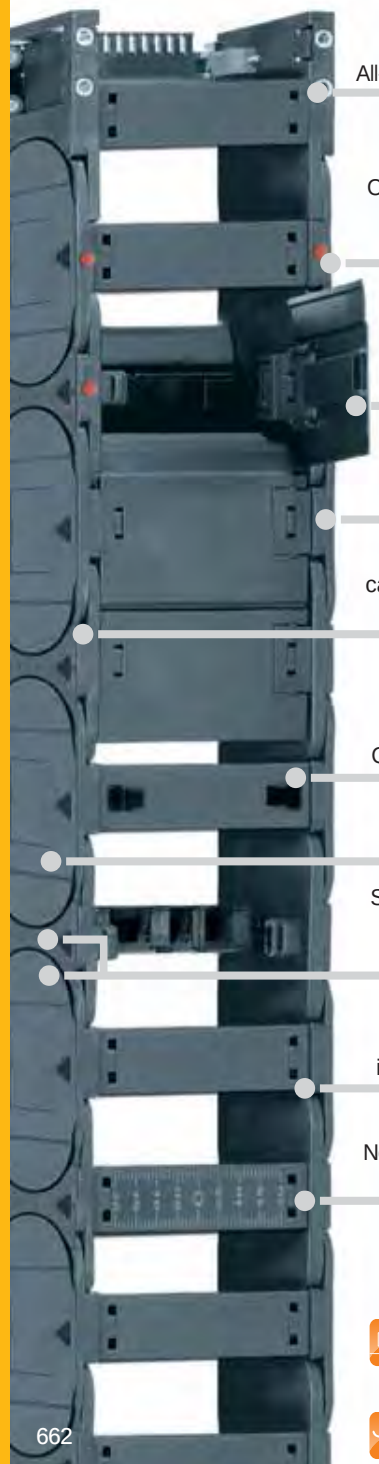
● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	77	960.30.125	960.30.175
.06	95	960.30.150	960.30.200
.07	102	960.30.150	960.30.200
.087	114	960.30.175	960.30.225
.10	127	960.30.175	960.30.225
.11	135	960.30.200	960.30.250
.112	140	960.30.200	960.30.250
.12	152	960.30.200	960.30.250
.137	165	960.30.225	960.30.275
.15	177	960.30.225	960.30.275
.162	190	960.30.250	960.30.300
.17	195	960.30.250	960.30.300
.18	202	960.30.250	960.30.300
.187	215	960.30.275	960.30.325
.20	227	960.30.275	960.30.325
.212	240	960.30.300	960.30.350
.23	252	960.30.300	960.30.350
.237	265	960.30.325	960.30.375
.25	277	960.30.325	960.30.375
.262	290	960.30.350	960.30.400
.28	302	960.30.350	960.30.400
.29	315	960.30.375	960.30.425
.30	327	960.30.375	960.30.425
.312	340	960.30.400	960.30.450
.325	352	960.30.400	960.30.450
.337	365	960.30.425	960.30.475
.350	377	960.30.425	960.30.475
.362	390	960.30.450	960.30.500
.375	402	960.30.450	960.30.500
.387	415	960.30.475	960.30.525
.400	427	960.30.475	960.30.525

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"



Stable due to undercut design, medium inner height

When to use Series E4.42:

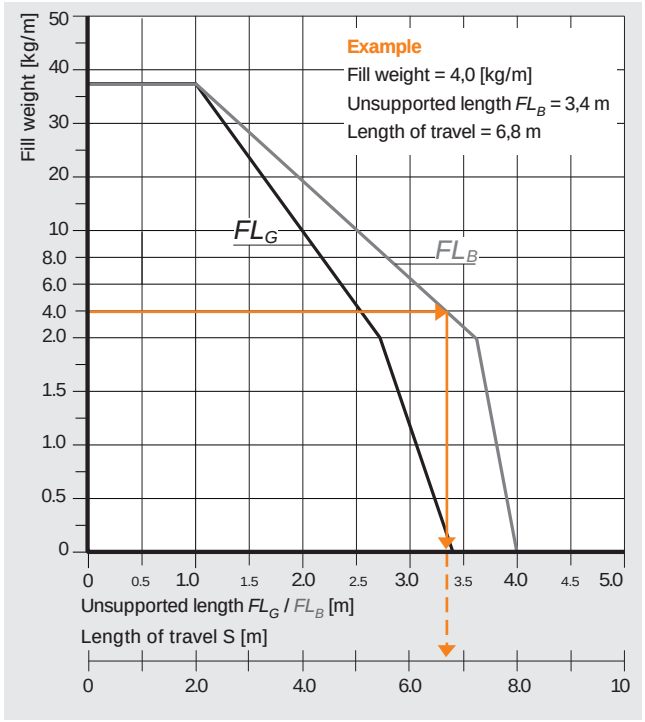
- If a robust e-chain®/e-tube with an inner height of 42 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 37 kg/m
- For long travels up to 300 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired

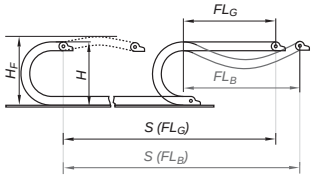
When to use a different igus® Series:

- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.40, page 946
- If the e-chain® shall be used in cleanroom applications
  ▶ Series E6.40, page 946
- If a less stable e-chain® can be used for economical reasons
  ▶ Series 3400/3450/3500/3480, page 462
- If a larger inner height at same outer dimensions is neccessary
  ▶ Series E4.48L, page 764

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.42



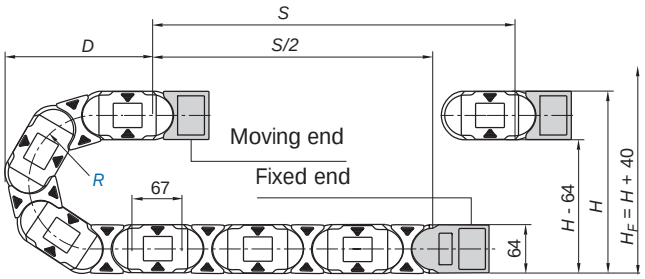


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 300 m.
More information ▶ page 676



Technical Data

Speed, material, temperature and flammability class ▶ page 622

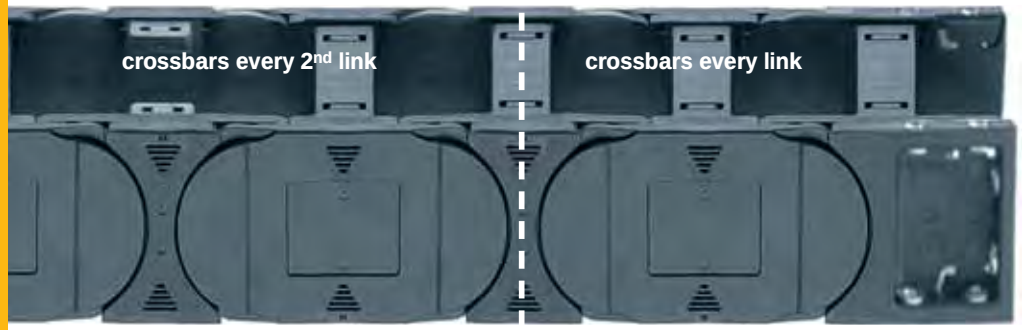
Pitch = 67 mm/link
Links/m = 15 (1005 mm)
Chain length = $S/2 + K$

R	075*	100*	115*	125	150	160	175	200	250	300	350
$H\ ^{0}_{+25}$	214	264	294	314	364	384	414	464	564	664	764
D	208	233	248	258	283	293	308	333	383	433	483
K	370	450	500	530	610	640	685	765	920	1080	1235

The required clearance height: $H_F = H + 40$ mm (with 3,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R + $ "safety"



e-chains® | Series E4.42 crossbars every link | Series H4.42 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	E4.42 [kg/m]	H4.42 [kg/m]
E4.42. 05. R.0	H4.42. 05. R.0	50	76	1,923	1,804
E4.42. 06. R.0	H4.42. 06. R.0	68	94	2,031	1,858
E4.42. 07. R.0	H4.42. 07. R.0	75	101	2,059	1,872
E4.42. 087. R.0	H4.42. 087. R.0	87	114	2,119	1,903
E4.42. 097. R.0	H4.42. 097. R.0	97	120	2,135	1,919
E4.42. 10. R.0	H4.42. 10. R.0	100	126	2,188	1,973
E4.42. 11. R.0	H4.42. 11. R.0	108	134	2,235	1,960
E4.42. 112. R.0	H4.42. 112. R.0	112	139	2,247	1,966
E4.42. 12. R.0	H4.42. 12. R.0	125	151	2,341	2,014
E4.42. 137. R.0	H4.42. 137. R.0	137	164	2,385	2,035
E4.42. 15. R.0	H4.42. 15. R.0	150	176	2,460	2,073
E4.42. 162. R.0	H4.42. 162. R.0	162	189	2,484	2,085
E4.42. 17. R.0	H4.42. 17. R.0	168	194	2,553	2,119
E4.42. 18. R.0	H4.42. 18. R.0	175	201	2,571	2,128
E4.42. 187. R.0	H4.42. 187. R.0	187	214	2,610	2,148
E4.42.. 20. R.0	H4.42. 20. R.0	200	226	2,715	2,200
E4.42. 212. R.0	H4.42. 212. R.0	212	239	2,757	2,221
E4.42. 23. R.0	H4.42. 23. R.0	225	251	2,841	2,263
E4.42. 237. R.0	H4.42. 237. R.0	237	264	2,865	2,275
E4.42. 25. R.0	H4.42. 25. R.0	250	276	2,979	2,332
E4.42. 262. R.0	H4.42. 262. R.0	262	289	3,048	2,367
E4.42. 28. R.0	H4.42. 28. R.0	275	301	3,108	2,397
E4.42. 29. R.0	H4.42. 29. R.0	287	314	3,136	2,411
E4.42. 30. R.0	H4.42. 30. R.0	300	326	3,243	2,464
E4.42. 312. R.0	H4.42. 312. R.0	312	339	3,262	2,474
E4.42. 325. R.0	H4.42. 325. R.0	325	351	3,348	2,517
E4.42. 337. R.0	H4.42. 337. R.0	337	364	3,399	2,542
E4.42. 350. R.0	H4.42. 350. R.0	350	376	3,588	2,637
E4.42. 362. R.0	H4.42. 362. R.0	362	389	3,669	2,677
E4.42. 375. R.0	H4.42. 375. R.0	375	402	3,730	2,708
E4.42. 387. R.0	H4.42. 387. R.0	387	414	3,786	2,736
E4.42. 400. R.0	H4.42. 400. R.0	400	426	3,840	2,763

Available bending radii *R* [mm] 075 | 100 | 115 | 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350

Supplement Part No. with required radius (*R*). Example: E4.42.30.300.0

e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.42 | Product range | Standard

E4.42
H4.42
R4.42



e-tubes | Series R4.42 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.42 [kg/m]
R4.42. 05. R.0*	50	76	2,150
R4.42. 07. R.0	75	101	2,280
R4.42. 087. R.0	87	114	2,410
R4.42. 10. R.0	100	126	2,520
R4.42. 11. R.0	108	134	2,570
R4.42. 12. R.0	125	151	2,730
R4.42. 15. R.0	150	176	2,980
R4.42. 17. R.0	168	194	3,150
R4.42. 20. R.0	200	226	3,450
R4.42. 25. R.0	250	276	4,250
R4.42. 30. R.0	300	326	4,890

*Removable lid only, no hinged option

Available bending radii *R* [mm] 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350

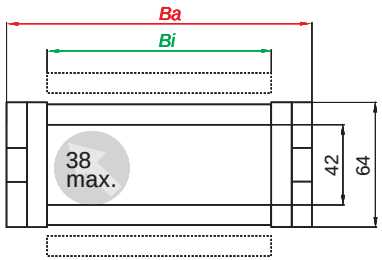
Supplement Part No. with required radius (*R*). Example: R4.42.30.300.0

Order key for all types

E4 .42. 30. 300. 0 e-chain® (crossbars every link)
H4 .42. 30. 300. 0 e-chain® (crossbars every 2nd link)
R4 .42. 30. 300. 0 Fully enclosed e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.42.	H4.42.	10 QZ.R.0	10 QE.R.0	10 Q.R.0	100
E4.42.	H4.42.	11 QZ.R.0	11 QE.R.0	11 Q.R.0	108
E4.42.	H4.42.	112 QZ.R.0	112 QE.R.0	112 Q.R.0	112
E4.42.	H4.42.	12 QZ.R.0	12 QE.R.0	12 Q.R.0	125
E4.42.	H4.42.	137 QZ.R.0	137 QE.R.0	137 Q.R.0	137
E4.42.	H4.42.	15 QZ.R.0	15 QE.R.0	15 Q.R.0	150
E4.42.	H4.42.	162 QZ.R.0	162 QE.R.0	162 Q.R.0	162
E4.42.	H4.42.	17 QZ.R.0	17 QE.R.0	17 Q.R.0	168
E4.42.	H4.42.	18 QZ.R.0	18 QE.R.0	18 Q.R.0	175
E4.42.	H4.42.	187 QZ.R.0	187 QE.R.0	187 Q.R.0	187
E4.42.	H4.42.	20 QZ.R.0	20 QE.R.0	20 Q.R.0	200
E4.42.	H4.42.	212 QZ.R.0	212 QE.R.0	212 Q.R.0	212
E4.42.	H4.42.	23 QZ.R.0	23 QE.R.0	23 Q.R.0	225
E4.42.	H4.42.	237 QZ.R.0	237 QE.R.0	237 Q.R.0	237
E4.42.	H4.42.	25 QZ.R.0	25 QE.R.0	25 Q.R.0	250
E4.42.	H4.42.	262 QZ.R.0	262 QE.R.0	262 Q.R.0	262
E4.42.	H4.42.	28 QZ.R.0	28 QE.R.0	28 Q.R.0	275
E4.42.	H4.42.	29 QZ.R.0	29 QE.R.0	29 Q.R.0	287
E4.42.	H4.42.	30 QZ.R.0	30 QE.R.0	30 Q.R.0	300
E4.42.	H4.42.	312 QZ.R.0	312 QE.R.0	312 Q.R.0	312
E4.42.	H4.42.	325 QZ.R.0	325 QE.R.0	325 Q.R.0	325
E4.42.	H4.42.	337 QZ.R.0	337 QE.R.0	337 Q.R.0	337
E4.42.	H4.42.	350 QZ.R.0	350 QE.R.0	350 Q.R.0	350
E4.42.	H4.42.	362 QZ.R.0	362 QE.R.0	362 Q.R.0	362
E4.42.	H4.42.	375 QZ.R.0	375 QE.R.0	375 Q.R.0	375
E4.42.	H4.42.	387 QZ.R.0	387 QE.R.0	387 Q.R.0	387
E4.42.	H4.42.	400 QZ.R.0	400 QE.R.0	400 Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

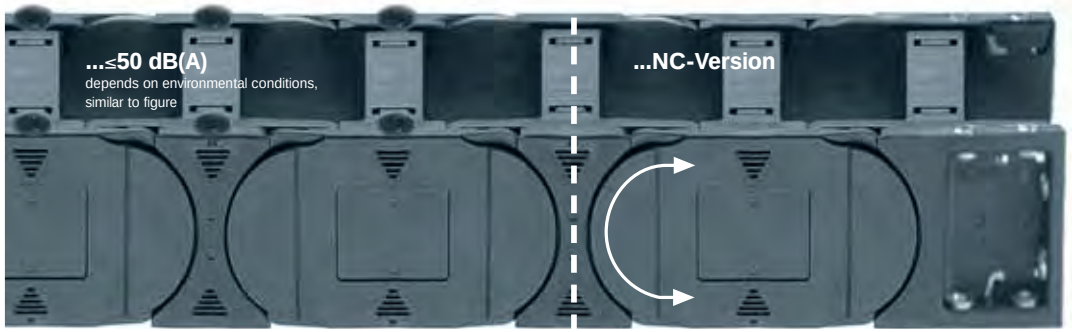
Available bending radii *R* [mm] 075 | 100 | 115 | 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350

Supplement Part No. with required radius (*R*). Example: E4.42.30QZ.300.0

Configuration options and order keys, overview ▶ page 624

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≤50 dB(A)

With pads E4[1] H4[1] R4[1]	Bi [mm]	With pads E4[1] H4[1] R4[1]	Bi [mm]
ES4 HS4 RS4 .42.05. R.0	50	ES4 HS4 – .42.212.R.0	212
ES4 HS4 – .42.06. R.0	68	ES4 HS4 – .42.23. R.0	225
ES4 HS4 RS4 .42.07. R.0	75	ES4 HS4 – .42.237.R.0	237
ES4 HS4 RS4 .42.087.R.0	87	ES4 HS4 RS4 .42.25. R.0	250
ES4 HS4 – .42.097.R.0	97	ES4 HS4 – .42.262.R.0	262
ES4 HS4 RS4 .42.10. R.0	100	ES4 HS4 – .42.28. R.0	275
ES4 HS4 RS4 .42.11. R.0	108	ES4 HS4 – .42.29. R.0	287
ES4 HS4 – .42.112.R.0	112	ES4 HS4 RS4 .42.30. R.0	300
ES4 HS4 RS4 .42.12. R.0	125	ES4 HS4 – .42.312.R.0	312
ES4 HS4 – .42.137.R.0	137	ES4 HS4 – .42.325.R.0	325
ES4 HS4 RS4 .42.15. R.0	150	ES4 HS4 – .42.337.R.0	337
ES4 HS4 – .42.162.R.0	162	ES4 HS4 – .42.350.R.0	350
ES4 HS4 RS4 .42.17. R.0	168	ES4 HS4 – .42.362.R.0	362
ES4 HS4 – .42.18. R.0	175	ES4 HS4 – .42.375.R.0	375
ES4 HS4 – .42.187.R.0	187	ES4 HS4 – .42.387.R.0	387
ES4 HS4 RS4 .42.20. R.0	200	ES4 HS4 – .42.400.R.0	400

NC-Version | Without pretension

NC-Version E4[1] H4[1] R4[1]	Bi [mm]	NC-Version E4[1] H4[1] R4[1]	Bi [mm]
E4 H4 R4.42.05. R.0.NC	50	E4 H4 – .42.212.R.0.NC	212
E4 H4 – .42.06. R.0.NC	68	E4 H4 – .42.23. R.0.NC	225
E4 H4 R4.42.07. R.0.NC	75	E4 H4 – .42.237.R.0.NC	237
E4 H4 R4.42.087.R.0.NC	87	E4 H4 R4.42.25. R.0.NC	250
E4 H4 – .42.097.R.0.NC	97	E4 H4 – .42.262.R.0.NC	262
E4 H4 R4.42.10. R.0.NC	100	E4 H4 – .42.28. R.0.NC	275
E4 H4 R4.42.11. R.0.NC	108	E4 H4 – .42.29. R.0.NC	287
E4 H4 – .42.112.R.0.NC	112	E4 H4 R4.42.30. R.0.NC	300
E4 H4 R4.42.12. R.0.NC	125	E4 H4 – .42.312.R.0.NC	312
E4 H4 – .42.137.R.0.NC	137	E4 H4 – .42.325.R.0.NC	325
E4 H4 R4.42.15. R.0.NC	150	E4 H4 – .42.337.R.0.NC	337
E4 H4 – .42.162.R.0.NC	162	E4 H4 – .42.350.R.0.NC	350
E4 H4 R4.42.17. R.0.NC	168	E4 H4 – .42.362.R.0.NC	362
E4 H4 – .42.18. R.0.NC	175	E4 H4 – .42.375.R.0.NC	375
E4 H4 – .42.187.R.0.NC	187	E4 H4 – .42.387.R.0.NC	387
E4 H4 R4.42.20. R.0.NC	200	E4 H4 – .42.400.R.0.NC	400

Available bending radii *R* [mm] 075* | 100* | 115* | 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: ES4.42.30.300.0 or E4.42.30.300.0.NC

1) E4 = e-chain® with crossbars every link H4 = e-chain® with crossbars every 2nd link R4 = e-tube fully enclosed

Configuration options and order keys, overview ▶ page 624

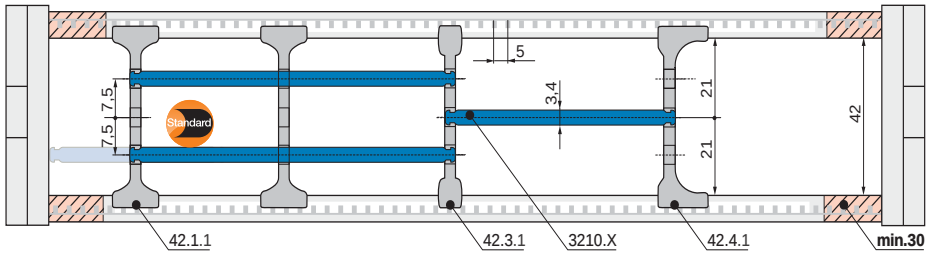
Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

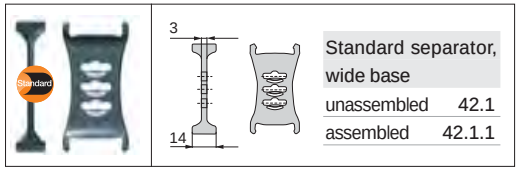
ESD/ATEX permanently conductive e-chains® - E4.42 several widths with delivery from stock: Inner widths 50 - 200 mm, radii *R* 075 - 250 mm. Full ESD product range ▶ www.igus.eu/ESD

E4.1 | Series E4.42 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



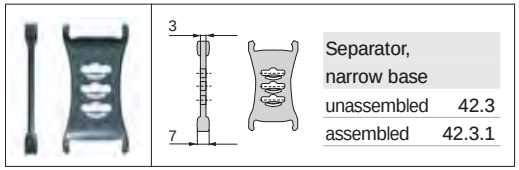
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	42.1
assembled	42.1.1

Standard - for all applications

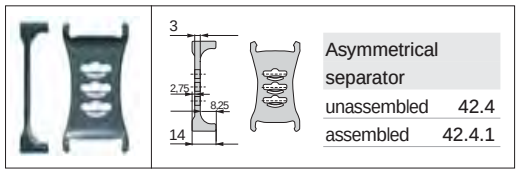
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	42.3
assembled	42.3.1

For many thin cables

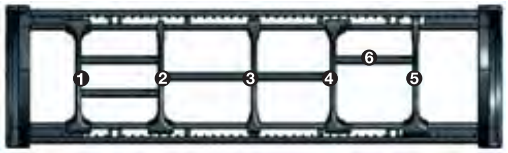
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	42.4
assembled	42.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



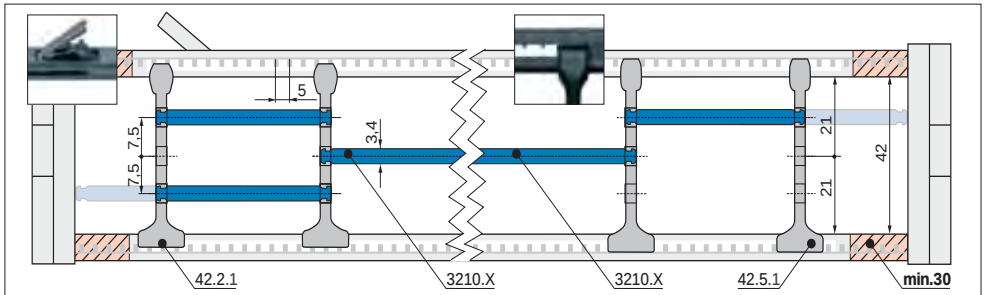


① Standard separator, wide base - Part No. 42.1 ③ Separator, narrow base - Part No. 42.3 ⑤ Notch separator - Part No. 42.5
② Separator for QuickLock crossbar - Part No. 42.2 ④ Separator, asymmetrical - Part No. 42.4 ⑥ Full-width self, lockable - Part No. 3200.X

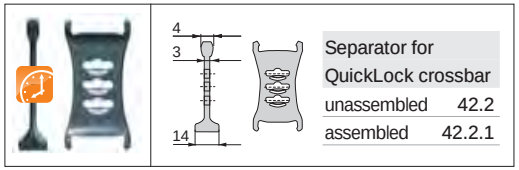
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.42 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



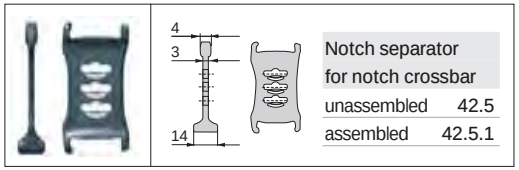
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	42.2
assembled	42.2.1

For even faster installation

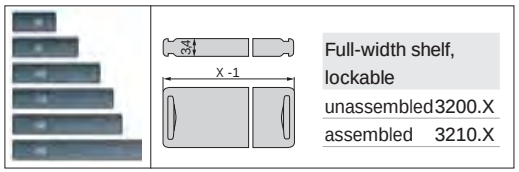
Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	42.5
assembled	42.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

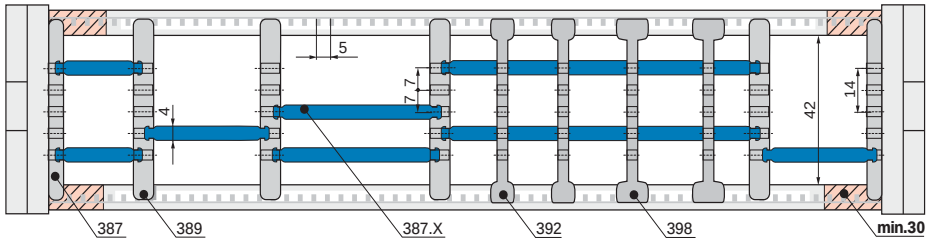
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



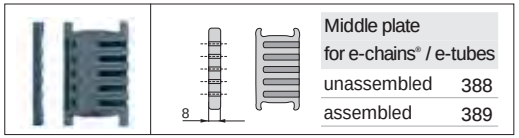
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

Option | Shelves for e-chains® and e-tubes



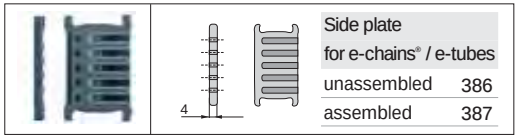
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	388
assembled	389

Middle plate 388

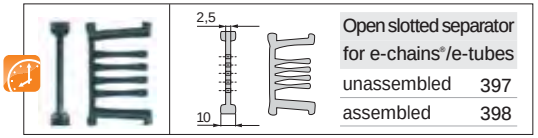
Middle plates form the basic pattern of a shelf system. Shelves 386.X (table below) can be arranged at 5 different heights (in 7 mm increments).



Side plate for e-chains® / e-tubes	
unassembled	386
assembled	387

Side plate 386

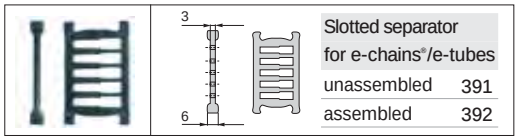
Works like middle plate.
Allows modular shelving close to the side links.



Open slotted separator for e-chains®/e-tubes	
unassembled	397
assembled	398

Open, slotted separator 397 (unilateral open)

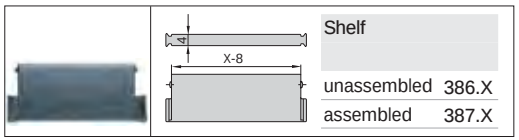
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Slotted separator for e-chains®/e-tubes	
unassembled	391
assembled	392

Slotted separator 391

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.



Shelf	
unassembled	386.X
assembled	387.X

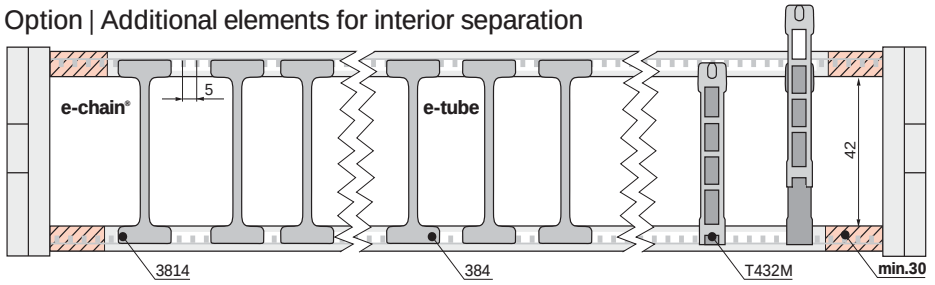
Shelf 386.X

For horizontal separation. Shelves of various widths can be arranged at 5 different heights (in 7 mm increments). - see table beneath (not in combination with 3804, 383).

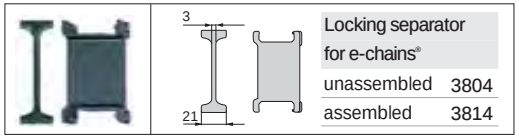
Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	050	386.50	387.50	108	386.108	387.108
023	386.23	387.23	054	386.54	387.54	125	386.125	387.125
025	386.25	387.25	062	386.62	387.62	150	386.150	387.150
028	386.28	387.28	075	386.75	387.75	175	386.175	387.175
033	386.33	387.33	087	386.87	387.87	200	386.200	387.200
043	386.43	387.43	100	386.100	387.100	208	386.208	387.208

Option | Additional elements for interior separation



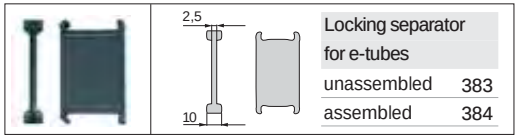
Note e-tube: Please observe a lateral spacing of **30 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Locking separator for e-chains®	
unassembled	3804
assembled	3814

Locking separator 3804 (e-chains® only)

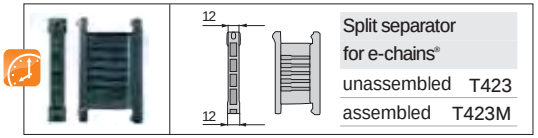
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Locking separator for e-tubes	
unassembled	383
assembled	384

Locking separator 383 (e-tubes only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



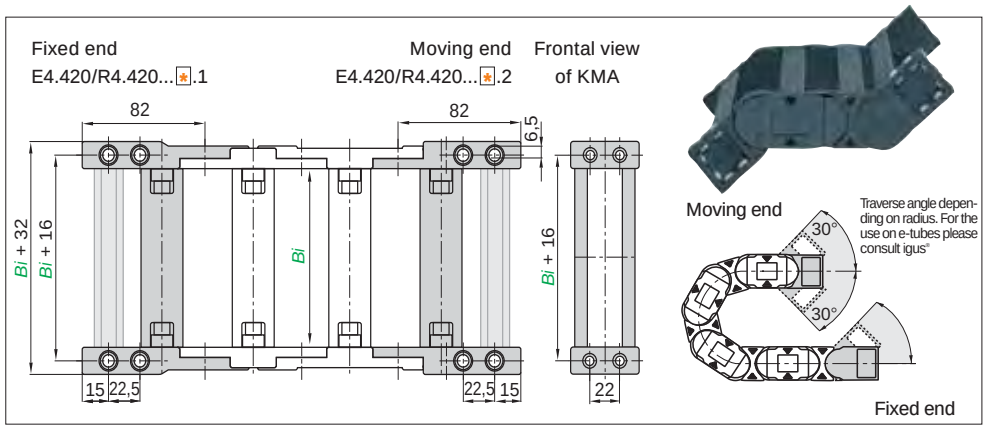
Split separator for e-chains®	
unassembled	T423
assembled	T423M

Split separator T423 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.

E4.1 | Series E4.42 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05. ▶	E4.420. R4.420.05 .*.12.C	50	212. ▶	E4.420. – 212.*.12.C	212
06. ▶	E4.420. – 06 .*.12.C	68	23. ▶	E4.420. – 23 .*.12.C	225
07. ▶	E4.420. R4.420.07 .*.12.C	75	237. ▶	E4.420. – 237.*.12.C	237
087. ▶	E4.420. R4.420.087.*.12.C	87	25. ▶	E4.420. R4.420.25 .*.12.C	250
09. ▶	E4.420. – 09 .*.12.C	97	262. ▶	E4.420. – 262.*.12.C	262
10. ▶	E4.420. R4.420.10 .*.12.C	100	28. ▶	E4.420. – 28 .*.12.C	275
11. ▶	E4.420. R4.420.11 .*.12.C	108	29. ▶	E4.420. – 29 .*.12.C	287
112. ▶	E4.420. – 112.*.12.C	112	30. ▶	E4.420. R4.420.30 .*.12.C	300
12. ▶	E4.420. R4.420.12 .*.12.C	125	312. ▶	E4.420. – 312.*.12.C	312
137. ▶	E4.420. – 137.*.12.C	137	325. ▶	E4.420. – 325.*.12.C	325
15. ▶	E4.420. R4.420.15 .*.12.C	150	337. ▶	E4.420. – 337.*.12.C	337
162. ▶	E4.420. – 162.*.12.C	162	350. ▶	E4.420. – 350.*.12.C	350
17. ▶	E4.420. R4.420.17 .*.12.C	168	362. ▶	E4.420. – 362.*.12.C	362
18. ▶	E4.420. – 18 .*.12.C	175	375. ▶	E4.420. – 375.*.12.C	375
187. ▶	E4.420. – 187.*.12.C	187	387. ▶	E4.420. – 387.*.12.C	387
20. ▶	E4.420. R4.420.20 .*.12.C	200	400. ▶	E4.420. – 400.*.12.C	400

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.420.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket Moving end

E4.420.30.2.2.C (even number of links)

Mounting bracket Fixed end

E4.420.30.2.1.C (even number of links)

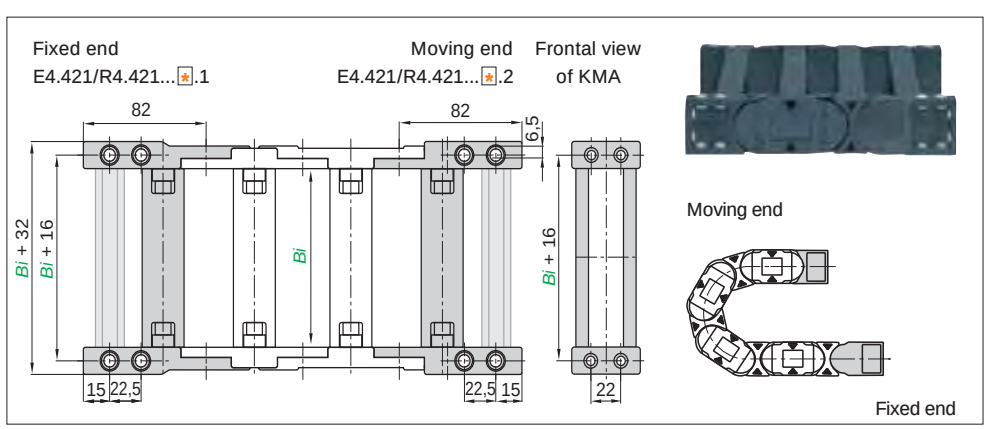
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 | Series E4.42 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05. ▶	E4.421. R4.421.05 .*.12.C	50	212. ▶	E4.421. – 212.*.12.C	212
06. ▶	E4.421. – 06 .*.12.C	68	23. ▶	E4.421. – 23 .*.12.C	225
07. ▶	E4.421. R4.421.07 .*.12.C	75	237. ▶	E4.421. – 237.*.12.C	237
087. ▶	E4.421. R4.421.087.*.12.C	87	25. ▶	E4.421. R4.421.25 .*.12.C	250
09. ▶	E4.421. – 09 .*.12.C	97	262. ▶	E4.421. – 262.*.12.C	262
10. ▶	E4.421. R4.421.10 .*.12.C	100	28. ▶	E4.421. – 28 .*.12.C	275
11. ▶	E4.421. R4.421.11 .*.12.C	108	29. ▶	E4.421. – 29 .*.12.C	287
112. ▶	E4.421. – 112.*.12.C	112	30. ▶	E4.421. R4.421.30 .*.12.C	300
12. ▶	E4.421. R4.421.12 .*.12.C	125	312. ▶	E4.421. – 312.*.12.C	312
137. ▶	E4.421. – 137.*.12.C	137	325. ▶	E4.421. – 325.*.12.C	325
15. ▶	E4.421. R4.421.15 .*.12.C	150	337. ▶	E4.421. – 337.*.12.C	337
162. ▶	E4.421. – 162.*.12.C	162	350. ▶	E4.421. – 350.*.12.C	350
17. ▶	E4.421. R4.421.17 .*.12.C	168	362. ▶	E4.421. – 362.*.12.C	362
18. ▶	E4.421. – 18 .*.12.C	175	375. ▶	E4.421. – 375.*.12.C	375
187. ▶	E4.421. – 187.*.12.C	187	387. ▶	E4.421. – 387.*.12.C	387
20. ▶	E4.421. R4.421.20 .*.12.C	200	400. ▶	E4.421. – 400.*.12.C	400

- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.421.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket Moving end

E4.421.30.2.2.C (even number of links)

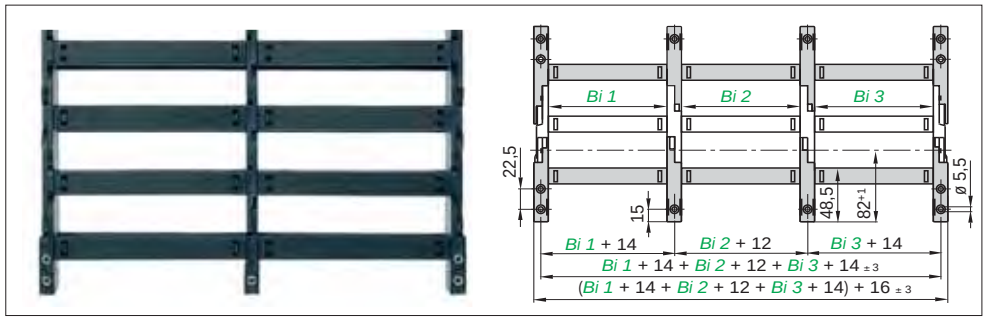
Mounting bracket Fixed end

E4.421.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



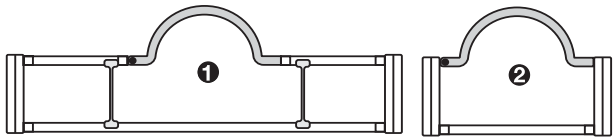
Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
E4.42.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
E4.42.10 / 20 / 10.200.0
Extension link - single-part order
384.*R*. (please indicate radius)



Round extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)



Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

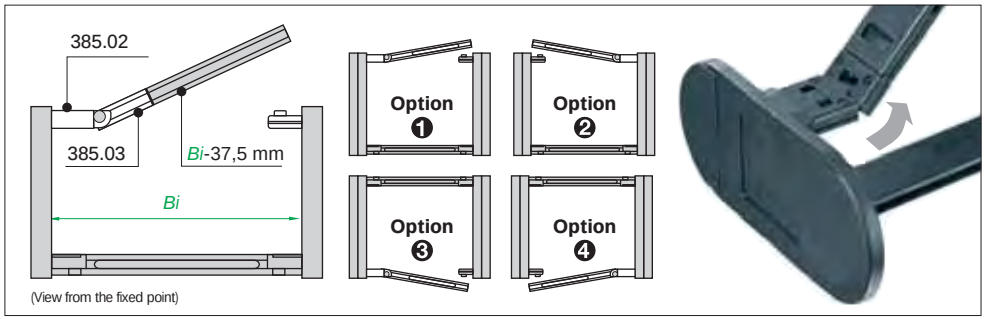
Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	105	O round	no	yes
385.18.RD115	105	O round	yes	no

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.42.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.42.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
E4.42.18RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
E4.42.18RDZ115.*R*.0

E4.42
H4.42
R4.42

E4.1 | Series E4.42 | More options

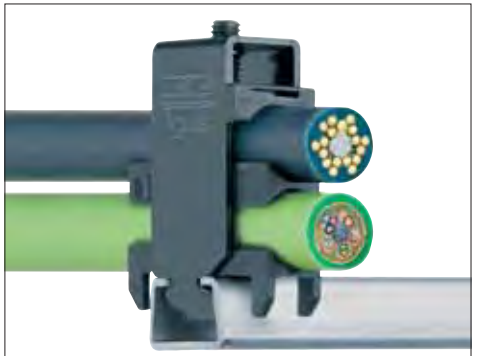


Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- Hinged crossbar: Part No. **385.02**
  Snap-open crossbar (shortened): *Bi*-37,5 mm Part No. **385.03**
  (smallest inner width *Bi* = 87,5)

Order example (here: inner width *Bi* 150)
E4.42.15.*Z*.*R*.0 =
E4.42.15.1.*R*.0
Supplement Index "Z" with required option number ①, ②, ③ or ④

E4.1 | Series E4.42 | e-chain® accessories



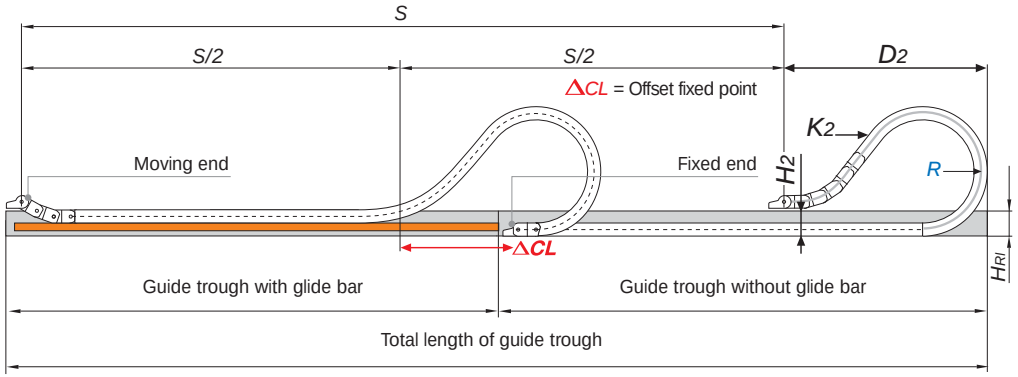
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 12 m to max. 300 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 8 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 67 mm/link · Links/m = 15 (1005 mm) · Chain length = $S/2 + K_2$

R	075*	100*	115*	125	150	160	175	200	250	300	350
H_2	150	200	230	186	186	186	186	186	186	186	186
D_2^{+25}	174	199	435	475	570	623	670	780	1030	1150	1500
K_2	370	450	737	804	938	1072	1139	1340	1675	1943	2412
ΔCL	–	–	200	230	300	380	380	460	660	730	1030

*Radius not available for e-tubes

More solutions | For long travel applications

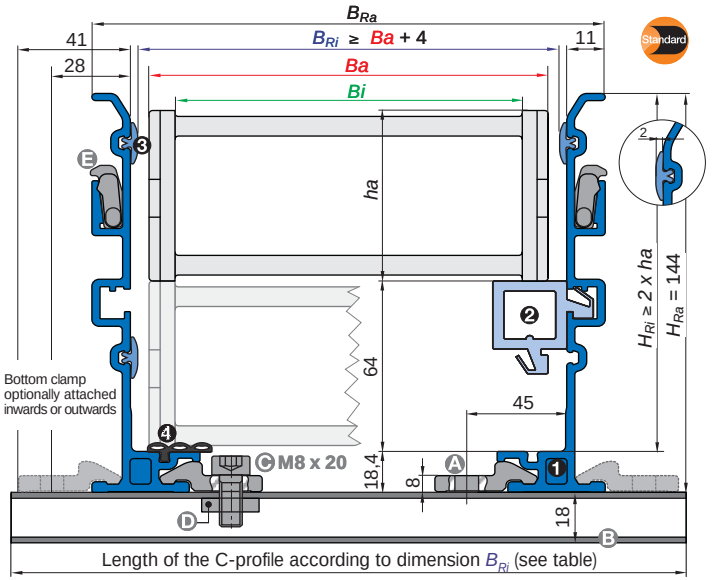
System P4.42 - profile-rol e-chain®, low-noise	Travels up to 800 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 3838R - Rolling instead of gliding	Travels up to 600 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		
autoglide E4.42.*Bi*.*R*.0.AG - Self-guiding, no guide troughs	Travels ≤ 50 m	v_{max} 1,5 m/s
Self-guiding e-chainsystems® - No guide troughs required!		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) · D_2 = Over length - long travels, gliding · K_2 = Further add-on (if the moving end is set lower) · R = Bending radius · ΔCL = Offset fixed point · H_{Ri} = Inner trough height · S = Length of travel · $S/2$ = Half length of travel

Aluminum SuperTrough | Basic Version

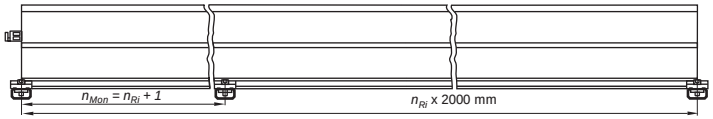
Part No. 973.30.SL | 973.31.SL | Trough height: 144 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.42.20.300.0 with B_{Ri} = 230

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 973.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 973.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.40.300
Module for the fixed end	
Order text: 1 set	Part No. 973.81.5
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 973.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1202

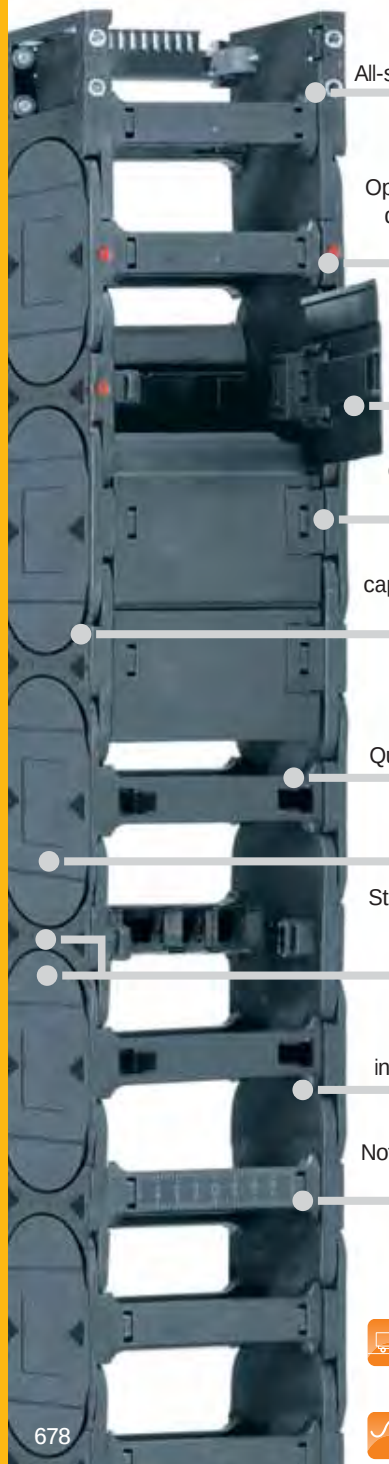
● Trough set ● Installation set ● Glide bar · ● C-Profile · Ba = Outer width e-chains® · Bi = Inner width e-chains® · B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height · H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	upon request	960.40.200
.06	98	upon request	960.40.225
.07	105	upon request	960.40.225
.087	118	960.40.175	960.40.250
.10	130	960.40.200	960.40.250
.11	138	960.40.200	960.40.275
.112	143	960.40.200	960.40.275
.12	155	960.40.225	960.40.275
.137	168	960.40.225	960.40.300
.15	180	960.40.250	960.40.300
.162	193	960.40.250	960.40.325
.17	198	960.40.250	960.40.325
.18	205	960.40.275	960.40.325
.187	218	960.40.275	960.40.350
.20	230	960.40.300	960.40.350
.212	243	960.40.300	960.40.375
.23	255	960.40.325	960.40.375
.237	268	960.40.325	960.40.400
.25	280	960.40.350	960.40.400
.262	293	960.40.350	960.40.425
.28	305	960.40.375	960.40.425
.29	318	960.40.375	960.40.450
.30	330	960.40.400	960.40.450
.312	343	960.40.400	960.40.475
.325	355	960.40.425	960.40.475
.337	368	960.40.425	960.40.500
.350	380	960.40.450	960.40.500
.362	393	960.40.450	960.40.525
.375	406	960.40.475	960.40.525
.387	418	960.40.475	960.40.550
.400	430	960.40.500	960.40.550

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of 960.40.XXX on the right column "attached outwards"



Stable due to undercut design, large inner height

When to use Series E4.56:

- If a robust e-chain®/e-tube with an inner height of 56 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 5,0 m and fill weights up to 62 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired

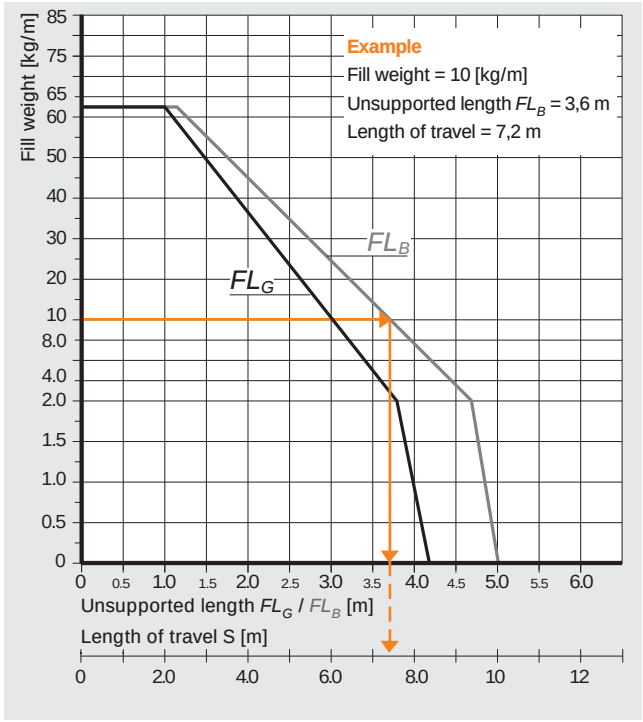
When to use a different igus® Series:

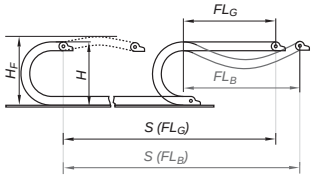
- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.52, page 956
- If the e-chain® shall be used in cleanroom applications
  ▶ Series E6.52, page 956
- If a less stable e-chain® can be used for economical reasons
  ▶ Series 14040/14140/R18840, page 784

The igus® E4 **e-chain® opener** reduces assembly time ▶ page 621

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.56



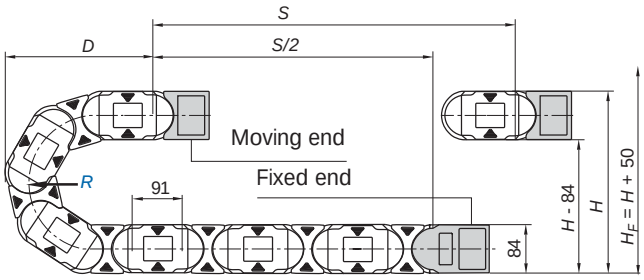


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 400 m.
More information ▶ page 692



Technical Data

Speed, material, temperature and flammability class ▶ page 622

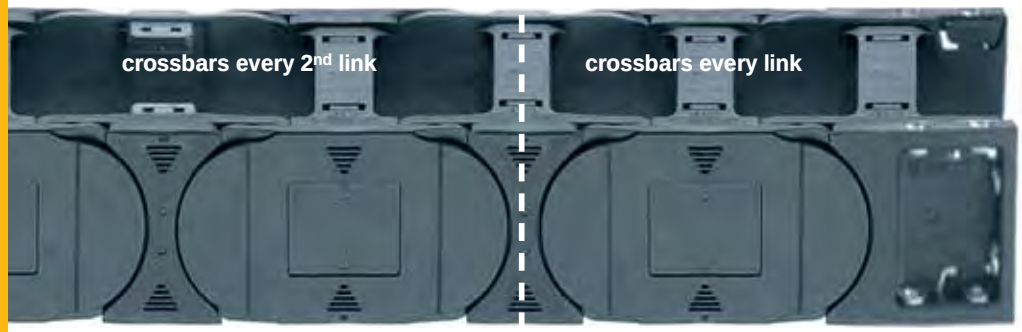
Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$

R	135*	150	175	200	240	250	300	350	400	450	500
H^{0}_{+25}	354	384	434	484	564	584	684	784	884	984	1084
D	314	329	354	379	419	429	479	529	579	629	679
K	610	655	735	815	940	970	1125	1285	1440	1600	1755

The required clearance height: $H_F = H + 50$ mm (with 3,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series E4.56 crossbars every link | Series H4.56 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	E4.56 [kg/m]	H4.56 [kg/m]
E4.56.	H4.56. 05. R.0	50	84	3,301	3,158
E4.56.	H4.56. 06. R.0	65	99	3,390	3,202
E4.56.	H4.56. 07. R.0	75	109	3,458	3,236
E4.56.	H4.56. 08. R.0	87	121	3,538	3,276
E4.56.	H4.56. 10. R.0	100	134	3,633	3,323
E4.56.	H4.56. 11. R.0	112	147	3,749	3,382
E4.56.	H4.56. 12. R.0	125	159	3,827	3,420
E4.56.	H4.56. 13. R.0	137	172	3,963	3,488
E4.56.	H4.56. 15. R.0	150	184	4,000	3,507
E4.56.	H4.56. 16. R.0	162	197	4,113	3,563
E4.56.	H4.56. 17. R.0	175	209	4,245	3,630
E4.56.	H4.56. 18. R.0	187	222	4,357	3,685
E4.56.	H4.56. 20. R.0	200	234	4,413	3,713
E4.56.	H4.56. 21. R.0	212	247	4,484	3,749
E4.56.	H4.56. 22. R.0	225	259	4,553	3,784
E4.56.	H4.56. 23. R.0	237	272	4,663	3,838
E4.56.	H4.56. 25. R.0	250	284	4,774	3,894
E4.56.	H4.56. 26. R.0	262	297	4,865	3,939
E4.56.	H4.56. 27. R.0	275	309	4,967	3,990
E4.56.	H4.56. 28. R.0	287	322	5,025	4,019
E4.56.	H4.56. 30. R.0	300	334	5,177	4,095
E4.56.	H4.56. 31. R.0	312	347	5,214	4,114
E4.56.	H4.56. 32. R.0	325	359	5,317	4,166
E4.56.	H4.56. 33. R.0	337	372	5,437	4,225
E4.56.	H4.56. 35. R.0	350	384	5,639	4,326
E4.56.	H4.56. 36. R.0	362	397	5,549	4,282
E4.56.	H4.56. 37. R.0	375	409	5,646	4,330
E4.56.	H4.56. 38. R.0	387	422	5,762	4,388
E4.56.	H4.56. 40. R.0	400	434	6,031	4,523
E4.56.	H4.56. 41. R.0	412	447	5,955	4,484
E4.56.	H4.56. 42. R.0	425	459	6,247	4,630
E4.56.	H4.56. 43. R.0	437	472	6,090	4,552
E4.56.	H4.56. 45. R.0	450	484	6,420	4,717
E4.56.	H4.56. 46. R.0	462	497	6,372	4,693
E4.56.	H4.56. 47. R.0	475	509	6,412	4,713
E4.56.	H4.56. 48. R.0	487	522	6,658	4,836
E4.56.	H4.56. 50. R.0	500	534	6,755	4,885
E4.56.	H4.56. 51. R.0	512	547	6,668	4,841
E4.56.	H4.56. 52. R.0	525	559	6,842	4,928
E4.56.	H4.56. 53. R.0	537	572	6,934	4,974
E4.56.	H4.56. 55. R.0	550	584	7,355	5,184
E4.56.	H4.56. 60. R.0	600	634	7,584	5,299

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

Supplement Part No. with required radius (*R*). Example: E4.56.30.300.0

e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series R4.56 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.56 [kg/m]
R4.56. 07. R.0*	75	109	3,910
R4.56. 10. R.0	100	134	4,200
R4.56. 12. R.0	125	159	4,560
R4.56. 15. R.0	150	184	4,940
R4.56. 17. R.0	175	209	5,250
R4.56. 20. R.0	200	234	5,560
R4.56. 25. R.0	250	284	6,290
R4.56. 27. R.0	275	309	6,650
R4.56. 30. R.0	300	334	6,950
R4.56. 35. R.0	350	384	7,650
R4.56. 40. R.0	400	434	8,650
R4.56. 46. R.0	462	497	9,118

Available bending radii *R* [mm] 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

*Removable lid only, no hinged option

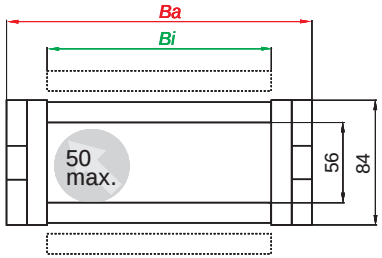
Supplement Part No. with required radius (*R*). Example: R4.56.30.300.0

Order key for all types

E4 .56. 30. 300. 0 e-chain® (crossbars every link)
H4 .56. 30. 300. 0 e-chain® (crossbars every 2nd link)
R4 .56. 30. 300. 0 Fully enclosed e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.56.	H4.56.	15QZ.R.0	15QE.R.0	15Q. R.0	150
E4.56.	H4.56.	16QZ.R.0	16QE.R.0	16Q. R.0	162
E4.56.	H4.56.	17QZ.R.0	17QE.R.0	17Q. R.0	175
E4.56.	H4.56.	18QZ.R.0	18QE.R.0	18Q. R.0	187
E4.56.	H4.56.	20QZ.R.0	20QE.R.0	20Q. R.0	200
E4.56.	H4.56.	21QZ.R.0	21QE.R.0	21Q. R.0	212
E4.56.	H4.56.	22QZ.R.0	22QE.R.0	22Q. R.0	225
E4.56.	H4.56.	23QZ.R.0	23QE.R.0	23Q. R.0	237
E4.56.	H4.56.	25QZ.R.0	25QE.R.0	25Q. R.0	250
E4.56.	H4.56.	26QZ.R.0	26QE.R.0	26Q. R.0	262
E4.56.	H4.56.	27QZ.R.0	27QE.R.0	27Q. R.0	275
E4.56.	H4.56.	28QZ.R.0	28QE.R.0	28Q. R.0	287
E4.56.	H4.56.	30QZ.R.0	30QE.R.0	30Q. R.0	300
E4.56.	H4.56.	31QZ.R.0	31QE.R.0	31Q. R.0	312
E4.56.	H4.56.	32QZ.R.0	32QE.R.0	32Q. R.0	325
E4.56.	H4.56.	33QZ.R.0	33QE.R.0	33Q. R.0	337
E4.56.	H4.56.	35QZ.R.0	35QE.R.0	35Q. R.0	350
E4.56.	H4.56.	36QZ.R.0	36QE.R.0	36Q. R.0	362
E4.56.	H4.56.	37QZ.R.0	37QE.R.0	37Q. R.0	375
E4.56.	H4.56.	38QZ.R.0	38QE.R.0	38Q. R.0	387
E4.56.	H4.56.	40QZ.R.0	40QE.R.0	40Q. R.0	400

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.56.	H4.56.	41QZ.R.0	41QE.R.0	41Q. R.0	412
E4.56.	H4.56.	42QZ.R.0	42QE.R.0	42Q. R.0	425
E4.56.	H4.56.	43QZ.R.0	43QE.R.0	43Q. R.0	437
E4.56.	H4.56.	45QZ.R.0	45QE.R.0	45Q. R.0	450
E4.56.	H4.56.	46QZ.R.0	46QE.R.0	46Q. R.0	462
E4.56.	H4.56.	47QZ.R.0	47QE.R.0	47Q. R.0	475
E4.56.	H4.56.	48QZ.R.0	48QE.R.0	48Q. R.0	487
E4.56.	H4.56.	50QZ.R.0	50QE.R.0	50Q. R.0	500
E4.56.	H4.56.	51QZ.R.0	51QE.R.0	51Q. R.0	512
E4.56.	H4.56.	52QZ.R.0	52QE.R.0	52Q. R.0	525
E4.56.	H4.56.	53QZ.R.0	53QE.R.0	53Q. R.0	537
E4.56.	H4.56.	55QZ.R.0	55QE.R.0	55Q. R.0	550
E4.56.	H4.56.	60QZ.R.0	60QE.R.0	60Q. R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

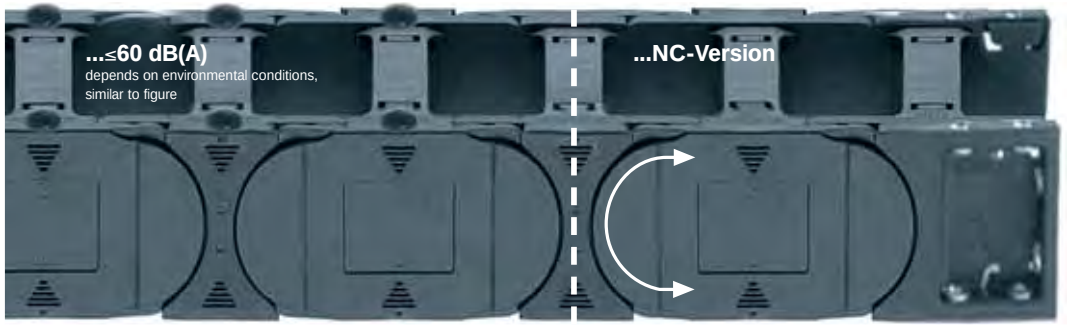
Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500

Supplement Part No. with required radius (*R*). Example: E4.56.30QZ.300.0

Configuration options and order keys, overview ▶ page 624

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≤60 dB(A)

With pads E4[1] H4[1] R4[1]			Bi [mm]
ES4	HS4	– .56.05. R.0	50
ES4	HS4	– .56.06. R.0	65
ES4	HS4	R4 .56.07. R.0	75
ES4	HS4	– .56.08. R.0	87
ES4	HS4	R4 .56.10. R.0	100
ES4	HS4	– .56.11. R.0	112
ES4	HS4	R4 .56.12. R.0	125
ES4	HS4	– .56.13. R.0	137
ES4	HS4	R4 .56.15. R.0	150
ES4	HS4	– .56.16. R.0	162
ES4	HS4	R4 .56.17. R.0	175
ES4	HS4	– .56.18. R.0	187
ES4	HS4	R4 .56.20. R.0	200
ES4	HS4	– .56.21. R.0	212
ES4	HS4	– .56.22. R.0	225
ES4	HS4	– .56.23. R.0	237
ES4	HS4	R4 .56.25. R.0	250
ES4	HS4	– .56.26. R.0	262
ES4	HS4	R4 .56.27. R.0	275
ES4	HS4	– .56.28. R.0	287
ES4	HS4	R4 .56.30. R.0	300

With pads E4[1] H4[1] R4[1]			Bi [mm]
ES4	HS4	– .56.31. R.0	312
ES4	HS4	– .56.32. R.0	325
ES4	HS4	R4 .56.33. R.0	337
ES4	HS4	– .56.35. R.0	350
ES4	HS4	R4 .56.36. R.0	362
ES4	HS4	– .56.37. R.0	375
ES4	HS4	R4 .56.38. R.0	387
ES4	HS4	– .56.40. R.0	400
ES4	HS4	R4 .56.41. R.0	412
ES4	HS4	– .56.42. R.0	425
ES4	HS4	R4 .56.43. R.0	437
ES4	HS4	– .56.45. R.0	450
ES4	HS4	R4 .56.46. R.0	462
ES4	HS4	– .56.47. R.0	475
ES4	HS4	– .56.48. R.0	487
ES4	HS4	– .56.50. R.0	500
ES4	HS4	R4 .56.51. R.0	512
ES4	HS4	– .56.52. R.0	525
ES4	HS4	R4 .56.53. R.0	537
ES4	HS4	– .56.55. R.0	550
ES4	HS4	R4 .56.60. R.0	600

NC-Version | Without pretension

NC-Version E4[1] H4[1] R4[1]			Bi [mm]
E4	H4	– .56.05. R.0.NC	50
E4	H4	– .56.06. R.0.NC	65
E4	H4	R4 .56.07. R.0.NC	75
E4	H4	– .56.08. R.0.NC	87
E4	H4	R4 .56.10. R.0.NC	100
E4	H4	– .56.11. R.0.NC	112
E4	H4	R4 .56.12. R.0.NC	125
E4	H4	– .56.13. R.0.NC	137
E4	H4	R4 .56.15. R.0.NC	150
E4	H4	– .56.16. R.0.NC	162
E4	H4	R4 .56.17. R.0.NC	175
E4	H4	– .56.18. R.0.NC	187
E4	H4	R4 .56.20. R.0.NC	200
E4	H4	– .56.21. R.0.NC	212
E4	H4	– .56.22. R.0.NC	225
E4	H4	– .56.23. R.0.NC	237
E4	H4	R4 .56.25. R.0.NC	250
E4	H4	– .56.26. R.0.NC	262
E4	H4	R4 .56.27. R.0.NC	275
E4	H4	– .56.28. R.0.NC	287
E4	H4	R4 .56.30. R.0.NC	300

NC-Version E4[1] H4[1] R4[1]			Bi [mm]
E4	H4	– .56.31. R.0.NC	312
E4	H4	– .56.32. R.0.NC	325
E4	H4	– .56.33. R.0.NC	337
E4	H4	R4 .56.35. R.0.NC	350
E4	H4	– .56.36. R.0.NC	362
E4	H4	– .56.37. R.0.NC	375
E4	H4	R4 .56.38. R.0.NC	387
E4	H4	– .56.40. R.0.NC	400
E4	H4	R4 .56.41. R.0.NC	412
E4	H4	– .56.42. R.0.NC	425
E4	H4	R4 .56.43. R.0.NC	437
E4	H4	– .56.45. R.0.NC	450
E4	H4	R4 .56.46. R.0.NC	462
E4	H4	– .56.47. R.0.NC	475
E4	H4	– .56.48. R.0.NC	487
E4	H4	– .56.50. R.0.NC	500
E4	H4	R4 .56.51. R.0.NC	512
E4	H4	– .56.52. R.0.NC	525
E4	H4	R4 .56.53. R.0.NC	537
E4	H4	– .56.55. R.0.NC	550
E4	H4	R4 .56.60. R.0.NC	600

Available bending radii *R* [mm] 135* | 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: ES4.56.30.300.0 or E4.56.30.300.0.NC

1) E4 = e-chain® with crossbars every link H4 = e-chain® with crossbars every 2nd link R4 = e-tube fully enclosed

Configuration options and order keys, overview ▶ page 624

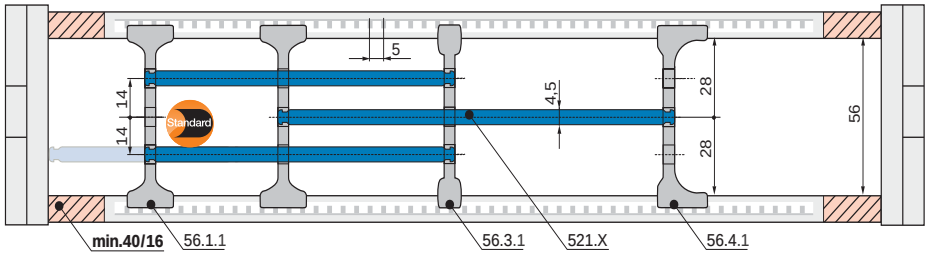
Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

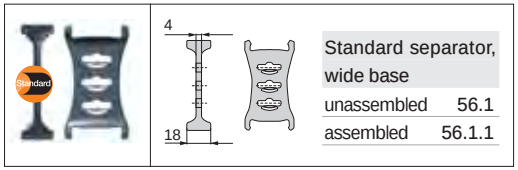
ESD/ATEX permanently conductive e-chains® - E4.56 several widths with delivery from stock: Inner widths 75 - 300 mm, radii *R* 135 - 250 mm. Full ESD product range ▶ www.igus.eu/ESD

E4.1 | Series E4.56 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



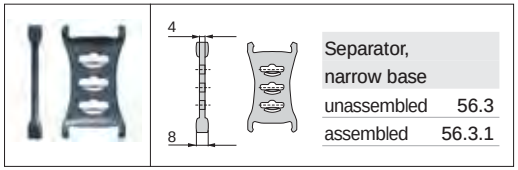
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	56.1
assembled	56.1.1

Standard - for all applications

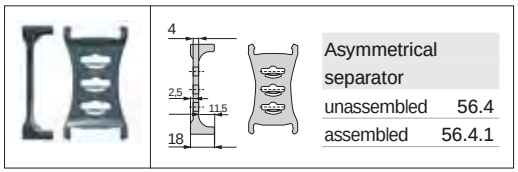
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	56.3
assembled	56.3.1

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	56.4
assembled	56.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



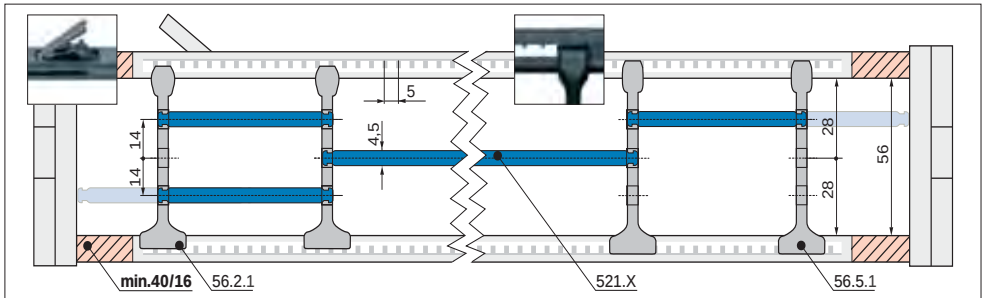


① Standard separator, wide base - Part No. 56.1 ③ Separator, narrow base - Part No. 56.3 ⑤ Notch separator - Part No. 56.5
② Separator for QuickLock crossbar - Part No. 56.2 ④ Separator, asymmetrical - Part No. 56.4 ⑥ Full-width self, lockable - Part No. 520.XX

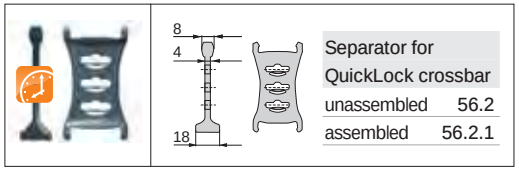
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.56 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



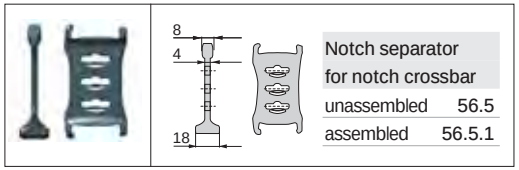
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	56.2
assembled	56.2.1

For even faster installation

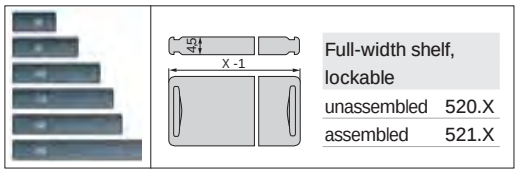
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	56.5
assembled	56.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

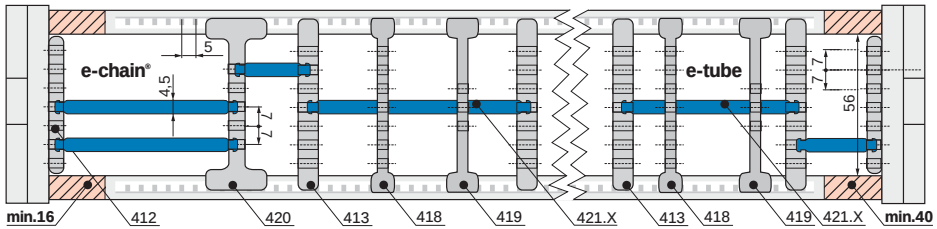
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



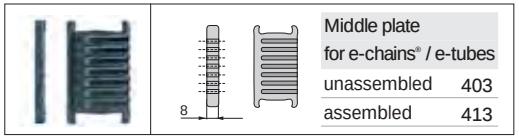
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	175	520.175	521.175	362	520.362	520.362
065	520.065	521.065	200	520.200	521.200	375	520.375	520.375
075	520.075	521.075	225	520.225	521.225	387	520.387	520.387
100	520.100	521.100	250	520.250	521.250	450	520.450	521.450
125	520.125	521.125	300	520.300	521.300			
150	520.150	521.150	350	520.350	521.350			

Option | Shelves for e-chains® and e-tubes



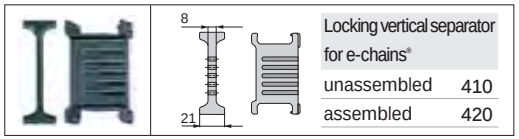
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	403
assembled	413

Middle plate 403

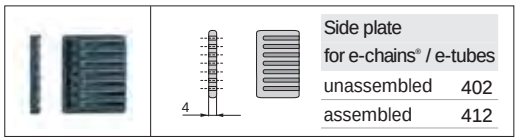
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 7 different heights (in 7 mm increments).



Locking vertical separator for e-chains®	
unassembled	410
assembled	420

Locking vertical separator 410 (e-chains® only)

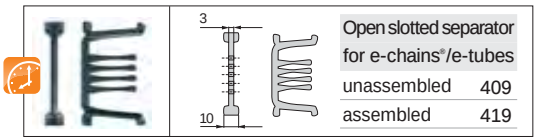
Works like middle plate, for applications exposed to very high humidity (> 85%).



Side plate for e-chains® / e-tubes	
unassembled	402
assembled	412

Side plate 402

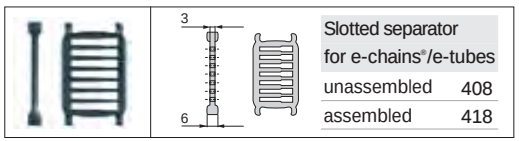
Works like middle plate.
Allows modular shelving close to the side links.



Open slotted separator for e-chains®/e-tubes	
unassembled	409
assembled	419

Open, slotted separator 409 (unilateral open)

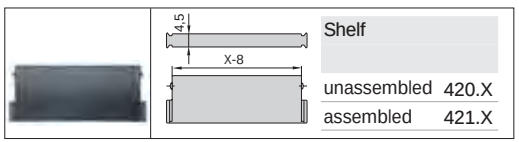
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Slotted separator for e-chains®/e-tubes	
unassembled	408
assembled	418

Slotted separator 408

For very fine subdivisions. However, they cannot be retro-fitted into an existing separation system without dismantling the interior separators first.



Shelf	
unassembled	420.X
assembled	421.X

Shelf 420.X

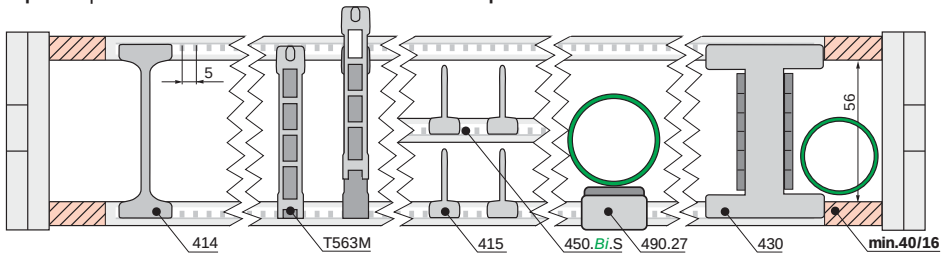
For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments). (not in combination with 404).

E4.1 | Series E4.56 | Interior separation | Options

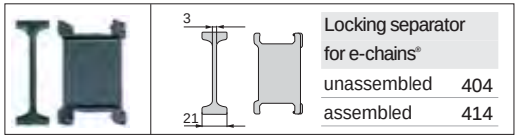
Previous interior separation All elements can still be ordered ► www.igus.eu/eu/E4.56

E4.56
H4.56
R4.56

Option | Additional elements for interior separation



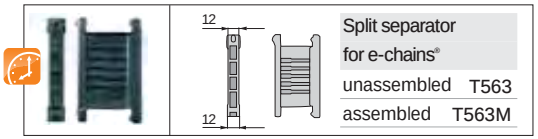
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Locking separator for e-chains®	
unassembled	404
assembled	414

Locking separator 404 (e-chains® only)

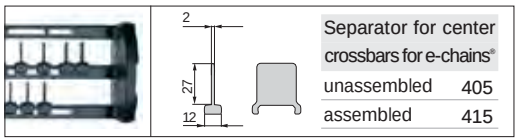
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Split separator for e-chains®	
unassembled	T563
assembled	T563M

Split separator T563 (e-chains® only)

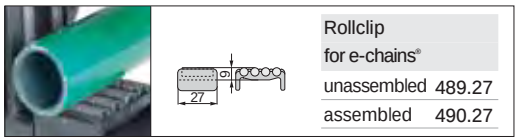
Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.



Separator for center crossbars for e-chains®	
unassembled	405
assembled	415

Separator for center crossbars (e-chains® only)

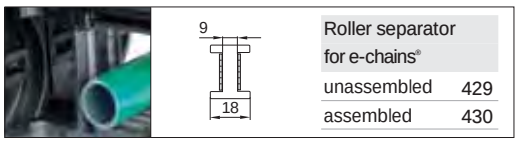
For applications with a large number of thin cables. The separator for center crossbars Part No. 450.*Bi*.S offers the option of subdividing the e-chain® independently into upper and lower halves.s.



Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

Rollclip

Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.



Roller separator for e-chains®	
unassembled	429
assembled	430

Roller separator

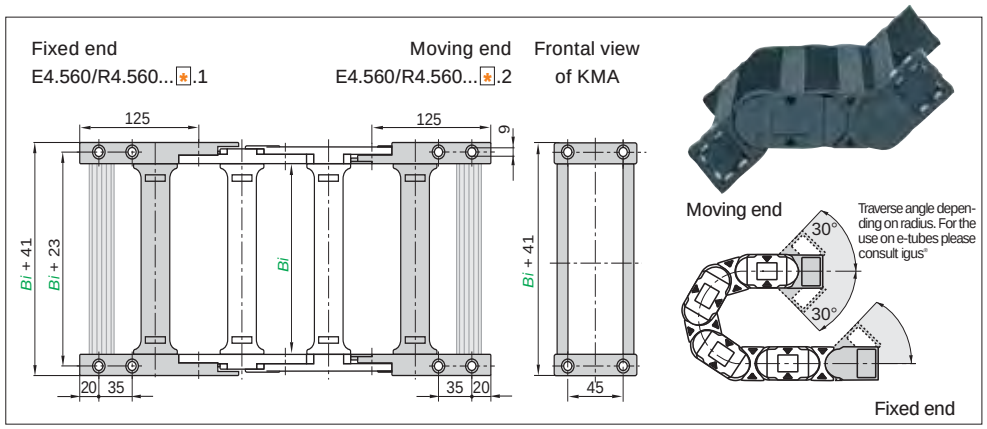
Performs a similar function to the Rollclip, but doubles as a separator. For rigid cables and hoses.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

E4.1 | Series E4.56 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05.	E4.560. – 05 .*.12.C	50	31.	E4.560. – 31 .*.12.C	312
06.	E4.560. – 06 .*.12.C	65	32.	E4.560. – 32 .*.12.C	325
07.	E4.560. R4.560. 07 .*.12.C	75	33.	E4.560. – 33 .*.12.C	337
08.	E4.560. – 08 .*.12.C	87	35.	E4.560. R4.560. 35 .*.12.C	350
10.	E4.560. R4.560. 10 .*.12.C	100	36.	E4.560. – 36 .*.12.C	362
11.	E4.560. – 11 .*.12.C	112	37.	E4.560. – 37 .*.12.C	375
12.	E4.560. R4.560. 12 .*.12.C	125	38.	E4.560. – 38 .*.12.C	387
13.	E4.560. – 13 .*.12.C	137	40.	E4.560. R4.560. 40 .*.12.C	400
15.	E4.560. R4.560. 15 .*.12.C	150	41.	E4.560. – 41 .*.12.C	412
16.	E4.560. – 16 .*.12.C	162	42.	E4.560. – 42 .*.12.C	425
17.	E4.560. R4.560. 17 .*.12.C	175	43.	E4.560. – 43 .*.12.C	437
18.	E4.560. – 18 .*.12.C	187	45.	E4.560. – 45 .*.12.C	450
20.	E4.560. R4.560. 20 .*.12.C	200	46.	E4.560. R4.560. 46 .*.12.C	462
21.	E4.560. – 21 .*.12.C	212	47.	E4.560. – 47 .*.12.C	475
22.	E4.560. – 22 .*.12.C	225	48.	E4.560. – 48 .*.12.C	487
23.	E4.560. – 23 .*.12.C	237	50.	E4.560. – 50 .*.12.C	500
25.	E4.560. R4.560. 25 .*.12.C	250	51.	E4.560. – 51 .*.12.C	512
26.	E4.560. – 26 .*.12.C	262	52.	E4.560. – 52 .*.12.C	525
27.	E4.560. R4.560. 27 .*.12.C	275	53.	E4.560. – 53 .*.12.C	537
28.	E4.560. – 28 .*.12.C	287	55.	E4.560. – 55 .*.12.C	550
30.	E4.560. R4.560. 30 .*.12.C	300	60.	E4.560. – 60 .*.12.C	600

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.560.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket Moving end

E4.560.30.2.2.C (even number of links)

Mounting bracket Fixed end

E4.560.30.2.1.C (even number of links)

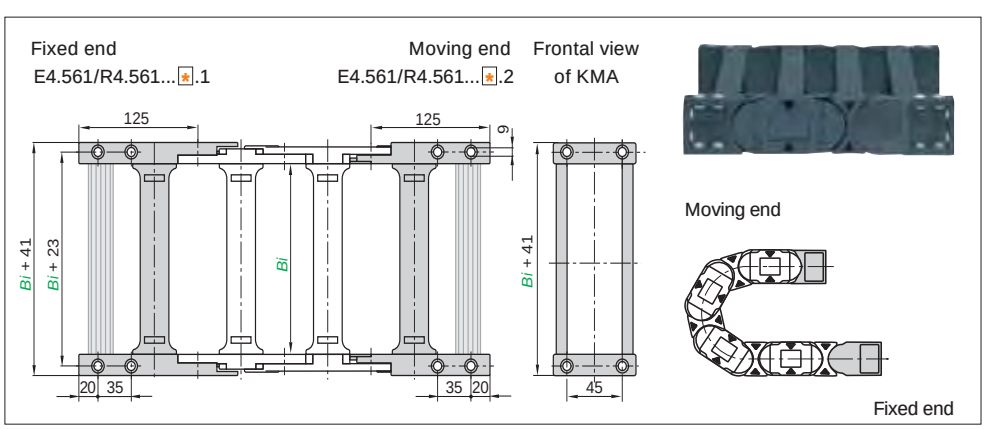
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 | Series E4.56 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05.	E4.561. – 05 .*.12.C	50	31.	E4.561. – 31 .*.12.C	312
06.	E4.561. – 06 .*.12.C	65	32.	E4.561. – 32 .*.12.C	325
07.	E4.561. R4.561. 07 .*.12.C	75	33.	E4.561. – 33 .*.12.C	337
08.	E4.561. – 08 .*.12.C	87	35.	E4.561. R4.561. 35 .*.12.C	350
10.	E4.561. R4.561. 10 .*.12.C	100	36.	E4.561. – 36 .*.12.C	362
11.	E4.561. – 11 .*.12.C	112	37.	E4.561. – 37 .*.12.C	375
12.	E4.561. R4.561. 12 .*.12.C	125	38.	E4.561. – 38 .*.12.C	387
13.	E4.561. – 13 .*.12.C	137	40.	E4.561. R4.561. 40 .*.12.C	400
15.	E4.561. R4.561. 15 .*.12.C	150	41.	E4.561. – 41 .*.12.C	412
16.	E4.561. – 16 .*.12.C	162	42.	E4.561. – 42 .*.12.C	425
17.	E4.561. R4.560. 17 .*.12.C	175	43.	E4.561. – 43 .*.12.C	437
18.	E4.561. – 18 .*.12.C	187	45.	E4.561. – 45 .*.12.C	450
20.	E4.561. R4.561. 20 .*.12.C	200	46.	E4.561. R4.561. 46 .*.12.C	462
21.	E4.561. – 21 .*.12.C	212	47.	E4.561. – 47 .*.12.C	475
22.	E4.561. – 22 .*.12.C	225	48.	E4.561. – 48 .*.12.C	487
23.	E4.561. – 23 .*.12.C	237	50.	E4.561. – 50 .*.12.C	500
25.	E4.561. R4.561. 25 .*.12.C	250	51.	E4.561. – 51 .*.12.C	512
26.	E4.561. – 26 .*.12.C	262	52.	E4.561. – 52 .*.12.C	525
27.	E4.561. R4.561. 27 .*.12.C	275	53.	E4.561. – 53 .*.12.C	537
28.	E4.561. – 28 .*.12.C	287	55.	E4.561. – 55 .*.12.C	550
30.	E4.561. R4.561. 30 .*.12.C	300	60.	E4.561. – 60 .*.12.C	600

- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.561.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

Mounting bracket Moving end

E4.561.30.2.2.C (even number of links)

Mounting bracket Fixed end

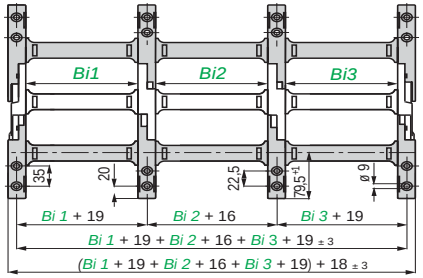
E4.561.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



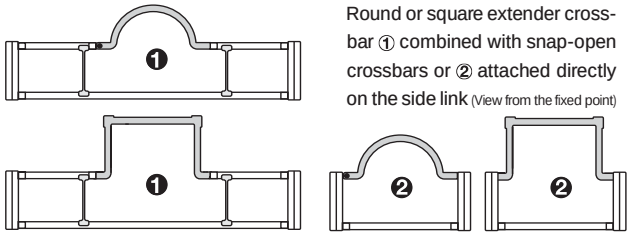


Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
E4.56.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
E4.56.10 / 20 / 10.200.0
Extension link - single-part order
422.*R*. (please indicate radius)





Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	180	□ square	yes	no
450.35.D250	195	□ square	yes	no
450.40.D300	245	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	180	□ square	no	yes
450.30.HD250	195	□ square	no	yes

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.56.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.56.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
E4.56.17RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
E4.56.17RDZ115.*R*.0

E4.1 | Series E4.56 | More options





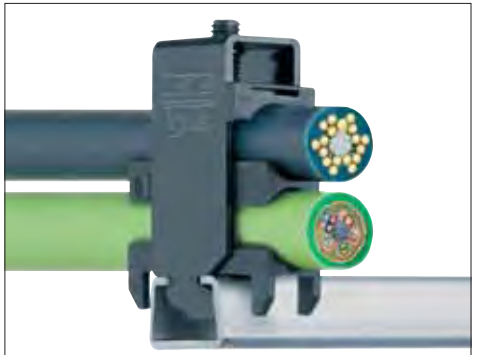
E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 150)
Locking clip, openable along inner radius "Z":
E4.56.15.B12.200Z.*R*.0
Locking clip, openable along outer radius "E":
E4.56.15.B12.200E.*R*.0

E4.1 | Series E4.56 | e-chain® accessories



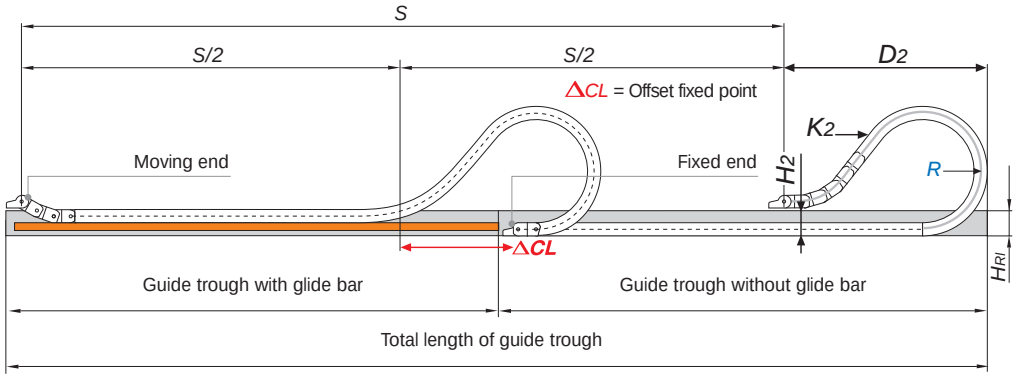
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 12 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 10 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K_2$

R	135*	150	175	200	240	250	300	350	400	450	500
H_2	270	266	266	266	266	266	266	266	266	266	266
D_2+25	268	450	580	710	900	980	1180	1440	1530	1700	1850
K_2	610	819	1092	1274	1547	1638	2002	2275	2548	2912	3276
ΔCL	–	159	259	359	509	559	709	909	959	1059	1159

*Radius not available for e-tubes

More solutions | For long travel applications

System P4.56 - profile-rol e-chain®, low-noise — Travels up to 800 m — v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life

rol e-chain® 4040R - Rolling instead of gliding — Travels up to 800 m — v_{max} 6,0 m/s

Major reduction in drive power to less than 25 % for moving the e-chain®

autoglide E4.56.*Bi*.*R*.0.AG - Self-guiding, no guide troughs — Travels ≤ 50 m — v_{max} 1,5 m/s

Self-guiding e-chainsystems® - No guide troughs required!

Specialty:

guidelok horizontal - Upper run guide, unsupported — Travels ≤ 50 m

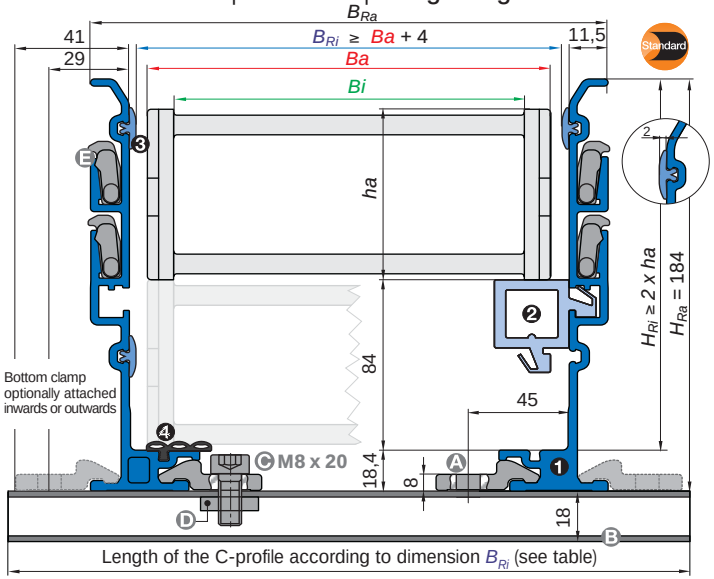
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains®

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

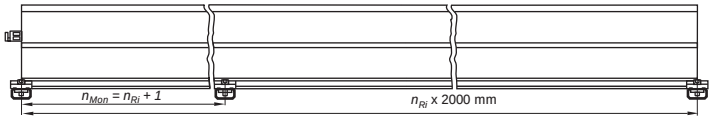
Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.56.10.200.0 with B_{Ri} = 138

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 974.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 974.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.200
Module for the fixed end	
Order text: 1 set	Part No. 974.80.5
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 974.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1204

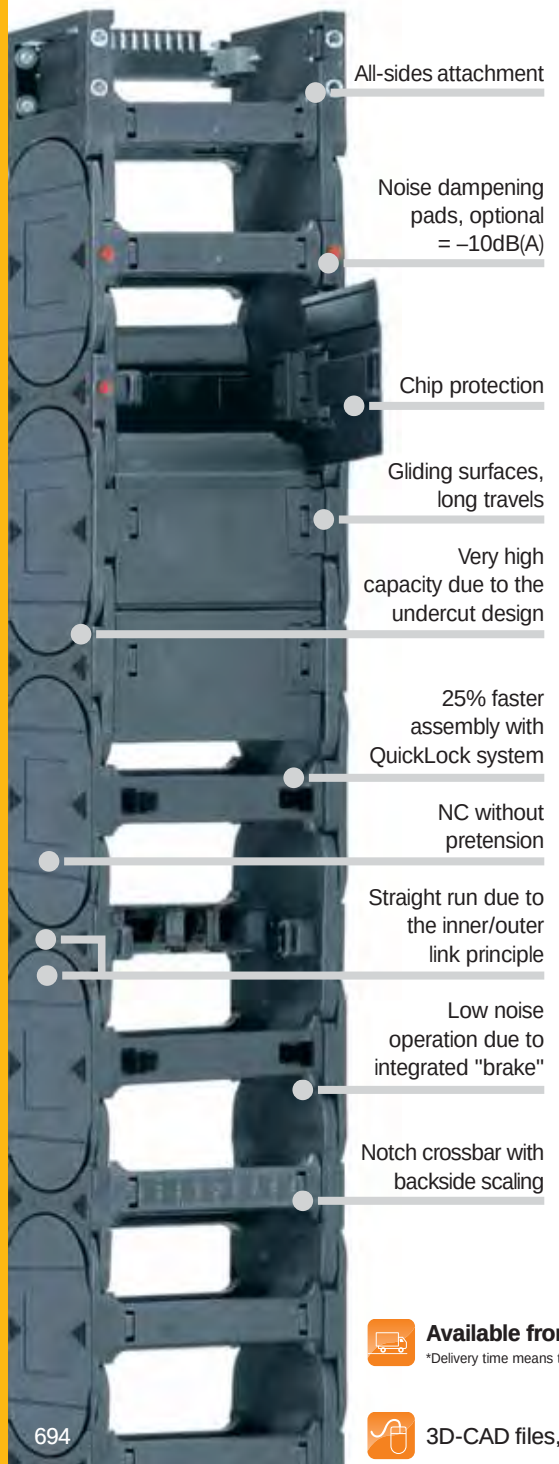
● Trough set ● Installation set ● Glide bar ● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	88	upon request	960.50.225
.06	103	upon request	960.50.225
.07	113	upon request	960.50.250
.08	125	960.50.175	960.50.250
.10	138	960.50.200	960.50.275
.11	151	960.50.200	960.50.275
.12	163	960.50.225	960.50.300
.13	176	960.50.225	960.50.300
.15	188	960.50.250	960.50.325
.16	201	960.50.250	960.50.325
.17	213	960.50.275	960.50.350
.18	226	960.50.275	960.50.350
.20	238	960.50.300	960.50.375
.21	251	960.50.300	960.50.375
.22	263	960.50.325	960.50.400
.23	276	960.50.325	960.50.400
.25	288	960.50.350	960.50.425
.26	301	960.50.350	960.50.425
.27	313	960.50.375	960.50.450
.28	326	960.50.375	960.50.450
.30	338	960.50.400	960.50.475
.31	351	960.50.400	960.50.475
.32	363	960.50.425	960.50.500
.33	376	960.50.425	960.50.500
.35	388	960.50.450	960.50.525
.36	401	960.50.450	960.50.525
.37	413	960.50.475	960.50.550
.38	426	960.50.475	960.50.550
.40	438	960.50.500	960.50.575
.41	451	960.50.500	960.50.575
.42	463	960.50.525	960.50.600
.43	476	960.50.525	960.50.600
.45	488	960.50.550	960.50.625
.46	501	960.50.550	960.50.625
.47	513	960.50.575	960.50.650
.48	526	960.50.575	960.50.650
.50	538	960.50.600	960.50.675
.51	551	960.50.600	960.50.675
.52	563	960.50.625	960.50.700
.53	576	960.50.625	960.50.700
.55	588	960.50.650	960.50.725
.60	638	960.50.700	960.50.775

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



Stable due to undercut design, very large inner height

When to use Series E4.80:

- If a robust e-chain®/e-tube with an inner height of 80 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 6,0 m and fill weights up to 80 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired

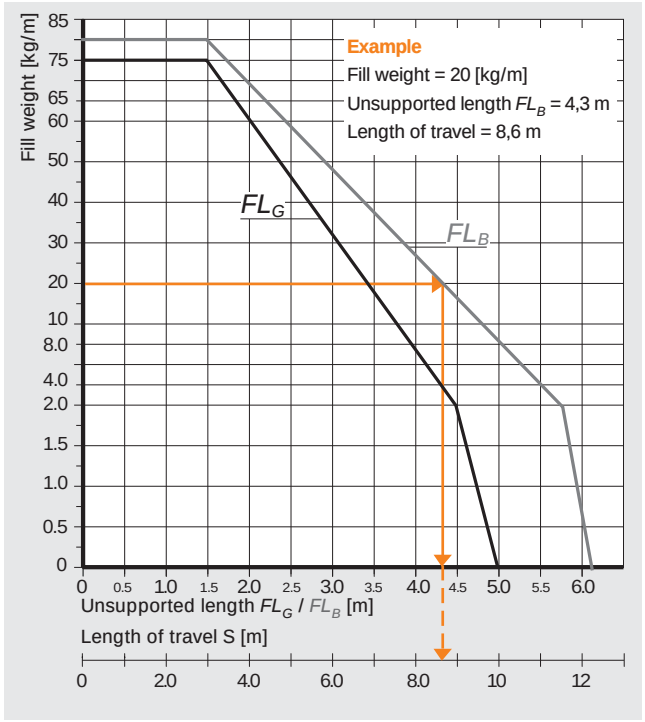
When to use a different igus® Series:

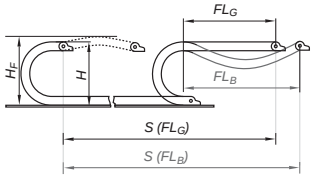
- If an extremely low-noise and low-vibration e-chain® is required (≤50 dB(A))
►Series E6.80, page 984
- If the e-chain® shall be used in cleanroom applications
►Series E6.80, page 984
- If a less stable e-chain® can be used for economical reasons
►Series 15050/15150/R19850, page 830

The igus® E4 **e-chain® opener** reduces assembly time ► page 621

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/E4.80



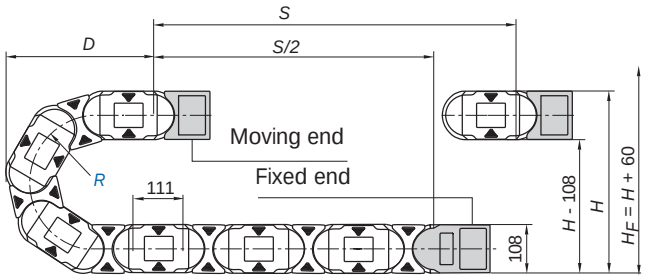


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95

Gliding applications

Travels up to 400 m.
More information ► page 708



Technical Data

Speed, material, temperature and flammability class ► page 622

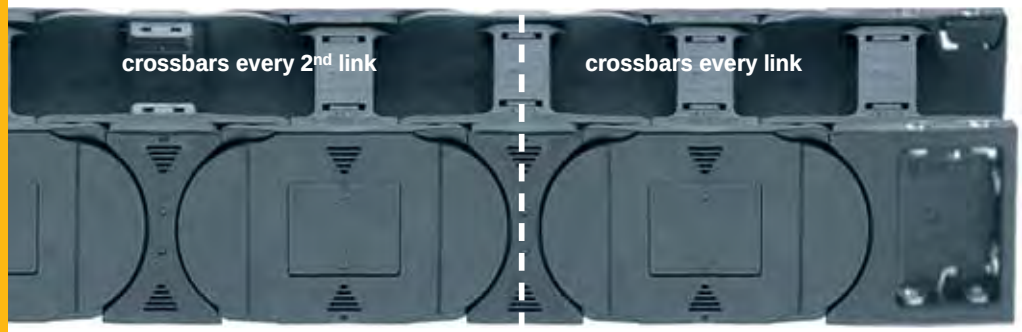
Pitch = 111 mm/link
Links/m = 9 (999 mm)
Chain length = $S/2 + K$

R	150*	200	250	300	350	400	500	550	600	1000
$H\ ^{0}_{+25}$	408	508	608	708	808	908	1108	1208	1308	2108
D	371	421	471	521	571	621	721	771	821	1221
K	695	855	1010	1165	1325	1480	1795	1950	2110	3365

The required clearance height: $H_F = H + 60$ mm (with 3,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series E4.80 crossbars every link | Series H4.80 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	E4.80 [kg/m]	H4.80 [kg/m]
E4.80.	H4.80. 05. R.0	50	100	5,339	5,221
E4.80.	H4.80. 06. R.0	65	115	5,411	5,257
E4.80.	H4.80. 07. R.0	75	125	5,467	5,285
E4.80.	H4.80. 08. R.0	87	137	5,563	5,319
E4.80.	H4.80. 10. R.0	100	150	5,610	5,357
E4.80.	H4.80. 11. R.0	112	163	5,705	5,404
E4.80.	H4.80. 12. R.0	125	175	5,769	5,436
E4.80.	H4.80. 13. R.0	137	188	5,880	5,492
E4.80.	H4.80. 15. R.0	150	200	5,911	5,507
E4.80.	H4.80. 16. R.0	162	213	6,003	5,553
E4.80.	H4.80. 17. R.0	175	225	6,111	5,607
E4.80.	H4.80. 18. R.0	187	238	6,202	5,653
E4.80.	H4.80. 20. R.0	200	250	6,248	5,676
E4.80.	H4.80. 21. R.0	212	263	6,306	5,705
E4.80.	H4.80. 22. R.0	225	275	6,363	5,733
E4.80.	H4.80. 23. R.0	237	288	6,453	5,778
E4.80.	H4.80. 25. R.0	250	300	6,543	5,824
E4.80.	H4.80. 26. R.0	262	313	6,618	5,861
E4.80.	H4.80. 27. R.0	275	325	6,701	5,902
E4.80.	H4.80. 28. R.0	287	338	6,749	5,926
E4.80.	H4.80. 30. R.0	300	350	6,873	5,988
E4.80.	H4.80. 31. R.0	312	363	6,904	6,004
E4.80.	H4.80. 32. R.0	325	375	6,988	6,046
E4.80.	H4.80. 33. R.0	337	388	7,086	6,095
E4.80.	H4.80. 35. R.0	350	400	7,251	6,177
E4.80.	H4.80. 36. R.0	362	413	7,178	6,141
E4.80.	H4.80. 37. R.0	375	425	7,257	6,180
E4.80.	H4.80. 38. R.0	387	438	7,352	6,228
E4.80.	H4.80. 40. R.0	400	450	7,572	6,338
E4.80.	H4.80. 41. R.0	412	463	7,510	6,307
E4.80.	H4.80. 42. R.0	425	475	7,749	6,426
E4.80.	H4.80. 43. R.0	437	488	7,621	6,362
E4.80.	H4.80. 45. R.0	450	500	7,890	6,497
E4.80.	H4.80. 46. R.0	462	513	7,851	6,477
E4.80.	H4.80. 47. R.0	475	525	7,884	6,494
E4.80.	H4.80. 48. R.0	487	538	8,086	6,595
E4.80.	H4.80. 50. R.0	500	550	8,093	6,598
E4.80.	H4.80. 51. R.0	512	563	8,165	6,634
E4.80.	H4.80. 52. R.0	525	575	8,235	6,670
E4.80.	H4.80. 53. R.0	537	588	8,311	6,707
E4.80.	H4.80. 55. R.0	550	600	8,655	6,879
E4.80.	H4.80. 60. R.0	600	650	8,843	6,973

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000

Supplement Part No. with required radius (*R*). Example: E4.80.30.300.0

e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.80
H4.80
R4.80

E4.1 | Series E4.80 | Product range | Standard



e-tubes | Series R4.80 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.80 [kg/m]
R4.80. 15. R.0	150	200	6,720
R4.80. 20. R.0	200	250	7,230
R4.80. 25. R.0	250	300	8,060
R4.80. 30. R.0	300	350	8,730
R4.80. 35. R.0	350	400	9,470
R4.80. 40. R.0	400	450	10,210
R4.80. 46 R.0	462	513	10,960

More widths available upon request, please consult igus® for delivery time

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000

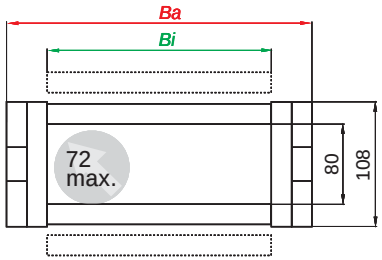
Supplement Part No. with required radius (*R*). Example: R4.80.30.300.0

Order key for all types

E4 .80. 30. 300. 0 e-chain® (crossbars every link)
H4 .80. 30. 300. 0 e-chain® (crossbars every 2nd link)
R4 .80. 30. 300. 0 Fully enclosed e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.80.	H4.80.	15QZ.R.0	15QE.R.0	15Q.R.0	150
E4.80.	H4.80.	16QZ.R.0	16QE.R.0	16Q.R.0	162
E4.80.	H4.80.	17QZ.R.0	17QE.R.0	17Q.R.0	175
E4.80.	H4.80.	18QZ.R.0	18QE.R.0	18Q.R.0	187
E4.80.	H4.80.	20QZ.R.0	20QE.R.0	20Q.R.0	200
E4.80.	H4.80.	21QZ.R.0	21QE.R.0	21Q.R.0	212
E4.80.	H4.80.	22QZ.R.0	22QE.R.0	22Q.R.0	225
E4.80.	H4.80.	23QZ.R.0	23QE.R.0	23Q.R.0	237
E4.80.	H4.80.	25QZ.R.0	25QE.R.0	25Q.R.0	250
E4.80.	H4.80.	26QZ.R.0	26QE.R.0	26Q.R.0	262
E4.80.	H4.80.	27QZ.R.0	27QE.R.0	27Q.R.0	275
E4.80.	H4.80.	28QZ.R.0	28QE.R.0	28Q.R.0	287
E4.80.	H4.80.	30QZ.R.0	30QE.R.0	30Q.R.0	300
E4.80.	H4.80.	31QZ.R.0	31QE.R.0	31Q.R.0	312
E4.80.	H4.80.	32QZ.R.0	32QE.R.0	32Q.R.0	325
E4.80.	H4.80.	33QZ.R.0	33QE.R.0	33Q.R.0	337
E4.80.	H4.80.	35QZ.R.0	35QE.R.0	35Q.R.0	350
E4.80.	H4.80.	36QZ.R.0	36QE.R.0	36Q.R.0	362
E4.80.	H4.80.	37QZ.R.0	37QE.R.0	37Q.R.0	375
E4.80.	H4.80.	38QZ.R.0	38QE.R.0	38Q.R.0	387
E4.80.	H4.80.	40QZ.R.0	40QE.R.0	40Q.R.0	400

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.80.	H4.80.	41QZ.R.0	41QE.R.0	41Q.R.0	412
E4.80.	H4.80.	42QZ.R.0	42QE.R.0	42Q.R.0	425
E4.80.	H4.80.	43QZ.R.0	43QE.R.0	43Q.R.0	437
E4.80.	H4.80.	45QZ.R.0	45QE.R.0	45Q.R.0	450
E4.80.	H4.80.	46QZ.R.0	46QE.R.0	46Q.R.0	462
E4.80.	H4.80.	47QZ.R.0	47QE.R.0	47Q.R.0	475
E4.80.	H4.80.	48QZ.R.0	48QE.R.0	48Q.R.0	487
E4.80.	H4.80.	50QZ.R.0	50QE.R.0	50Q.R.0	500
E4.80.	H4.80.	51QZ.R.0	51QE.R.0	51Q.R.0	512
E4.80.	H4.80.	52QZ.R.0	52QE.R.0	52Q.R.0	525
E4.80.	H4.80.	53QZ.R.0	53QE.R.0	53Q.R.0	537
E4.80.	H4.80.	55QZ.R.0	55QE.R.0	55Q.R.0	550
E4.80.	H4.80.	60QZ.R.0	60QE.R.0	60Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

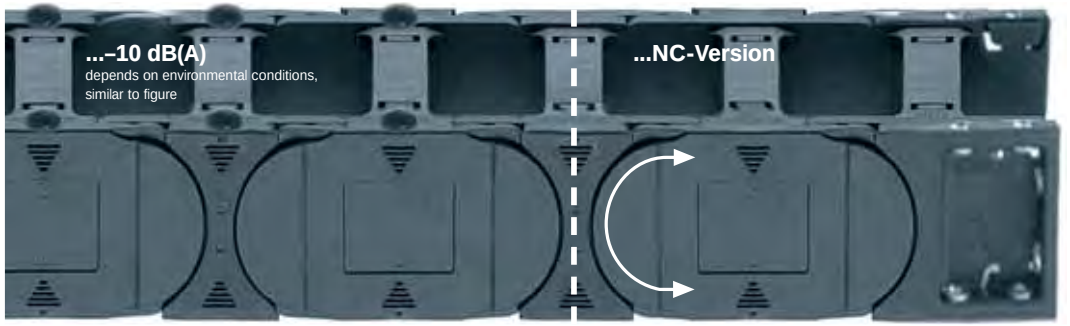
Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000

Supplement Part No. with required radius (*R*). Example: E4.80.30QZ.300.0

Configuration options and order keys, overview ▶ page 624

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | - ≈10 dB(A)

With pads E4[1] H4[1] R4[1]			Bi [mm]
ES4	HS4 –	.80.05. R.0	50
ES4	HS4 –	.80.06. R.0	65
ES4	HS4 –	.80.07. R.0	75
ES4	HS4 –	.80.08. R.0	87
ES4	HS4	RS4 .80.10. R.0	100
ES4	HS4 –	.80.11. R.0	112
ES4	HS4 –	.80.12. R.0	125
ES4	HS4 –	.80.13. R.0	137
ES4	HS4	RS4 .80.15. R.0	150
ES4	HS4 –	.80.16. R.0	162
ES4	HS4 –	.80.17. R.0	175
ES4	HS4 –	.80.18. R.0	187
ES4	HS4	RS4 .80.20. R.0	200
ES4	HS4 –	.80.21. R.0	212
ES4	HS4 –	.80.22. R.0	225
ES4	HS4 –	.80.23. R.0	237
ES4	HS4	RS4 .80.25. R.0	250
ES4	HS4 –	.80.26. R.0	262
ES4	HS4 –	.80.27. R.0	275
ES4	HS4 –	.80.28. R.0	287
ES4	HS4	RS4 .80.30. R.0	300

With pads E4[1] H4[1] R4[1]			Bi [mm]
ES4	HS4 –	.80.31. R.0	312
ES4	HS4 –	.80.32. R.0	325
ES4	HS4 –	.80.33. R.0	337
ES4	HS4	RS4 .80.35. R.0	350
ES4	HS4 –	.80.36. R.0	362
ES4	HS4 –	.80.37. R.0	375
ES4	HS4 –	.80.38. R.0	387
ES4	HS4	RS4 .80.40. R.0	400
ES4	HS4 –	.80.41. R.0	412
ES4	HS4 –	.80.42. R.0	425
ES4	HS4 –	.80.43. R.0	437
ES4	HS4 –	.80.45. R.0	450
ES4	HS4	RS4 .80.46. R.0	462
ES4	HS4 –	.80.47. R.0	475
ES4	HS4 –	.80.48. R.0	487
ES4	HS4 –	.80.50. R.0	500
ES4	HS4	RS4 .80.51. R.0	512
ES4	HS4 –	.80.52. R.0	525
ES4	HS4 –	.80.53. R.0	537
ES4	HS4 –	.80.55. R.0	550
ES4	HS4 –	.80.60. R.0	600

NC-Version | Without pretension

NC-Version E4[1] H4[1] R4[1]			Bi [mm]
E4	H4 –	.80.05. R.0.NC	50
E4	H4 –	.80.06. R.0.NC	65
E4	H4 –	.80.07. R.0.NC	75
E4	H4 –	.80.08. R.0.NC	87
E4	H4 –	.80.10. R.0.NC	100
E4	H4 –	.80.11. R.0.NC	112
E4	H4 –	.80.12. R.0.NC	125
E4	H4 –	.80.13. R.0.NC	137
E4	H4 R4	.80.15. R.0.NC	150
E4	H4 –	.80.16. R.0.NC	162
E4	H4 –	.80.17. R.0.NC	175
E4	H4 –	.80.18. R.0.NC	187
E4	H4 R4	.80.20. R.0.NC	200
E4	H4 –	.80.21. R.0.NC	212
E4	H4 –	.80.22. R.0.NC	225
E4	H4 –	.80.23. R.0.NC	237
E4	H4 R4	.80.25. R.0.NC	250
E4	H4 –	.80.26. R.0.NC	262
E4	H4 –	.80.27. R.0.NC	275
E4	H4 –	.80.28. R.0.NC	287
E4	H4 R4	.80.30. R.0.NC	300

NC-Version E4[1] H4[1] R4[1]			Bi [mm]
E4	H4 –	.80.31. R.0.NC	312
E4	H4 –	.80.32. R.0.NC	325
E4	H4 –	.80.33. R.0.NC	337
E4	H4 R4	.80.35. R.0.NC	350
E4	H4 –	.80.36. R.0.NC	362
E4	H4 –	.80.37. R.0.NC	375
E4	H4 –	.80.38. R.0.NC	387
E4	H4 R4	.80.40. R.0.NC	400
E4	H4 –	.80.41. R.0.NC	412
E4	H4 –	.80.42. R.0.NC	425
E4	H4 –	.80.43. R.0.NC	437
E4	H4 –	.80.45. R.0.NC	450
E4	H4 R4	.80.46. R.0.NC	462
E4	H4 –	.80.47. R.0.NC	475
E4	H4 –	.80.48. R.0.NC	487
E4	H4 –	.80.50. R.0.NC	500
E4	H4 R4	.80.51. R.0.NC	512
E4	H4 –	.80.52. R.0.NC	525
E4	H4 –	.80.53. R.0.NC	537
E4	H4 –	.80.55. R.0.NC	550
E4	H4 R4	.80.60. R.0.NC	600

Available bending radii *R* [mm] 150* | 200 | 250 | 300 | 350 | 400 | 500 | 550 | 600 | 1000 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: ES4.80.30.300.0 or E4.80.30.300.0.NC

1) E4 = e-chain® with crossbars every link H4 = e-chain® with crossbars every 2nd link R4 = e-tube fully enclosed

Configuration options and order keys, overview ▶ page 624

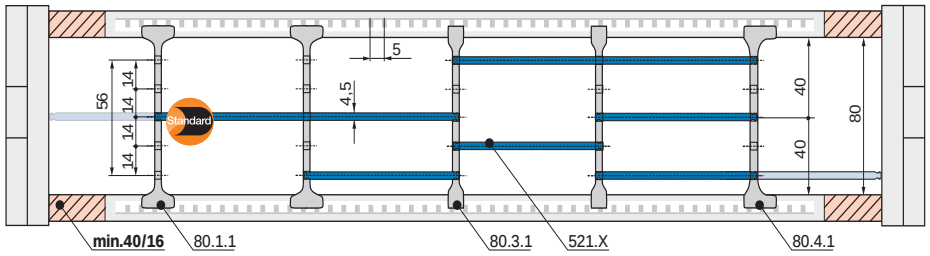
Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

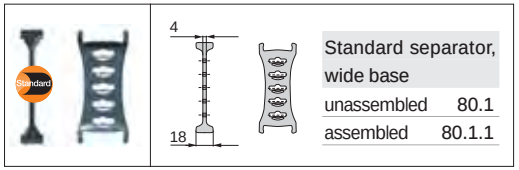
ESD/ATEX permanently conductive e-chains® - E4.80 several widths with delivery from stock: Inner widths 30 - 70 mm, radii *R* 048 - 100 mm. Full ESD product range ▶ www.igus.eu/ESD

E4.1 | Series E4.80 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



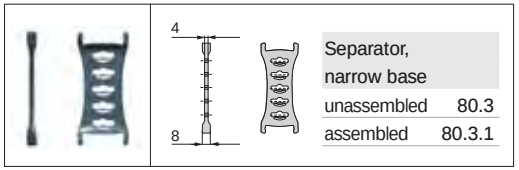
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	80.1
assembled	80.1.1

Standard - for all applications

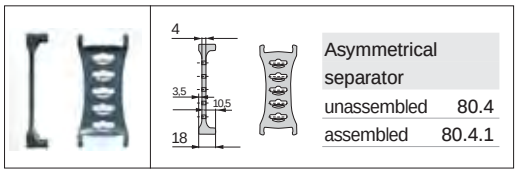
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	80.3
assembled	80.3.1

For many thin cables

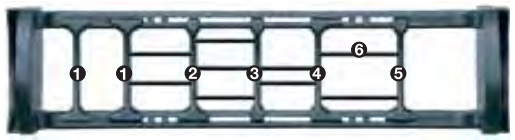
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	80.4
assembled	80.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.



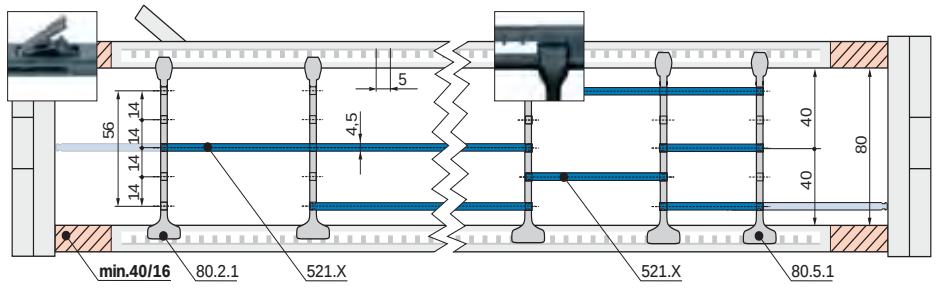


① Standard separator, wide base - Part No. 80.1 ③ Separator, narrow base - Part No. 80.3 ⑤ Notch separator - Part No. 80.5
② Separator for QuickLock crossbar - Part No. 80.2 ④ Separator, asymmetrical - Part No. 80.4 ⑥ Full-width self, lockable - Part No. 520.XX

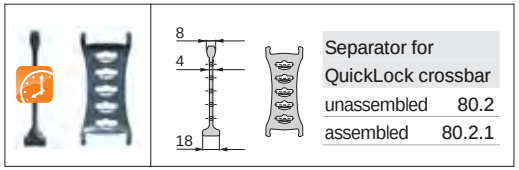
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.80 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



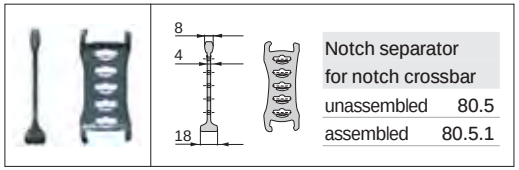
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	80.2
assembled	80.2.1

For even faster installation

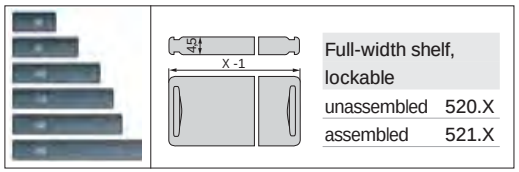
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	80.5
assembled	80.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

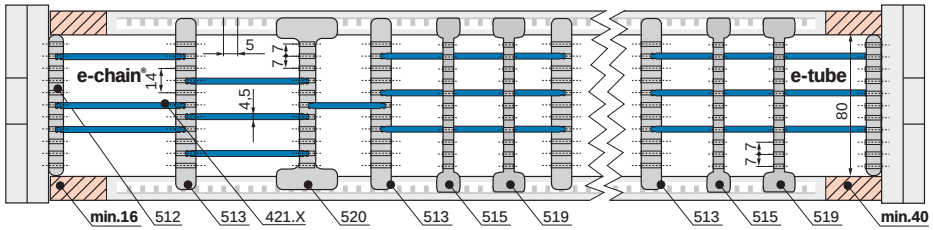
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.



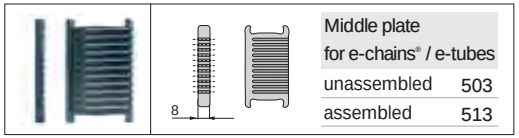
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	175	520.175	521.175	362	520.362	520.362
065	520.065	521.065	200	520.200	521.200	375	520.375	520.375
075	520.075	521.075	225	520.225	521.225	387	520.387	520.387
100	520.100	521.100	250	520.250	521.250	450	520.450	521.450
125	520.125	521.125	300	520.300	521.300			
150	520.150	521.150	350	520.350	521.350			

Option | Shelves for e-chains® and e-tubes



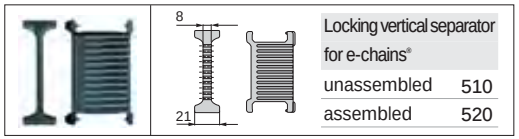
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	503
assembled	513

Middle plate 503

Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 11 different heights (in 7 mm increments).



Locking vertical separator for e-chains®	
unassembled	510
assembled	520

Locking vertical separator 510 (e-chains® only)

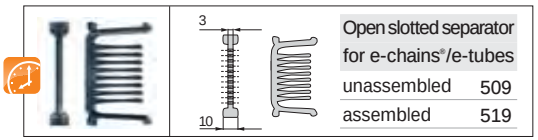
Works like middle plate, for applications exposed to very high humidity (> 85%).



Side plate for e-chains® / e-tubes	
unassembled	T802
assembled	T802M

Side plate T802

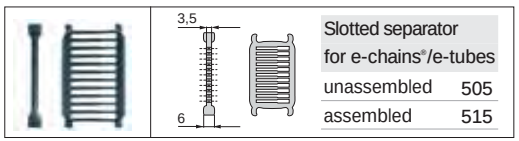
Works like middle plate.
Allows modular shelving close to the side links.



Open slotted separator for e-chains®/e-tubes	
unassembled	509
assembled	519

Open, slotted separator 509 (unilateral open)

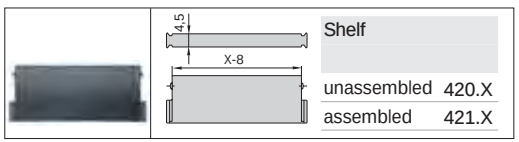
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Slotted separator for e-chains®/e-tubes	
unassembled	505
assembled	515

Slotted separator 505

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.



Shelf	
unassembled	420.X
assembled	421.X

Shelf 420.X

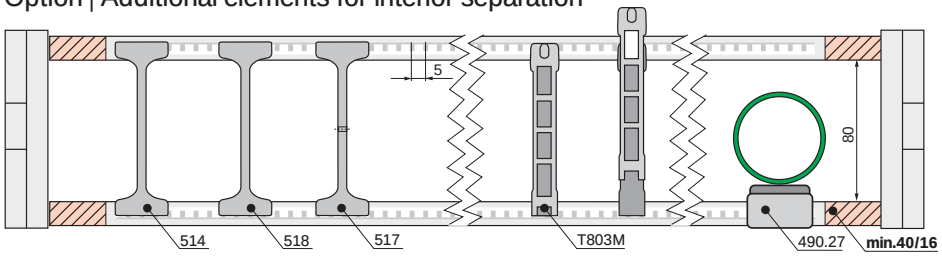
For horizontal separation. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments). (not in combination with 504, 508).

E4.80
H4.80
R4.80

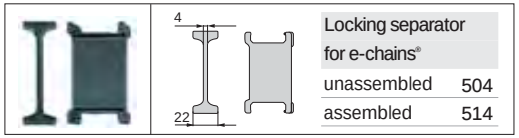
E4.1 | Series E4.80 | Interior separation | Options

Previous interior separation All elements can still be ordered ► www.igus.eu/eu/E4.80

Option | Additional elements for interior separation



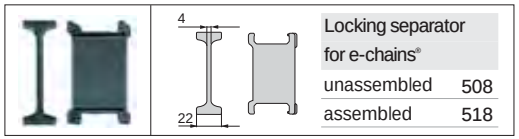
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Locking separator for e-chains®	
unassembled	504
assembled	514

Locking separator 504 (e-chains® only)

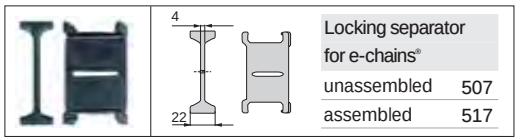
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Locking separator for e-chains®	
unassembled	508
assembled	518

Locking separator 508 (e-chains® only)

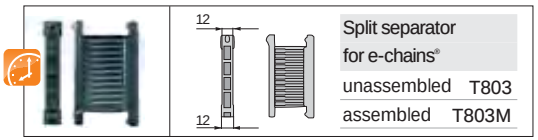
For applications exposed to very high humidity (> 85%). Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Locking separator for e-chains®	
unassembled	507
assembled	517

Locking separator 507 (e-chains® only)

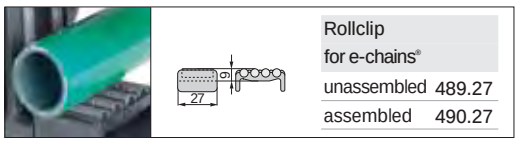
For applications exposed to very high humidity (> 85%). Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Split separator for e-chains®	
unassembled	T803
assembled	T803M

Split separator T803 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.



Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

Rollclip (e-chains® only)

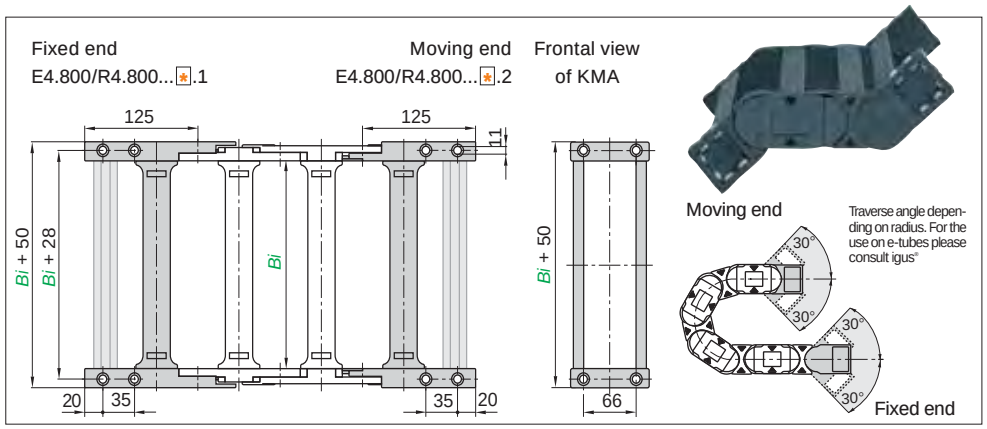
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

E4.1 | Series E4.80 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05.	E4.800. – 05 .*.12.C	50	31.	E4.800. – 31 .*.12.C	312
06.	E4.800. – 06 .*.12.C	65	32.	E4.800. – 32 .*.12.C	325
07.	E4.800. – 07 .*.12.C	75	33.	E4.800. – 33 .*.12.C	337
08.	E4.800. – 08 .*.12.C	87	35.	E4.800. R4.800. 35 .*.12.C	350
10.	E4.800. – 10 .*.12.C	100	36.	E4.800. – 36 .*.12.C	362
11.	E4.800. – 11 .*.12.C	112	37.	E4.800. – 37 .*.12.C	375
12.	E4.800. – 12 .*.12.C	125	38.	E4.800. – 38 .*.12.C	387
13.	E4.800. – 13 .*.12.C	137	40.	E4.800. R4.800. 40 .*.12.C	400
15.	E4.800. R4.800. 15 .*.12.C	150	41.	E4.800. – 41 .*.12.C	412
16.	E4.800. – 16 .*.12.C	162	42.	E4.800. – 42 .*.12.C	425
17.	E4.800. – 17 .*.12.C	175	43.	E4.800. – 43 .*.12.C	437
18.	E4.800. – 18 .*.12.C	187	45.	E4.800. – 45 .*.12.C	450
20.	E4.800. R4.800. 20 .*.12.C	200	46.	E4.800. R4.800. 46 .*.12.C	462
21.	E4.800. – 21 .*.12.C	212	47.	E4.800. – 47 .*.12.C	475
22.	E4.800. – 22 .*.12.C	225	48.	E4.800. – 48 .*.12.C	487
23.	E4.800. – 23 .*.12.C	237	50.	E4.800. – 50 .*.12.C	500
25.	E4.800. R4.800. 25 .*.12.C	250	51.	E4.800. – 51 .*.12.C	512
26.	E4.800. – 26 .*.12.C	262	52.	E4.800. – 52 .*.12.C	525
27.	E4.800. – 27 .*.12.C	275	53.	E4.800. – 53 .*.12.C	537
28.	E4.800. – 28 .*.12.C	287	55.	E4.800. – 55 .*.12.C	550
30.	E4.800. R4.800. 30 .*.12.C	300	60.	E4.800. – 60 .*.12.C	600

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)

E4.800.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

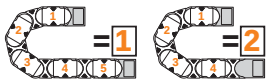
Mounting bracket Moving end

E4.800.30.2.2.C (even number of links)

Mounting bracket Fixed end

E4.800.30.2.1.C (even number of links)

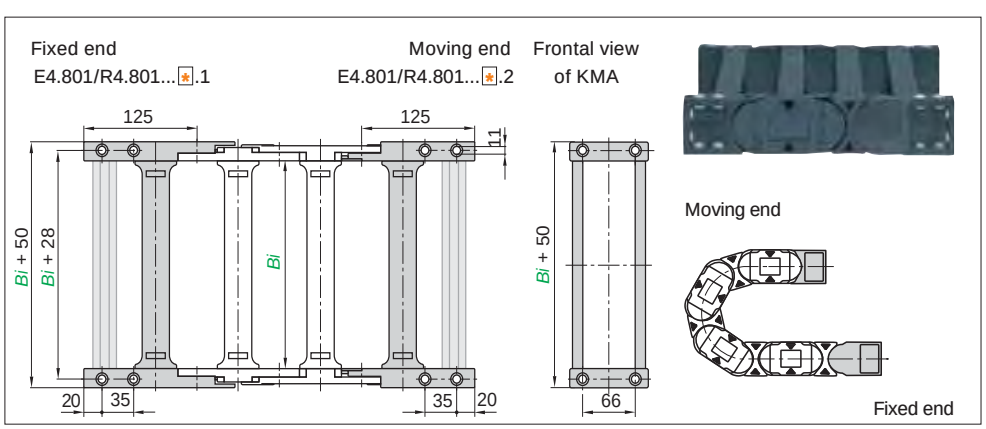
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 | Series E4.80 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05.	E4.801. – 05 .*.12.C	50	31.	E4.801. – 31 .*.12.C	312
06.	E4.801. – 06 .*.12.C	65	32.	E4.801. – 32 .*.12.C	325
07.	E4.801. – 07 .*.12.C	75	33.	E4.801. – 33 .*.12.C	337
08.	E4.801. – 08 .*.12.C	87	35.	E4.801. R4.801. 35 .*.12.C	350
10.	E4.801. – 10 .*.12.C	100	36.	E4.801. – 36 .*.12.C	362
11.	E4.801. – 11 .*.12.C	112	37.	E4.801. – 37 .*.12.C	375
12.	E4.801. – 12 .*.12.C	125	38.	E4.801. – 38 .*.12.C	387
13.	E4.801. – 13 .*.12.C	137	40.	E4.801. R4.801. 40 .*.12.C	400
15.	E4.801. R4.801. 15 .*.12.C	150	41.	E4.801. – 41 .*.12.C	412
16.	E4.801. – 16 .*.12.C	162	42.	E4.801. – 42 .*.12.C	425
17.	E4.801. – 17 .*.12.C	175	43.	E4.801. – 43 .*.12.C	437
18.	E4.801. – 18 .*.12.C	187	45.	E4.801. – 45 .*.12.C	450
20.	E4.801. R4.801. 20 .*.12.C	200	46.	E4.801. R4.801. 46 .*.12.C	462
21.	E4.801. – 21 .*.12.C	212	47.	E4.801. – 47 .*.12.C	475
22.	E4.801. – 22 .*.12.C	225	48.	E4.801. – 48 .*.12.C	487
23.	E4.801. – 23 .*.12.C	237	50.	E4.801. – 50 .*.12.C	500
25.	E4.801. R4.801. 25 .*.12.C	250	51.	E4.801. – 51 .*.12.C	512
26.	E4.801. – 26 .*.12.C	262	52.	E4.801. – 52 .*.12.C	525
27.	E4.801. – 27 .*.12.C	275	53.	E4.801. – 53 .*.12.C	537
28.	E4.801. – 28 .*.12.C	287	55.	E4.801. – 55 .*.12.C	550
30.	E4.801. R4.801. 30 .*.12.C	300	60.	E4.801. – 60 .*.12.C	600

- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)

E4.801.30.2.12.C

- C-profile option
- Full set
- even
- Width index
- Series

Single-part order:

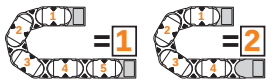
Mounting bracket Moving end

E4.801.30.2.2.C (even number of links)

Mounting bracket Fixed end

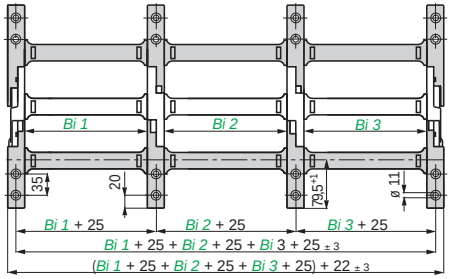
E4.801.30.2.1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end. The Part Nos. depend on an even or odd numbers of links. Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



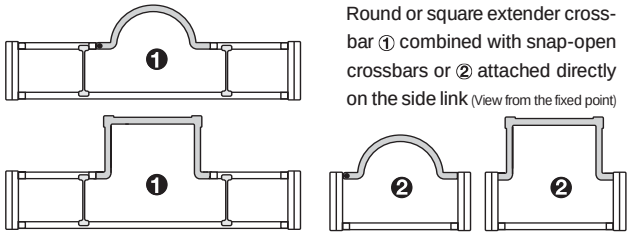


Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
E4.80.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
E4.80.10 / 20 / 10.200.0
Extension links: single-part order:
E4.80M.01 (outer link)
E4.80M.02.*R*. (inner link)
(please indicate radius)





Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.80.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.80.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
E4.80.17RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
E4.80.17RDZ115.*R*.0





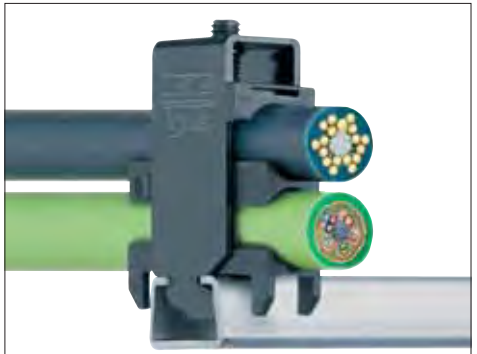
E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 150)
Locking clip, openable along inner radius "Z":
E4.80.15.B12.200Z.*R*.0
Locking clip, openable along outer radius "E":
E4.80.15.B12.200E.*R*.0

E4.1 | Series E4.80 | e-chain® accessories



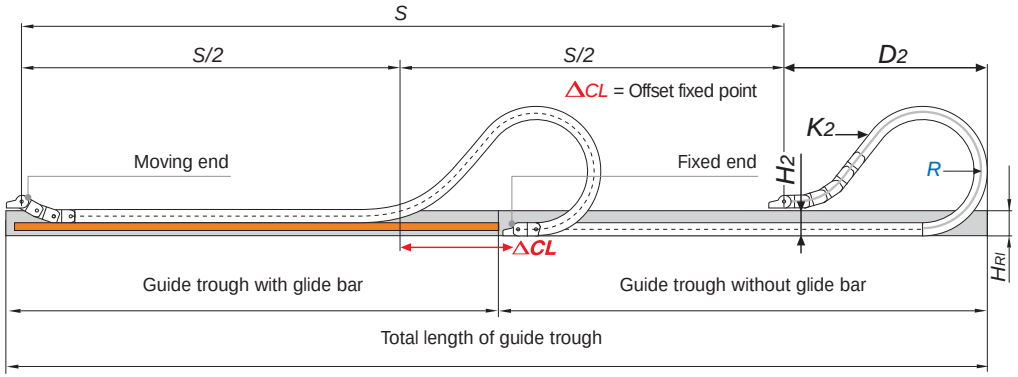
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 12 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 10 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 111 mm/link · Links/m = 9 (999 mm) · Chain length = $S/2 + K_2$

R	150*	200	250	300	350	400	500	550	600	1000
H_2	242	242	242	242	242	242	242	–	–	–
D_2^{+25}	550	800	1000	1200	1450	1600	2100	–	–	–
K_2	890	1330	1665	2000	2330	2660	3440	–	–	–
ΔCL	189	389	539	689	889	989	1389	–	–	–

*Radius not available for e-tubes

More solutions | For long travel applications

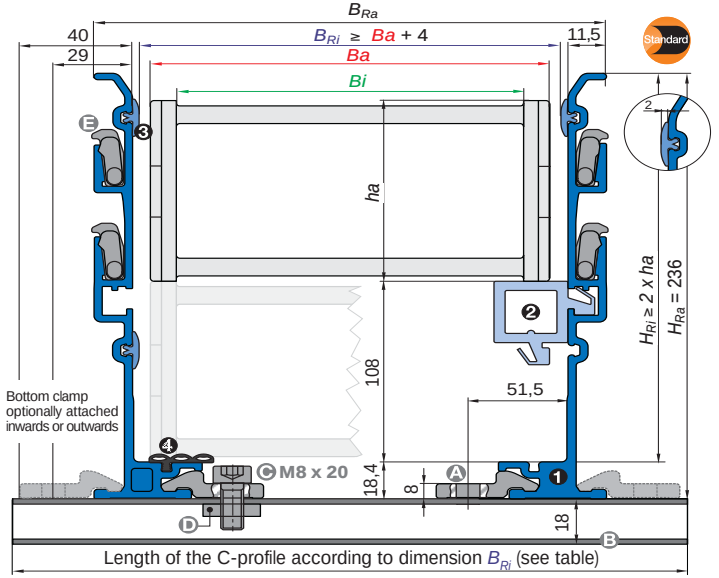
System P4.80 - profile-rol e-chain®, low-noise	Travels up to 800 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 5050R - Rolling instead of gliding	Travels up to 800 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		
autoglide E4.80.*Bi*.*R*.0.AG - Self-guiding, no guide troughs	Travels ≤ 50 m	v_{max} 1,5 m/s
Self-guiding e-chainsystems® - No guide troughs required!		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) · K_2 = Further add-on (if the moving end is set lower) · ΔCL = Offset fixed point · S = Length of travel
D_2 = Over length - long travels, gliding · R = Bending radius · H_{Ri} = Inner trough height · S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

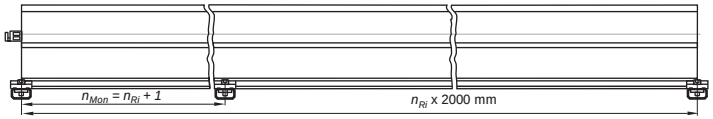
Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.80.30.300.0 with B_{Ri} = 354

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 975.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 975.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.425
Module for the fixed end	
Order text: 1 set	Part No. 975.80
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1206

● Trough set ● Installation set ● Glide bar · ● C-Profile · Ba = Outer width e-chains® · Bi = Inner width e-chains® · B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height · H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	104	upon request	960.50.225
.06	119	upon request	960.50.250
.07	129	upon request	960.50.250
.08	141	960.50.200	960.50.275
.10	154	960.50.225	960.50.275
.11	167	960.50.225	960.50.300
.12	179	960.50.250	960.50.300
.13	192	960.50.250	960.50.325
.15	204	960.50.275	960.50.325
.16	217	960.50.275	960.50.350
.17	229	960.50.300	960.50.350
.18	242	960.50.300	960.50.375
.20	254	960.50.325	960.50.375
.21	267	960.50.325	960.50.400
.22	279	960.50.350	960.50.400
.23	292	960.50.350	960.50.425
.25	304	960.50.375	960.50.425
.26	317	960.50.375	960.50.450
.27	329	960.50.400	960.50.450
.28	342	960.50.400	960.50475
.30	354	960.50.425	960.50.475
.31	367	960.50.425	960.50.500
.32	379	960.50.450	960.50.500
.33	392	960.50.450	960.50.525
.35	404	960.50.475	960.50.525
.36	417	960.50.475	960.50.550
.37	429	960.50.500	960.50.550
.38	442	960.50.500	960.50.575
.40	454	960.50.525	960.50.575
.41	467	960.50.525	960.50600
.42	479	960.50.550	960.50.600
.43	492	960.50.550	960.50.625
.45	504	960.50.575	960.50.625
.46	517	960.50.575	960.50.650
.47	529	960.50.600	960.50.650
.48	542	960.50.600	960.50.675
.50	554	960.50.625	960.50.675
.51	567	960.50.625	960.50.700
.52	579	960.50.650	960.50.700
.53	592	960.50.650	960.50.725
.55	604	960.50.675	960.50.725
.60	654	960.50.725	960.50.775

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of 960.50.XXX on the right column "attached outwards"

E4.1 | Series E4.112 | Introduction

New in this catalog

112 e-chain® 108 e-tube



Stable due to undercut design new very large inner height

When to use Series E4.112:

- If a robust e-chain®/e-tube with an inner height of 112 mm is required (e-tube 108 mm inner height)
- If inner widths up to 600 mm are required
- For unsupported lengths up to 6,5 m and fill weights up to 85 kg/m
- For long travels up to 450 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired

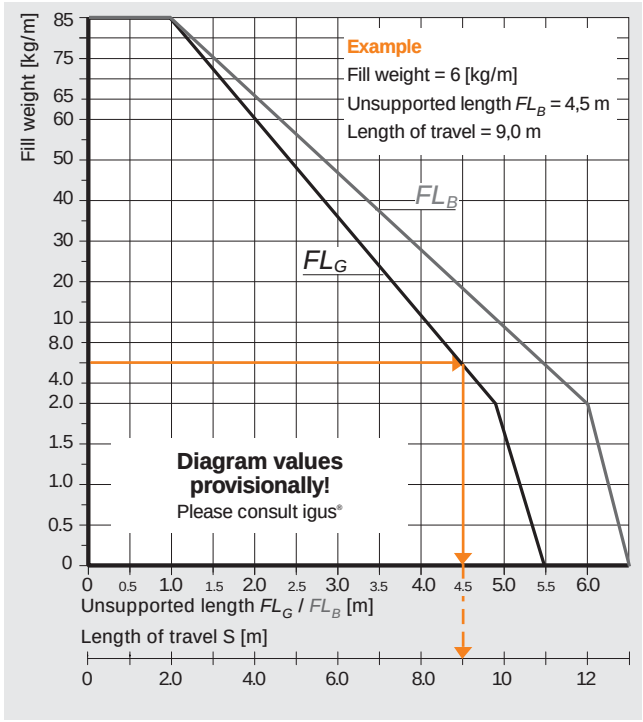
When to use a different igus® Series:

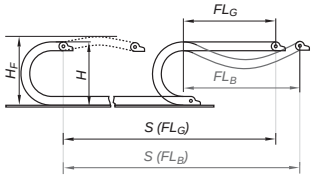
- When an e-chain® is needed for rough applications with even greater inner height
  ▶ Series 800, page 724
- When a light version is needed
  ▶ Series 1640, page 860

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.112

E4.1 | Series E4.112 | Dimensions | Unsupported



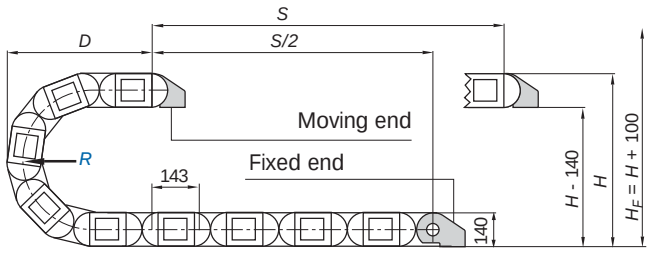


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 450 m.
More information ▶ page 722



Technical Data

Speed, material, temperature and flammability class ▶ page 622

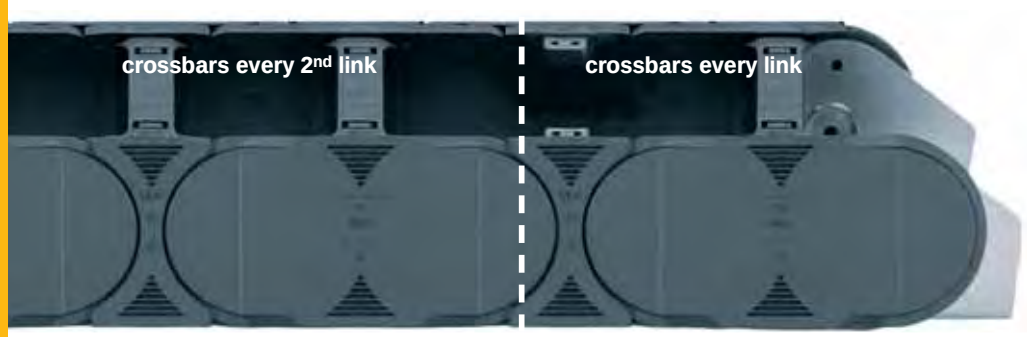
Pitch = 143 mm/link
Links/m = 7 (1001 mm)
Chain length = $S/2 + K$

R	200*	250	300	350	400	450	500	550	600	750	1000
H	545	645	745	845	945	1045	1145	1245	1345	1645	2145
D	415	465	515	565	615	665	715	765	815	965	1215
K	915	1075	1230	1390	1545	1700	1860	2015	2175	2645	3430

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E4.112 crossbars every link | Series H4.112 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	E4.112 [kg/m]	H4.112 [kg/m]
E4.112. 05. R.0	H4.112. 05. R.0	50	102	≈ 6,89	≈ 6,88
E4.112. 06. R.0	H4.112. 06. R.0	65	117	≈ 6,95	≈ 6,91
E4.112. 07. R.0	H4.112. 07. R.0	75	127	≈ 6,99	≈ 6,93
E4.112. 08. R.0	H4.112. 08. R.0	87	139	≈ 7,05	≈ 6,96
E4.112. 10. R.0	H4.112. 10. R.0	100	152	≈ 7,10	≈ 6,99
E4.112. 11. R.0	H4.112. 11. R.0	112	164	≈ 7,18	≈ 7,03
E4.112. 12. R.0	H4.112. 12. R.0	125	177	≈ 7,23	≈ 7,05
E4.112. 13. R.0	H4.112. 13. R.0	137	189	≈ 7,31	≈ 7,09
E4.112. 15. R.0	H4.112. 15. R.0	150	202	≈ 7,34	≈ 7,11
E4.112. 16. R.0	H4.112. 16. R.0	162	214	≈ 7,41	≈ 7,14
E4.112. 17. R.0	H4.112. 17. R.0	175	227	≈ 7,49	≈ 7,18
E4.112. 18. R.0	H4.112. 18. R.0	187	239	≈ 7,56	≈ 7,22
E4.112. 20. R.0	H4.112. 20. R.0	200	252	≈ 7,60	≈ 7,24
E4.112. 21. R.0	H4.112. 21. R.0	212	264	≈ 7,64	≈ 7,26
E4.112. 22. R.0	H4.112. 22. R.0	225	277	≈ 7,69	≈ 7,28
E4.112. 23. R.0	H4.112. 23. R.0	237	289	≈ 7,76	≈ 7,32
E4.112. 25. R.0	H4.112. 25. R.0	250	302	≈ 7,83	≈ 7,35
E4.112. 26. R.0	H4.112. 26. R.0	262	314	≈ 7,89	≈ 7,38
E4.112. 27. R.0	H4.112. 27. R.0	275	327	≈ 7,95	≈ 7,41
E4.112. 28. R.0	H4.112. 28. R.0	287	339	≈ 7,99	≈ 7,43
E4.112. 30. R.0	H4.112. 30. R.0	300	352	≈ 8,09	≈ 7,48
E4.112. 31. R.0	H4.112. 31. R.0	312	364	≈ 8,11	≈ 7,49
E4.112. 32. R.0	H4.112. 32. R.0	325	377	≈ 8,18	≈ 7,52
E4.112. 33. R.0	H4.112. 33. R.0	337	389	≈ 8,25	≈ 7,56
E4.112. 35. R.0	H4.112. 35. R.0	350	402	≈ 8,38	≈ 7,63
E4.112. 36. R.0	H4.112. 36. R.0	362	414	≈ 8,32	≈ 7,60
E4.112. 37. R.0	H4.112. 37. R.0	375	427	≈ 8,38	≈ 7,63
E4.112. 38. R.0	H4.112. 38. R.0	387	439	≈ 8,46	≈ 7,67
E4.112. 40. R.0	H4.112. 40. R.0	400	452	≈ 8,63	≈ 7,75
E4.112. 41. R.0	H4.112. 41. R.0	412	464	≈ 8,58	≈ 7,73
E4.112. 42. R.0	H4.112. 42. R.0	425	477	≈ 8,77	≈ 7,82
E4.112. 43. R.0	H4.112. 43. R.0	437	489	≈ 8,67	≈ 7,77
E4.112. 45. R.0	H4.112. 45. R.0	450	502	≈ 8,88	≈ 7,88
E4.112. 46. R.0	H4.112. 46. R.0	462	514	≈ 8,85	≈ 7,86
E4.112. 47. R.0	H4.112. 47. R.0	475	527	≈ 8,87	≈ 7,87
E4.112. 48. R.0	H4.112. 48. R.0	487	539	≈ 9,03	≈ 7,95
E4.112. 50. R.0	H4.112. 50. R.0	500	552	≈ 9,09	≈ 7,98
E4.112. 51. R.0	H4.112. 51. R.0	512	564	≈ 9,03	≈ 7,95
E4.112. 52. R.0	H4.112. 52. R.0	525	577	≈ 9,15	≈ 8,01
E4.112. 53. R.0	H4.112. 53. R.0	537	589	≈ 9,20	≈ 8,04
E4.112. 55. R.0	H4.112. 55. R.0	550	602	≈ 9,47	≈ 8,17
E4.112. 60. R.0	H4.112. 60. R.0	600	652	≈ 9,62	≈ 8,25

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 750 | 1000

Supplement Part No. with required radius (*R*). Example: E4.112.30.300.0

e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.112 | Product range | Standard

E4.112
H4.112
R4.112



e-tubes | Series R4.112 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	R4.112 [kg/m]
R4.112. 20. R.0	200	252	≈ 9,26
R4.112. 25. R.0	250	302	≈ 9,91
R4.112. 30. R.0	300	352	≈ 10,53
R4.112. 35. R.0	350	402	≈ 11,18
R4.112. 40. R.0	400	452	≈ 11,82

Available bending radii *R* [mm] 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 750 | 1000

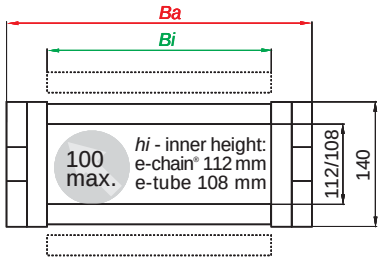
Supplement Part No. with required radius (*R*). Example: R4.112.30.300.0

Order key for all types

E4.112. 30. 300. 0 e-chain® (crossbars every link)
H4.112. 30. 300. 0 e-chain® (crossbars every 2nd link)
R4.112. 30. 300. 0 Fully enclosed e-tube

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.112. H4.112.	15.QZ.R.0	15.QE.R.0	15.Q.R.0	150
E4.112. H4.112.	16.QZ.R.0	16.QE.R.0	16.Q.R.0	162
E4.112. H4.112.	17.QZ.R.0	17.QE.R.0	17.Q.R.0	175
E4.112. H4.112.	18.QZ.R.0	18.QE.R.0	18.Q.R.0	187
E4.112. H4.112.	20.QZ.R.0	20.QE.R.0	20.Q.R.0	200
E4.112. H4.112.	21.QZ.R.0	21.QE.R.0	21.Q.R.0	212
E4.112. H4.112.	22.QZ.R.0	22.QE.R.0	22.Q.R.0	225
E4.112. H4.112.	23.QZ.R.0	23.QE.R.0	23.Q.R.0	237
E4.112. H4.112.	25.QZ.R.0	25.QE.R.0	25.Q.R.0	250
E4.112. H4.112.	26.QZ.R.0	26.QE.R.0	26.Q.R.0	262
E4.112. H4.112.	27.QZ.R.0	27.QE.R.0	27.Q.R.0	275
E4.112. H4.112.	28.QZ.R.0	28.QE.R.0	28.Q.R.0	287
E4.112. H4.112.	30.QZ.R.0	30.QE.R.0	30.Q.R.0	300
E4.112. H4.112.	31.QZ.R.0	31.QE.R.0	31.Q.R.0	312
E4.112. H4.112.	32.QZ.R.0	32.QE.R.0	32.Q.R.0	325
E4.112. H4.112.	33.QZ.R.0	33.QE.R.0	33.Q.R.0	337
E4.112. H4.112.	35.QZ.R.0	35.QE.R.0	35.Q.R.0	350
E4.112. H4.112.	36.QZ.R.0	36.QE.R.0	36.Q.R.0	362
E4.112. H4.112.	37.QZ.R.0	37.QE.R.0	37.Q.R.0	375
E4.112. H4.112.	38.QZ.R.0	38.QE.R.0	38.Q.R.0	387
E4.112. H4.112.	40.QZ.R.0	40.QE.R.0	40.Q.R.0	400

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
E4.112. H4.112.	41.QZ.R.0	41.QE.R.0	41.Q.R.0	412
E4.112. H4.112.	42.QZ.R.0	42.QE.R.0	42.Q.R.0	425
E4.112. H4.112.	43.QZ.R.0	43.QE.R.0	43.Q.R.0	437
E4.112. H4.112.	45.QZ.R.0	45.QE.R.0	45.Q.R.0	450
E4.112. H4.112.	46.QZ.R.0	46.QE.R.0	46.Q.R.0	462
E4.112. H4.112.	47.QZ.R.0	47.QE.R.0	47.Q.R.0	475
E4.112. H4.112.	48.QZ.R.0	48.QE.R.0	48.Q.R.0	487
E4.112. H4.112.	50.QZ.R.0	50.QE.R.0	50.Q.R.0	500
E4.112. H4.112.	51.QZ.R.0	51.QE.R.0	51.Q.R.0	512
E4.112. H4.112.	52.QZ.R.0	52.QE.R.0	52.Q.R.0	525
E4.112. H4.112.	53.QZ.R.0	53.QE.R.0	53.Q.R.0	537
E4.112. H4.112.	55.QZ.R.0	55.QE.R.0	55.Q.R.0	550
E4.112. H4.112.	60.QZ.R.0	60.QE.R.0	60.Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 750 | 1000

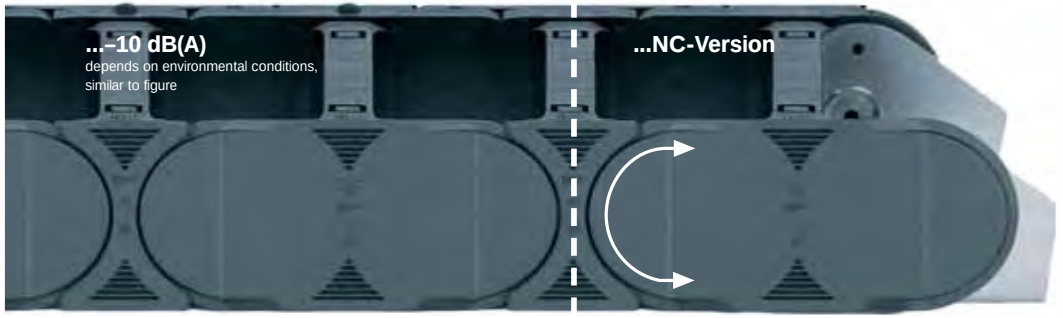
Supplement Part No. with required radius *(R)*. Example: E4.112.30QZ.300.0

e-chain® links as single parts, overview ►page 623

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)

E4.1 | Series E4.112 | Product range | Options



Noise dampening | - ≈10 dB(A)

With pads E4[1] H4[1] R4[1]	Bi [mm]
ES4 HS4 – .112.05.R.0	50
ES4 HS4 – .112.06.R.0	65
ES4 HS4 – .112.07.R.0	75
ES4 HS4 – .112.08.R.0	87
ES4 HS4 RS4 .112.10.R.0	100
ES4 HS4 RS4 .112.11.R.0	112
ES4 HS4 RS4 .112.12.R.0	125
ES4 HS4 RS4 .112.13.R.0	137
ES4 HS4 RS4 .112.15.R.0	150
ES4 HS4 RS4 .112.16.R.0	162
ES4 HS4 RS4 .112.17.R.0	175
ES4 HS4 RS4 .112.18.R.0	187
ES4 HS4 RS4 .112.20.R.0	200
ES4 HS4 RS4 .112.21.R.0	212
ES4 HS4 RS4 .112.22.R.0	225
ES4 HS4 RS4 .112.23.R.0	237
ES4 HS4 RS4 .112.25.R.0	250
ES4 HS4 RS4 .112.26.R.0	262
ES4 HS4 RS4 .112.27.R.0	275
ES4 HS4 RS4 .112.28.R.0	287
ES4 HS4 RS4 .112.30.R.0	300

With pads E4[1] H4[1] R4[1]	Bi [mm]
ES4 HS4 – .112.31.R.0	312
ES4 HS4 – .112.32.R.0	325
ES4 HS4 – .112.33.R.0	337
ES4 HS4 RS4 .112.35.R.0	350
ES4 HS4 – .112.36.R.0	362
ES4 HS4 – .112.37.R.0	375
ES4 HS4 – .112.38.R.0	387
ES4 HS4 RS4 .112.40.R.0	400
ES4 HS4 – .112.41.R.0	412
ES4 HS4 – .112.42.R.0	425
ES4 HS4 – .112.43.R.0	437
ES4 HS4 – .112.45.R.0	450
ES4 HS4 – .112.46.R.0	462
ES4 HS4 – .112.47.R.0	475
ES4 HS4 – .112.48.R.0	487
ES4 HS4 – .112.50.R.0	500
ES4 HS4 – .112.51.R.0	512
ES4 HS4 – .112.52.R.0	525
ES4 HS4 – .112.53.R.0	537
ES4 HS4 – .112.55.R.0	550
ES4 HS4 – .112.60.R.0	600

NC-Version | Without pretension

NC-Version E4[1] H4[1] R4[1]	Bi [mm]
E4 H4 – .112.05.R.0.NC	50
E4 H4 – .112.06.R.0.NC	65
E4 H4 – .112.07.R.0.NC	75
E4 H4 – .112.08.R.0.NC	87
E4 H4 R4.112.10.R.0.NC	100
E4 H4 – .112.11.R.0.NC	112
E4 H4 – .112.12.R.0.NC	125
E4 H4 – .112.13.R.0.NC	137
E4 H4 R4.112.15.R.0.NC	150
E4 H4 – .112.16.R.0.NC	162
E4 H4 – .112.17.R.0.NC	175
E4 H4 – .112.18.R.0.NC	187
E4 H4 R4.112.20.R.0.NC	200
E4 H4 – .112.21.R.0.NC	212
E4 H4 – .112.22.R.0.NC	225
E4 H4 – .112.23.R.0.NC	237
E4 H4 R4.112.25.R.0.NC	250
E4 H4 – .112.26.R.0.NC	262
E4 H4 – .112.27.R.0.NC	275
E4 H4 – .112.28.R.0.NC	287
E4 H4 R4.112 30.R.0.NC	300

NC-Version E4[1] H4[1] R4[1]	Bi [mm]
E4 H4 – .112.31.R.0.NC	312
E4 H4 – .112.32.R.0.NC	325
E4 H4 – .112.33.R.0.NC	337
E4 H4 R4.112.35.R.0.NC	350
E4 H4 – .112.36.R.0.NC	362
E4 H4 – .112.37.R.0.NC	375
E4 H4 – .112.38.R.0.NC	387
E4 H4 R4.112.40.R.0.NC	400
E4 H4 – .112.41.R.0.NC	412
E4 H4 – .112.42.R.0.NC	425
E4 H4 – .112.43.R.0.NC	437
E4 H4 – .112.45.R.0.NC	450
E4 H4 – .112.46.R.0.NC	462
E4 H4 – .112.47.R.0.NC	475
E4 H4 – .112.48.R.0.NC	487
E4 H4 – .112.50.R.0.NC	500
E4 H4 – .112.51.R.0.NC	512
E4 H4 – .112.52.R.0.NC	525
E4 H4 – .112.53.R.0.NC	537
E4 H4 – .112 60.R.0.NC	600

Available bending radii *R* [mm] 200* | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 750 | 1000 *Radius not available for e-tubes

Supplement Part No. with required radius *(R)*. Example: ES4.112.30.300.0 or E4.112.30.300.0.NC

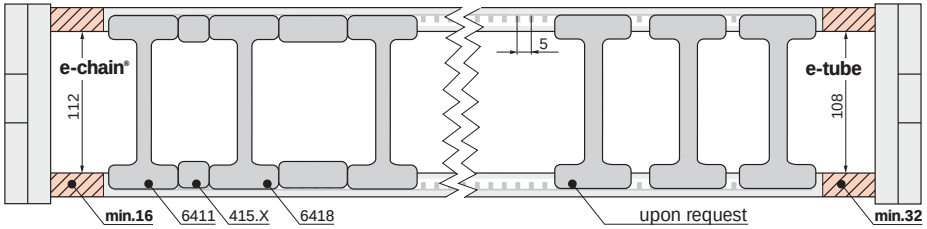
1) E4 = e-chain® with crossbars every link H4 = e-chain® with crossbars every 2nd link R4 = e-tube fully enclosed

e-chain® links as single parts, overview ►page 623

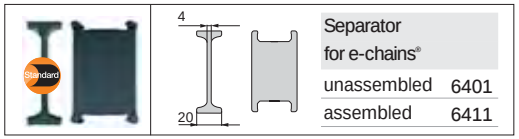
Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Option 1 | Separators and spacers



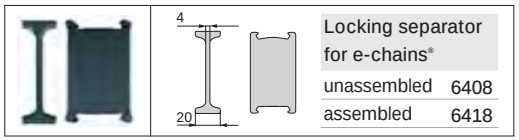
Note: Please observe a lateral spacing to the side links. **e-tube: 32 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link.



Separator for e-chains®	
unassembled	6401
assembled	6411

Separator 6401 (e-chains® only)

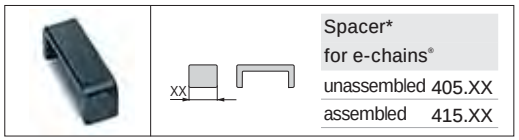
For a vertical subdivision. Offers safe stability due to its wide base design, also when used with thick cables or hoses (Separator for e-tubes 1608 upon request).



Locking separator for e-chains®	
unassembled	6408
assembled	6418

Locking separator 6408 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

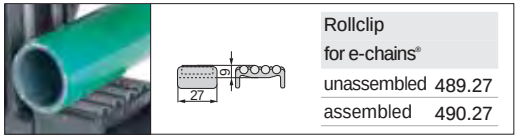


Spacer* for e-chains®	
unassembled	405.XX
assembled	415.XX

Spacer* 405.XX (e-chains® only)

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20, 30, 40 mm).

Additional elements - interior separation



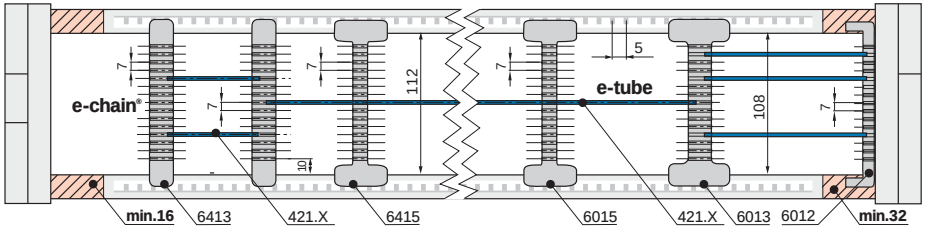
Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

Rollclip

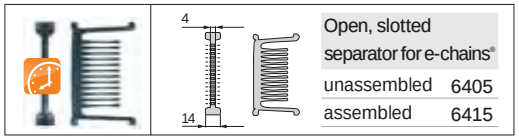
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

E4.1 | Series E4.112 | Interior separation
Interior separation - for e-chains® and e-tubes

Option 2 | Shelves



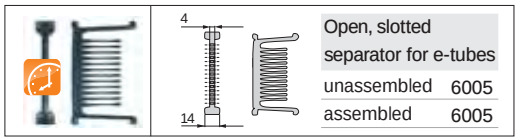
Note: Please observe a lateral spacing to the side links. **e-tube: 32 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link.



Open, slotted separator for e-chains®	
unassembled	6405
assembled	6415

Open, slotted separator 6405 (unilateral open)

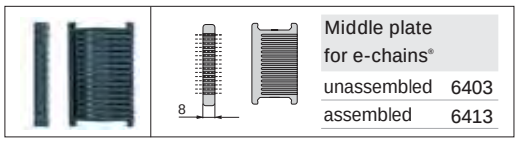
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves. e-chains® only.



Open, slotted separator for e-tubes	
unassembled	6005
assembled	6005

Open, slotted separator 6005 (e-tubes only, unilateral open)

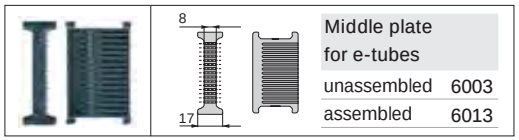
Works like open, slotted separator 6405 on e-tube 1608.



Middle plate for e-chains®	
unassembled	6403
assembled	6413

Middle plate 6403 (e-chains® only)

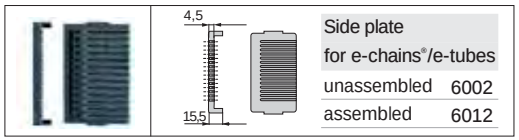
To achieve a modular shelving the shelf 420.X can be arranged at 15 different heights (in 7 mm increments).



Middle plate for e-tubes	
unassembled	6003
assembled	6013

Middle plate 6003 (e-tubes only)

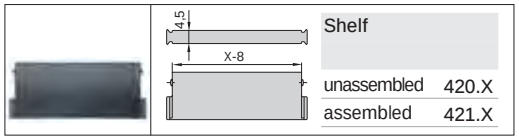
Works like middle plate 6403 on e-tube 1608.



Side plate for e-chains®/e-tubes	
unassembled	6002
assembled	6012

Side plate 6002 (e-chains®/e-tubes)

Works like middle plate.
Allows modular shelving close to the side links.



Shelf	
unassembled	420.X
assembled	421.X

Shelf 420.X

For horizontal separation. Shelves of various widths can be arranged at 15 different heights (in 7 mm increments). - see table below.

Shelves

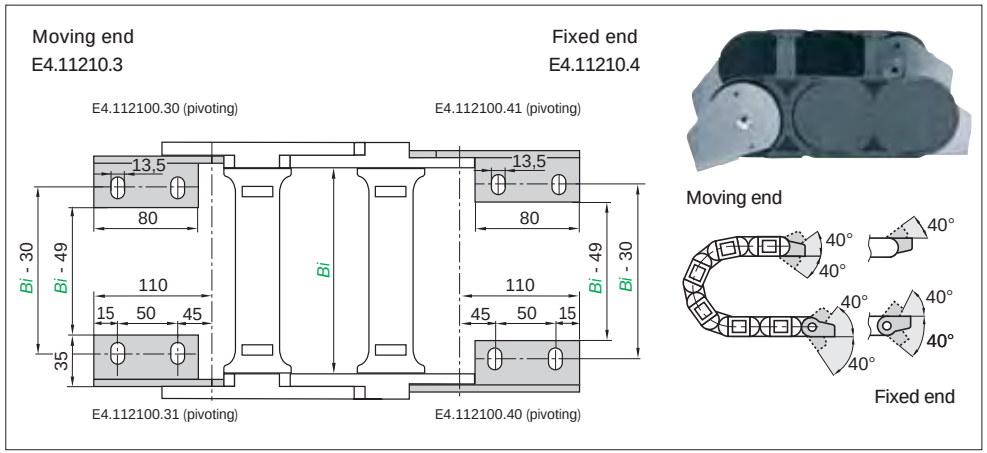
Width X	unassembled	assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28

Width X	unassembled	assembled
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X	unassembled	assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125

Width X	unassembled	assembled
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

E4.1 | Series E4.112 | Steel mounting brackets pivoting



Steel pivoting | Recommended for unsupported and gliding applications

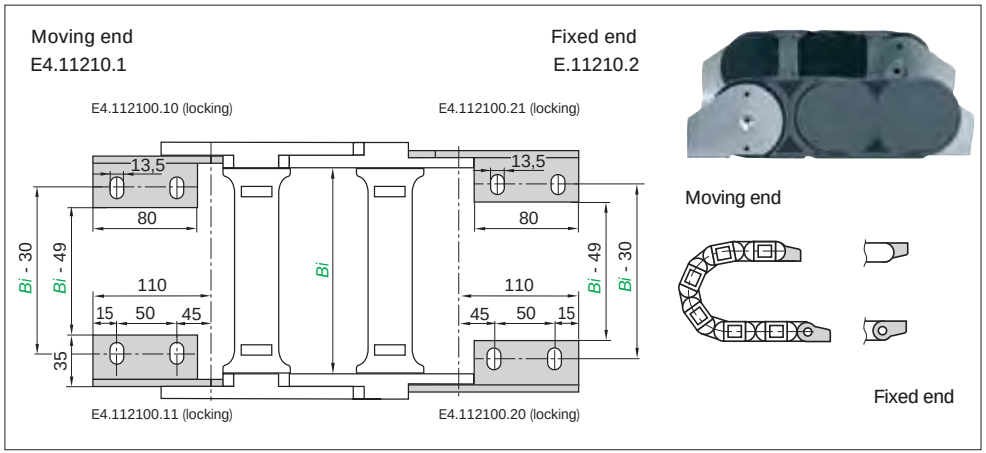
Part No.	Mounting bracket pivoting
E4.11210.1.34.VS.E	Full set (both sides), ending with outer side link, screwed - Standard
E4.11210.2.34.VS.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - Standard

- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 | Series E4.112 | Steel mounting brackets locking



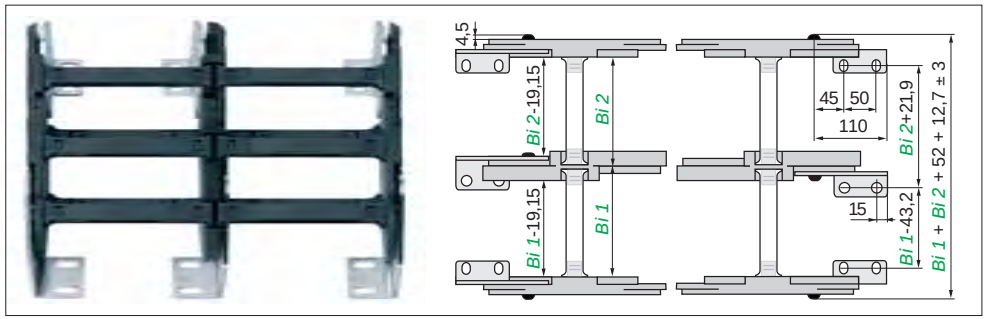
Steel locking | Recommended for vertical hanging and standing applications

Part No.	Mounting bracket locking
E4.11210.1.12.VS.E	Full set (both sides), ending with outer side link, screwed - Standard
E4.11210.2.12.VS.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - Standard

- For locking connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)

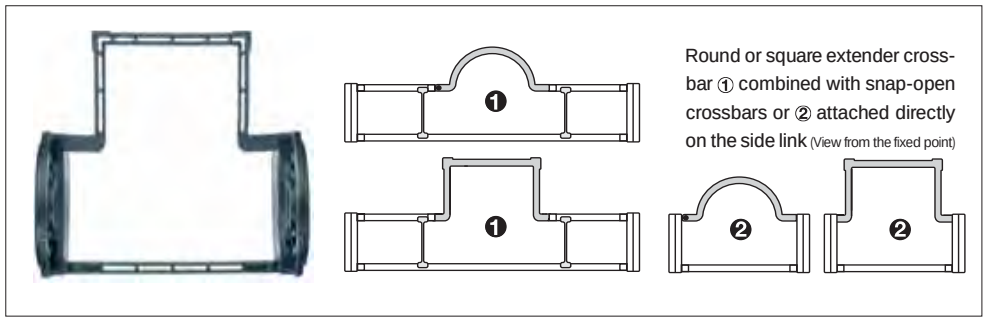
Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 2 chambers
E4.112.*Bi1* / *Bi2* .*R*.0 =
E4.112.10 / 20 .200.0
Extension links: single-part order:
6022.*R*. (please indicate radius)



Round or square extender cross-bar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 300 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
E4.112.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
E4.112.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
E4.112.17RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
E4.112.17RDZ115.*R*.0

E4.1 | Series E4.112 | More options

E4.112
H4.112
R4.112



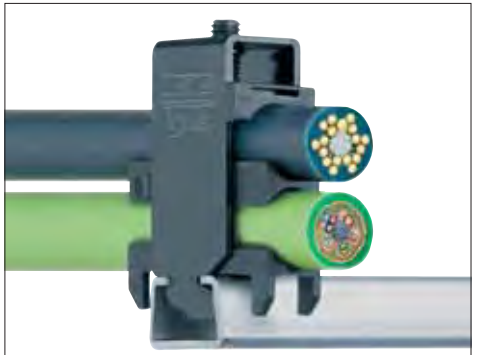
E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 150)
Locking clip, openable along inner radius "Z":
E4.112.15.B12.200Z.*R*.0
Locking clip, openable along outer radius "E":
E4.112.15.B12.200E.*R*.0

E4.1 | Series E4.112 | e-chain® accessories



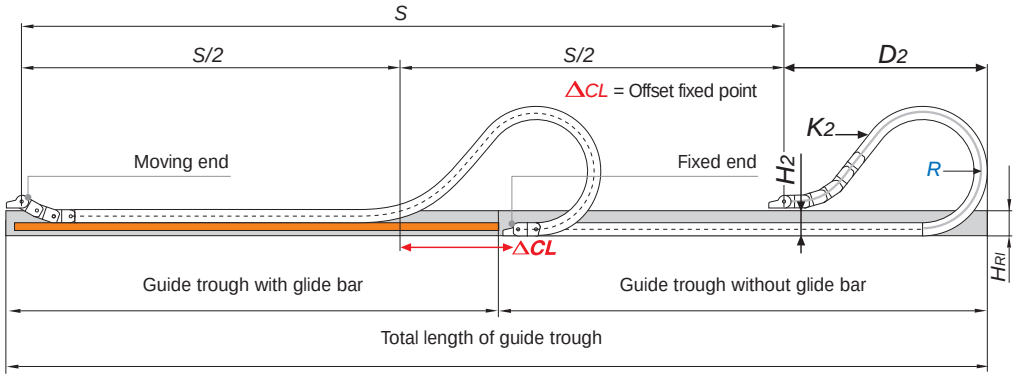
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 14 m to max. 450 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 11 and 14 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 143 mm/link · Links/m = 7 (1001 mm) · Chain length = $S/2 + K$

R	200*	250	300	350	400	450	500	550	600	750	1000
H_2	325	325	325	325	325	325	325	325	325	–	–
D_2	900	1000	1100	1250	1450	1600	1700	1900	2050	–	–
K_2	1573	1716	1859	2288	2574	2860	3146	3432	3861	–	–
ΔCL	450	500	550	650	800	900	950	1100	1200	–	–

*Radius not available for e-tubes

More solutions | For long travel applications

guidelok horizontal - Upper run guide, unsupported Travels ≤ 50 m

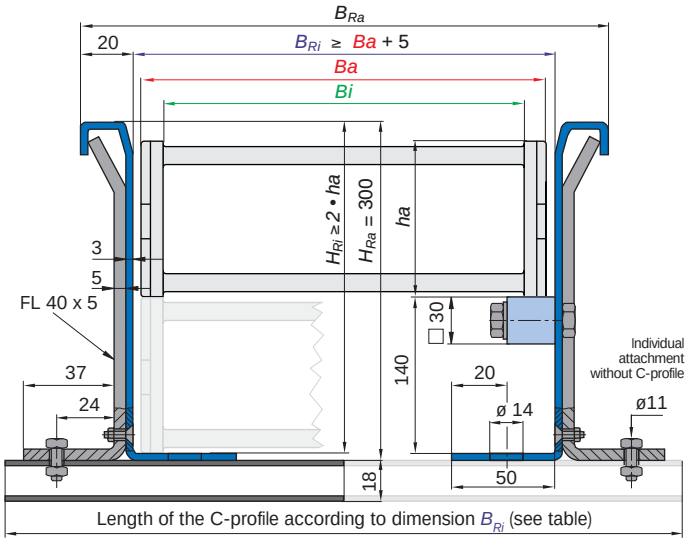
Chips cannot get stuck between upper and lower run - enormous increase of "self supporting" length of e-chains®

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height $S/2$ = Half length of travel

Steel Guide Troughs | Heavy-Duty

Part No. 98.30 | 98.31 | Trough height: 300 mm

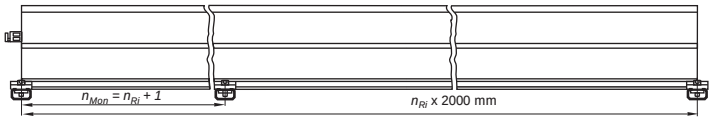


- Guide trough without glide bars — Part No. 98.30
- Guide trough with glide bars — Part No. 98.31
- Installation sets as end connectors — Part No. 98.50.XXX

.XXX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Order example: Length of travel 30 m - Center mounted for Series E4.112.12.300.0 with B_{Ri} = 164

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	98.30
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	98.31
Installation set "Basic" complete (guide trough-sets + 1)		
Order text: 17 installation sets	Part No.	98.50.300



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Steel guide trough in detail ▶ page 1232

● Trough set ● C-Profile B_{Ri} = Inner trough width H_{Ra} = Outer trough height
● Installation set Ba = Outer width e-chains® B_{Ra} = Outer trough width n_{Mon} = Number of installation sets
● Glide bar Bi = Inner width e-chains® H_{Ri} = Inner trough height n_{Ri} = Number of trough sets

Installation set with C-profile for e-chains®

For Width Index	B_{Ri} [mm]	Part No. Installation set
.05	107	98.50. 225
.06	122	98.50. 250
.07	132	98.50. 250
.10	157	98.50. 275
.11	169	98.50. 300
.12	182	98.50. 300
.13	194	98.50. 325
.15	207	98.50. 325
.16	219	98.50. 350
.17	232	98.50. 350
.18	244	98.50. 375
.20	257	98.50. 375
.21	269	98.50. 400
.22	282	98.50. 400
.23	294	98.50. 425
.25	307	98.50. 425
.26	319	98.50. 450
.27	332	98.50. 450
.28	344	98.50. 475
.30	357	98.50. 475
.31	369	98.50. 500
.32	382	98.50. 500
.33	394	98.50. 525
.35	407	98.50. 525
.36	419	98.50. 550
.37	432	98.50. 550
.38	444	98.50. 575
.40	457	98.50. 575
.41	469	98.50. 600
.42	482	98.50. 600
.43	494	98.50. 625
.45	507	98.50. 625
.46	519	98.50. 650
.47	532	98.50. 650
.48	544	98.50. 675
.50	557	98.50. 675
.51	569	98.50. 700
.52	582	98.50. 700
.53	594	98.50. 725
.55	607	98.50. 725
.60	657	98.50. 775



For rough conditions, very large inner height

When to use Series 800:

- If a robust e-chain® with an inner height of 200 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 8,0 m and fill weights up to 90 kg/m
- For long travels up to 450 m
- For rough environmental conditions or rigid hoses

When to use a different igus® Series:

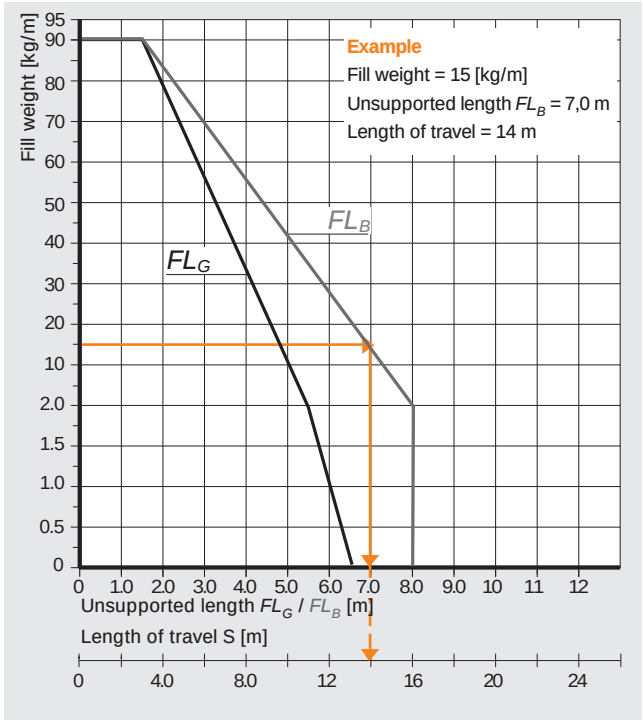
- If a light weighted, less stable e-chain® with identical inner height is required

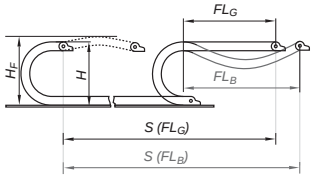
►Series 840, page 732

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/800



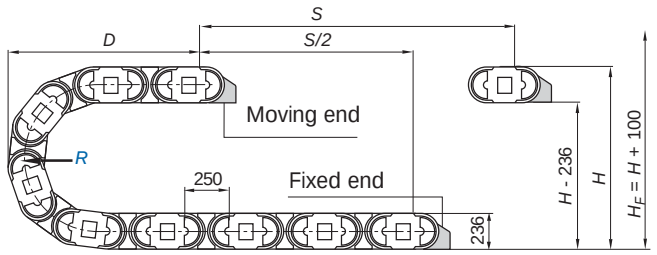


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95

Gliding applications

Travels up to 450 m.
More information ► page 730



Technical Data

Speed, material, temperature and flammability class ► page 622

Pitch = 250 mm/link
Links/m = 4 (1000 mm)
Chain length = $S/2 + K$

R	325	350	400	450	500	600	750	1000
H	886	936	1036	1136	1236	1436	1736	2236
D	818	843	893	943	993	1093	1243	1493
K	1525	1600	1760	1915	2075	2385	2860	3645

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R + $ "safety"



e-chains® | Series 800 with crossbars every link

Part No. crossbars every link			Bi [mm]	Ba [mm]	800 [kg/m]
800.	20.	R.0	200	260	≈ 15,09
800.	25.	R.0	250	310	≈ 15,50
800.	30.	R.0	300	360	≈ 15,89
800.	32.	R.0	325	385	≈ 16,05
800.	35.	R.0	350	410	≈ 16,22

Part No. crossbars every link			Bi [mm]	Ba [mm]	800 [kg/m]
800.	40.	R.0	400	460	≈ 16,74
800.	45.	R.0	450	510	≈ 16,88
800.	50.	R.0	500	560	≈ 17,23
800.	55.	R.0	550	610	≈ 17,63
800.	60.	R.0	600	660	≈ 18,19

Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

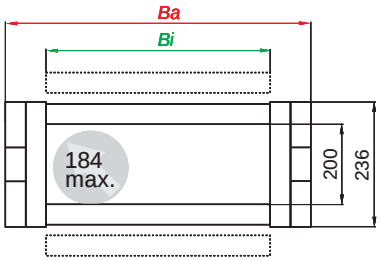
Supplement Part No. with required radius (*R*). Example: 800.40.400.0

Order key

800. 40. 400. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



NC-Version | Without pretension

Part No. crossbars every link			Bi [mm]
800.	20.	R.0.NC	200
800.	25.	R.0.NC	250
800.	30.	R.0.NC	300
800.	32.	R.0.NC	325
800.	35.	R.0.NC	350

Part No. crossbars every link			Bi [mm]
800.	40.	R.0.NC	400
800.	45.	R.0.NC	450
800.	50.	R.0.NC	500
800.	55.	R.0.NC	550
800.	60.	R.0.NC	600

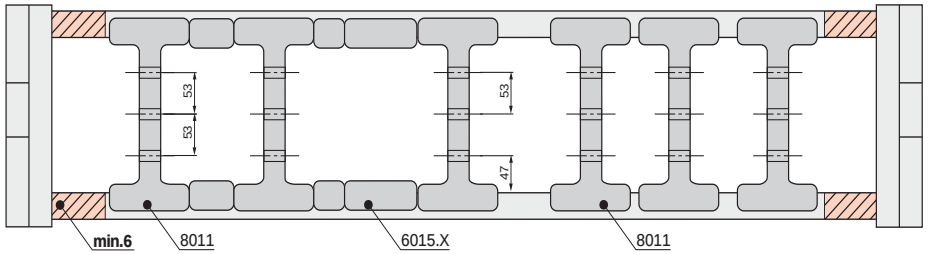
Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000

Supplement Part No. with required radius (*R*). Example: 800.40.400.0.NC

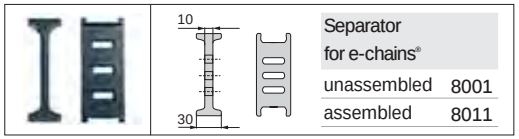
Configuration options and order keys, overview ▶ page 624

NC-Version - Delivery time* 3-5 work days.

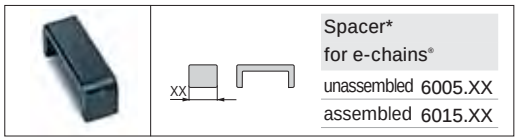
*Delivery time means time until shipping of goods (after technical release)



Note e-chain®: Please observe a lateral spacing of **6 mm** to the side links!
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-chains®	
unassembled	8001
assembled	8011



Spacer* for e-chains®	
unassembled	6005.XX
assembled	6015.XX

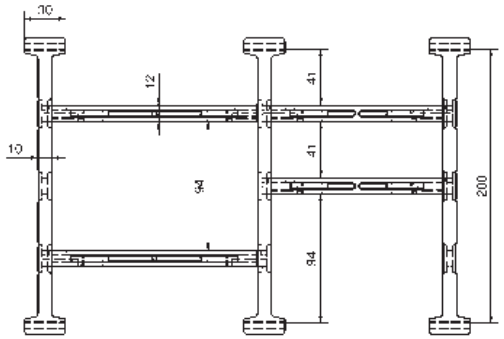
Separator 8001

For a vertical subdivision. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

Spacer* 6005.XX

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20 mm).

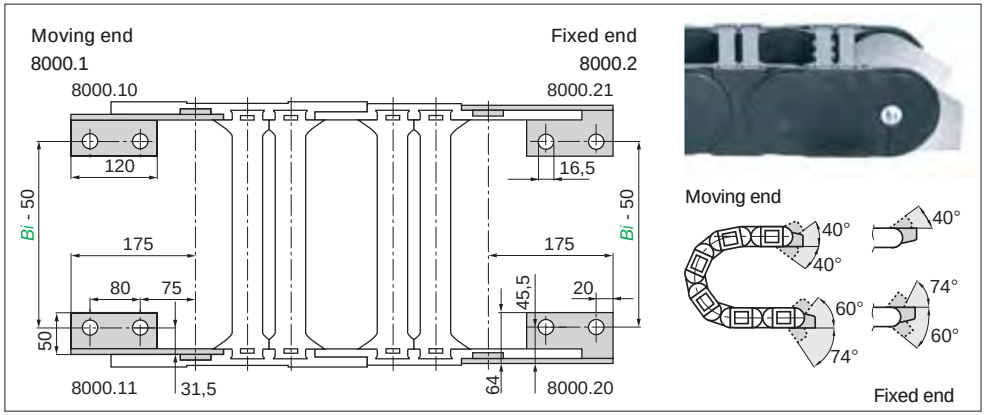
Modular E4 shelving system for Series 800





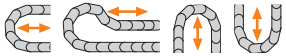
● Secure guide even for large cables ● Easy assembly
● Robust, also for large cable diameters ● Modular ● Widths from 50 - 600 mm

Part No. unassembled	Part No. assembled	Snap in tab	Part No. separator	Part No. crossbar	Width [mm]
8001H1	8011H1	❶ single-sided	❸ 8001	❹ 450.XX.A	50-600
8001H2	8011H2	❷ double-sided	❸ 8001	❹ 450.XX.A	50-600



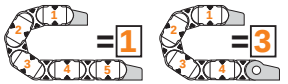
Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

Part No.	Mounting bracket pivoting
8000.1.12.VS.E	Full set (both sides), ending with outer side link, screwed - Standard
8000.3.12.VS.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - Standard
8000.1.12.E	Full set (both sides), ending with outer side link, not screwed - Standard
8000.3.12.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), not screwed - Standard



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

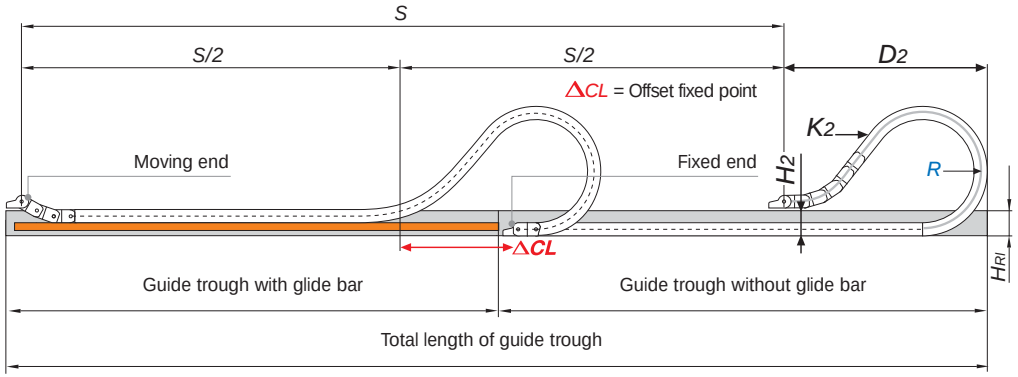
Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

Gliding applications | For long travels from 15 m to max. 450 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 12 and 15 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 250 mm/link · Links/m = 4 (1000 mm) · Chain length = $S/2 + K_2$

R	325	350	400	450	500	600	750	1000
H_2	580	580	580	580	580	580	580	580
$D_2{}^{+25}$	1030	1080	1380	1610	2000	2480	*	*
K_2	2000	2000	2500	3000	3250	4000	*	*
ΔCL	250	300	550	750	1050	1400	*	*

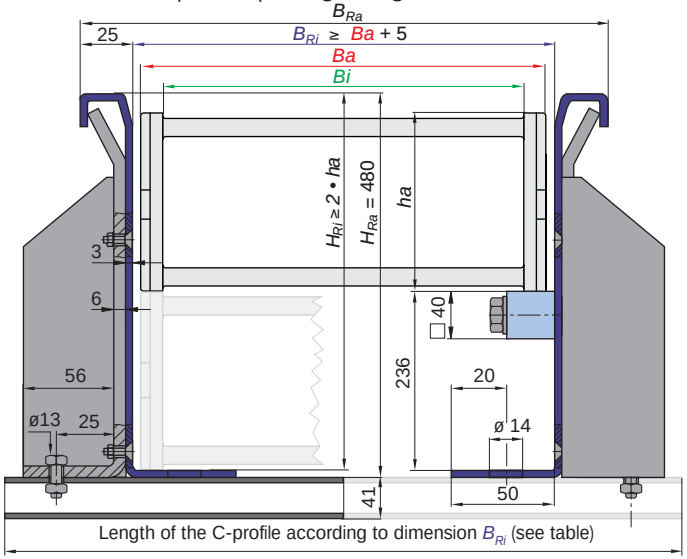
*Value upon request!

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Steel Guide Troughs | Heavy-Duty

Part No. 90.30 | 90.31 | Trough height: 480 mm



- Guide trough without glide bars — Part No. 90.30
- Guide trough with glide bars — Part No. 90.31
- Installation sets as end connectors — Part No. 90.50.XXX

.XXX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Installation set with C-profile for e-chains®

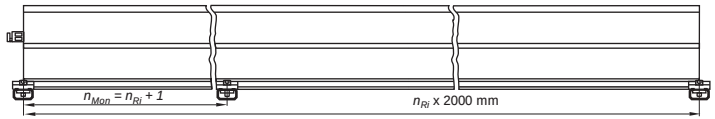
For Width Index	B_{Ri} [mm]	Part No. Installation set
.20	265	90.50. 450
.25	315	90.50. 500
.30	365	90.50. 550
.32	390	90.50. 575
.35	415	90.50. 600
.40	465	90.50. 650
.45	515	90.50. 700
.50	565	90.50. 750
.55	615	90.50. 800
.60	665	90.50. 850

Order example: Length of travel 30 m - Center mounted for Series 800.20.325.0 with B_{Ri} = 265

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) — Part No. 90.30

Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) — Part No. 90.31

Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets — Part No. 90.50.450



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Steel guide trough in detail ▶ page 1234

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



This igus steel guide trough has reinforced mounting angles for extreme applications



For rough conditions, very large inner height

When to use Series 840:

- If a robust e-chain® with an inner height of 204 mm is required
- If inner widths up to 563 mm are required
- For unsupported lengths up to 8,0 m and fill weights up to 90 kg/m
- For long travels up to 450 m
- Optimized ratio of interior and exterior dimension
- If many options and accessories are desired

When to use a different igus® Series:

- If an even more stable e-chain® with identical inner height is required

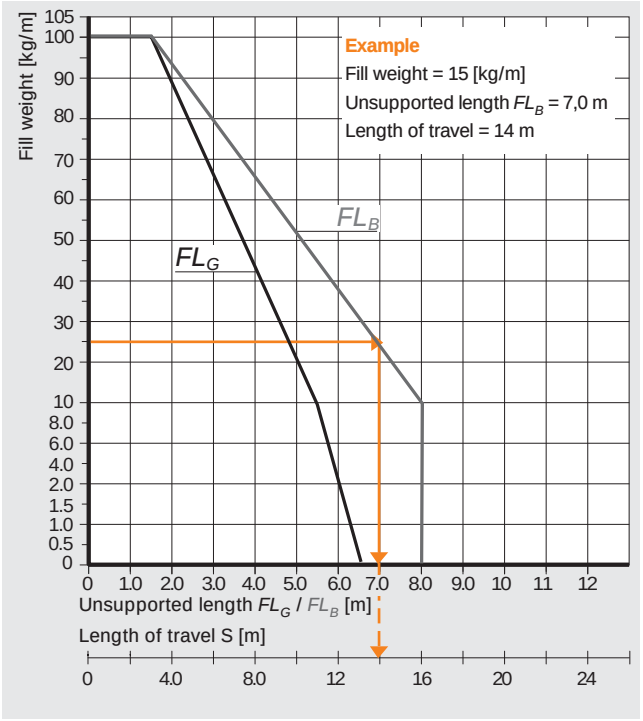
►Series 800, page 724

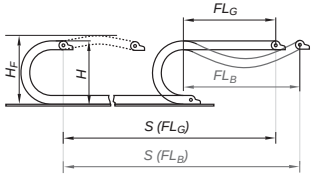
The igus® E4 **e-chain® opener** reduces assembly time ► page 621

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/840



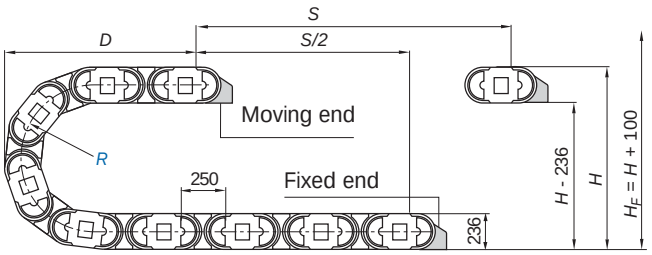


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95

Gliding applications

Travels up to 450 m.
More information ► page 738



Technical Data

Speed, material, temperature and flammability class ► page 622

Pitch = 250 mm/link
Links/m = 4 (1000 mm)
Chain length = $S/2 + K$

R	325	350	400	450	500	600	750	1000
H	886	936	1036	1136	1236	1436	1736	2236
D	818	843	893	943	993	1093	1243	1493
K	1525	1600	1760	1915	2075	2385	2860	3645

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series 840 with crossbars every link

Part No. crossbars every link	Bi [mm]	Ba [mm]	840 [kg/m]
840. 13. R.0	100	160	≈ 13,84
840. 15. R.0	113	173	≈ 13,87
840. 16. R.0	125	185	≈ 13,95
840. 17. R.0	138	198	≈ 14,04
840. 18. R.0	150	210	≈ 14,13
840. 20. R.0	163	223	≈ 14,17
840. 21. R.0	175	235	≈ 14,22
840. 22. R.0	188	248	≈ 14,27
840. 23. R.0	200	260	≈ 14,35
840. 25. R.0	213	273	≈ 14,43
840. 26. R.0	225	285	≈ 14,49
840. 27. R.0	238	298	≈ 14,57

Part No. crossbars every link	Bi [mm]	Ba [mm]	840 [kg/m]
840. 28. R.0	250	310	≈ 14,61
840. 30. R.0	263	323	≈ 14,72
840. 31. R.0	275	335	≈ 14,75
840. 32. R.0	288	348	≈ 14,82
840. 33. R.0	300	360	≈ 14,91
840. 35. R.0	313	373	≈ 15,06
840. 36. R.0	325	385	≈ 15,09
840. 37. R.0	338	398	≈ 15,11
840. 38. R.0	350	410	≈ 15,15
840. 40. R.0	363	423	≈ 15,34
840. 41. R.0	375	435	≈ 15,39
840. 42. R.0	388	448	≈ 15,50

Part No. crossbars every link	Bi [mm]	Ba [mm]	840 [kg/m]
840. 43. R.0	400	460	≈ 15,57
840. 45. R.0	413	473	≈ 15,63
840. 46. R.0	425	485	≈ 15,69
840. 47. R.0	438	498	≈ 15,72
840. 48. R.0	450	510	≈ 15,80
840. 50. R.0	463	523	≈ 15,87
840. 51. R.0	475	535	≈ 15,91
840. 52. R.0	488	548	≈ 15,93
840. 53. R.0	500	560	≈ 16,00
840. 55. R.0	513	573	≈ 16,31
840. 60. R.0	563	623	≈ 16,47

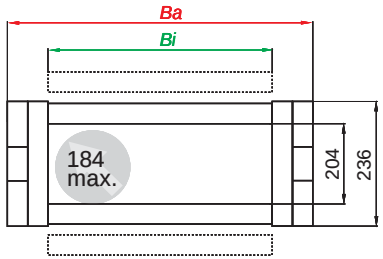
Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000
Supplement Part No. with required radius (*R*). Example: 840.40.400.0

Order key

840. 40. 400. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 623

Configuration options and order keys, overview ▶ page 624

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



NC-Version | Without pretension

Part No. crossbars every link	Bi [mm]
840. 13. R.0.NC	100
840. 15. R.0.NC	113
840. 16. R.0.NC	125
840. 17. R.0.NC	138
840. 18. R.0.NC	150
840. 20. R.0.NC	163
840. 21. R.0.NC	175
840. 22. R.0.NC	188
840. 23. R.0.NC	200
840. 25. R.0.NC	213
840. 26. R.0.NC	225
840. 27. R.0.NC	238

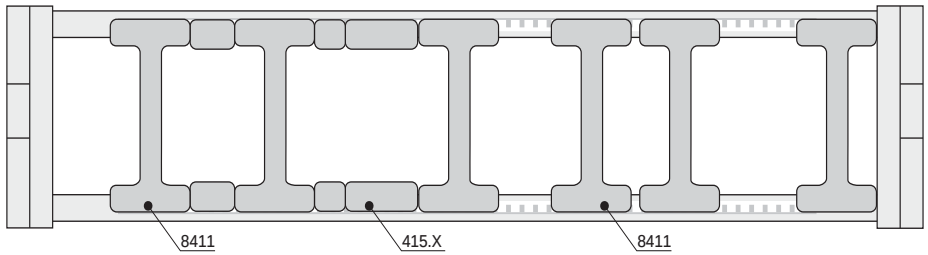
Part No. crossbars every link	Bi [mm]
840. 28. R.0.NC	250
840. 30. R.0.NC	263
840. 31. R.0.NC	275
840. 32. R.0.NC	288
840. 33. R.0.NC	300
840. 35. R.0.NC	313
840. 36. R.0.NC	325
840. 37. R.0.NC	338
840. 38. R.0.NC	350
840. 40. R.0.NC	363
840. 41. R.0.NC	375
840. 42. R.0.NC	388

Part No. crossbars every link	Bi [mm]
840. 43. R.0.NC	400
840. 45. R.0.NC	413
840. 46. R.0.NC	425
840. 47. R.0.NC	438
840. 48. R.0.NC	450
840. 50. R.0.NC	463
840. 51. R.0.NC	475
840. 52. R.0.NC	488
840. 53. R.0.NC	500
840. 55. R.0.NC	513
840. 60. R.0.NC	563

Available bending radii *R* [mm] 325 | 350 | 400 | 450 | 500 | 600 | 750 | 1000
Supplement Part No. with required radius (*R*). Example: 840.40.400.0.NC

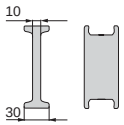
Configuration options and order keys, overview ▶ page 624

NC-Version - Delivery time* 3-5 work days.
*Delivery time means time until shipping of goods (after technical release)



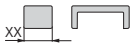
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!





Separator for e-chains®	
unassembled	8401
assembled	8411





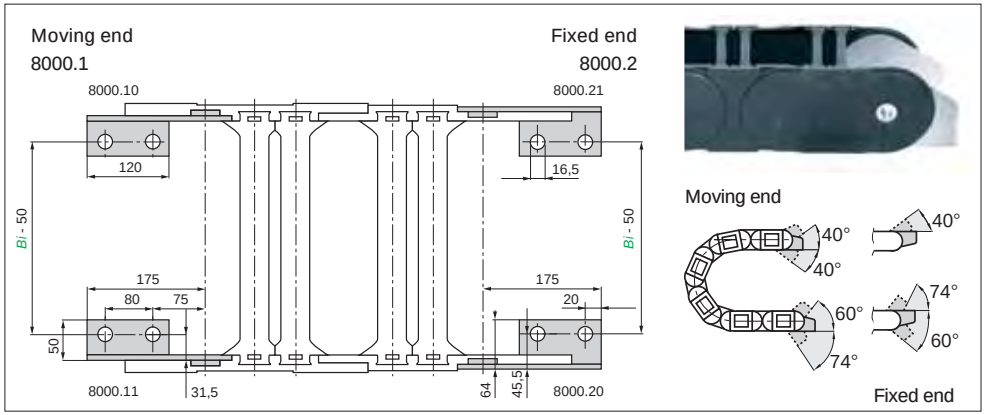
Spacer* for e-chains®	
unassembled	405.XX
assembled	415.XX

Separator 8401

For a vertical subdivision. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

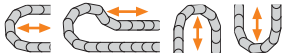
Spacer* 405.XX

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20, 30, 40 mm).



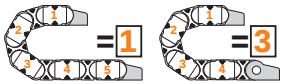
Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

Part No.	Mounting bracket pivoting
8000.1.12.VS.E	Full set (both sides), ending with outer side link, screwed - Standard
8000.3.12.VS.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - Standard
8000.1.12.E	Full set (both sides), ending with outer side link, not screwed - Standard
8000.3.12.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), not screwed - Standard



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

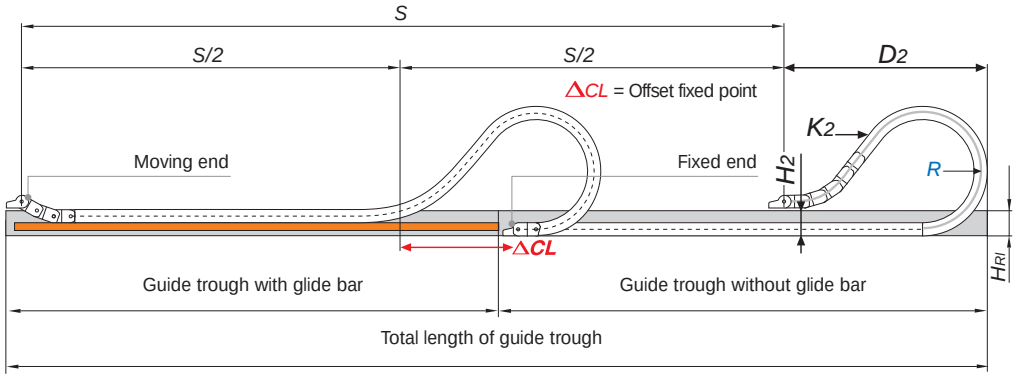
Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

Gliding applications | For long travels from 15 m to max. 450 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 12 and 15 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 250 mm/link · Links/m = 4 (1000 mm) · Chain length = $S/2 + K_2$

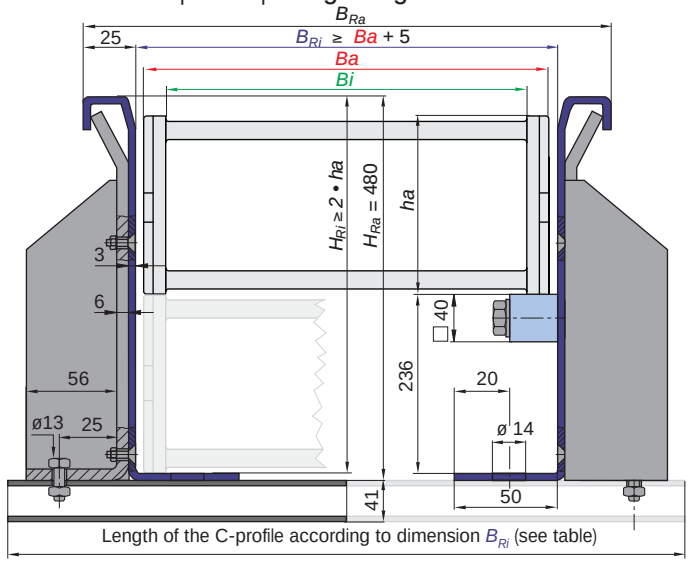
R	325	350	400	450	500	600	750	1000
H_2	580	580	580	580	580	580	580	580
D_2^{+25}	1030	1080	1380	1610	2000	2480	*	*
K_2	2000	2000	2500	3000	3250	4000	*	*
ΔCL	250	300	550	750	1050	1400	*	*

*Value upon request!

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) | K_2 = Further add-on (if the moving end is set lower) | ΔCL = Offset fixed point | S = Length of travel
D_2 = Over length - long travels, gliding | R = Bending radius | H_{Ri} = Inner trough height | S/2 = Half length of travel

Part No. 90.30 | 90.31 | Trough height: 480 mm



- Guide trough without glide bars — Part No. 90.30
- Guide trough with glide bars — Part No. 90.31
- Installation sets as end connectors — Part No. 90.50.XXX

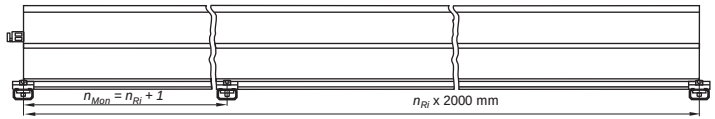
.XXX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Order example: Length of travel 30 m - Center mounted for Series 840.13.325.0 with B_{Ri} = 165

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) — Part No. 90.30

Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) — Part No. 90.31

Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets — Part No. 90.50.350



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Steel guide trough in detail ▶ page 1234

● Trough set ● Installation set ● Glide bar | ● C-Profile | Ba = Outer width e-chains® | Bi = Inner width e-chains® | B_{Ri} = Inner trough width | B_{Ra} = Outer trough width | H_{Ri} = Inner trough height | H_{Ra} = Outer trough height | n_{Mon} = Number of installation sets | n_{Ri} = Number of trough sets

Installation set with C-profile for e-chains®

For Width Index	B_{Ri} [mm]	Part No. Installation set
.13	165	90.50. 350
.15	178	90.50. 350
.16	190	90.50. 375
.17	203	90.50. 375
.18	215	90.50. 400
.20	228	90.50. 400
.21	240	90.50. 425
.22	253	90.50. 425
.23	265	90.50. 450
.25	278	90.50. 450
.26	290	90.50. 475
.27	303	90.50. 475
.28	315	90.50. 500
.30	328	90.50. 500
.31	340	90.50. 525
.32	353	90.50. 525
.33	365	90.50. 550
.35	378	90.50. 550
.36	390	90.50. 575
.37	403	90.50. 575
.38	415	90.50. 600
.40	428	90.50. 600
.41	440	90.50. 625
.42	453	90.50. 625
.43	465	90.50. 650
.45	478	90.50. 650
.46	490	90.50. 675
.47	503	90.50. 675
.48	515	90.50. 700
.50	528	90.50. 700
.51	540	90.50. 725
.52	553	90.50. 725
.53	565	90.50. 750
.55	578	90.50. 750
.60	628	90.50. 800



This igus steel guide trough has reinforced mounting angles for extreme applications



Steel mounting brackets

Highly resistant to wear, corrosion and sea water

Electrically insulating

Straight run due to the inner/outer link principle

Very high capacity due to the undercut design

Low noise operation due to integrated "brake"

Rollers for less abrasion optional

Largest all-plastic e-chain®, extreme inner height 350 mm

When to use Series E4.350:

- If the world's largest all-plastic e-chain® (issue 04/2010) with an inner height of 350 mm is required
- For a very huge interior up to a diagonal of 42"and an inner width up to 940 mm
- For unsupported lengths up to 6,5 m and fill weights >100 kg/m
- For large, heavy and stiff cables
- Ideal for rough use on oil platforms, in steel plants, or in Heavy-Duty machinery
- Maintenance-free - no grease or oil needed to lubricate the joints
- Less abrasion due to rollers

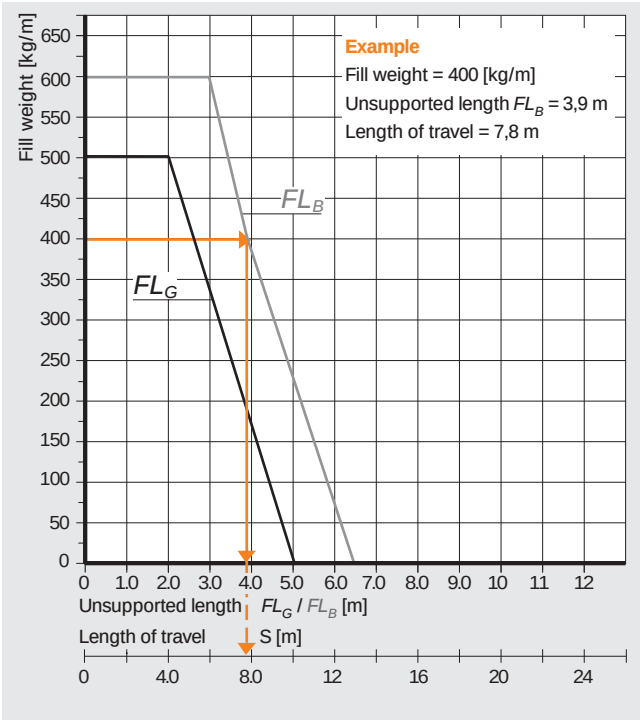
! Please ask for additional support for this series. An optimal dimensioning is done by the igus® project team!

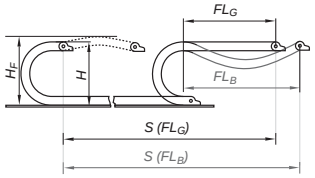


Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

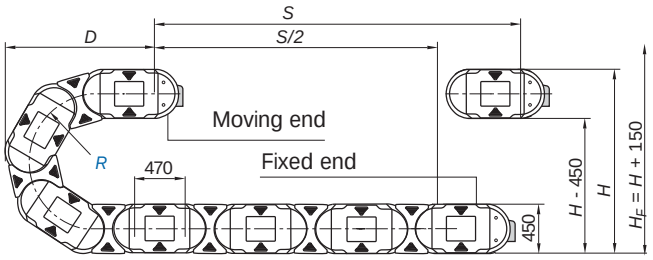
3D-CAD files, configurators, PDF ► www.igus.eu/eu/E4.350





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95



Technical Data

Speed, material, temperature and flammability class ► page 622

Pitch = 470 mm/link
Links/m = 2 (940 mm)
Chain length = $S/2 + K$

R	500	750	1000
$H\ ^{+0}_{+25}$	1450	1950	2450
D	1430	1680	1930
K	2515	3300	4085

The required clearance height: $H_F = H + 150$ mm

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E4.350 with crossbars every link

Part No. crossbars every link	Bi [mm]	Ba [mm]	E4.350 [kg/m]
E4.350. 400. R.0	400	540	61,9
E4.350. 500. R.0	500	640	65,7
E4.350. 600. R.0	600	740	69,6

Part No. crossbars every link	Bi [mm]	Ba [mm]	E4.350 [kg/m]
E4.350. 700. R.0	700	840	73,4
E4.350. 800. R.0	800	940	77,2

Available bending radii *R* [mm] 500 | 750 | 1000

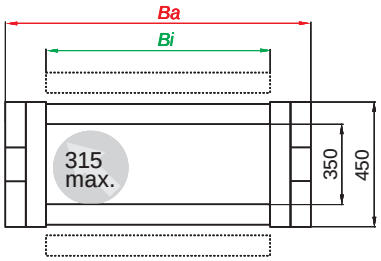
Supplement Part No. with required radius (*R*). Example: E4.350.500.500.0

Order key

E4.350. 500. 500. 0

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

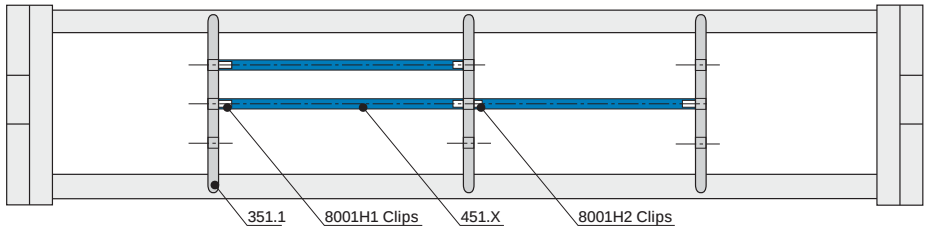
Dimensioning



Configuration options and order keys, overview ► page 624

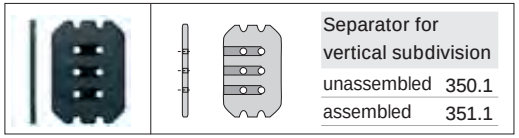
Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



In the standard configuration separators are assembled every 2nd e-chain® link

Note: No lateral spacing to side links necessary!



Separator for vertical subdivision	
unassembled	350.1
assembled	351.1

Separator for vertical subdivision 350.1

For a vertical subdivision subdivision 450.X in 3 levels.



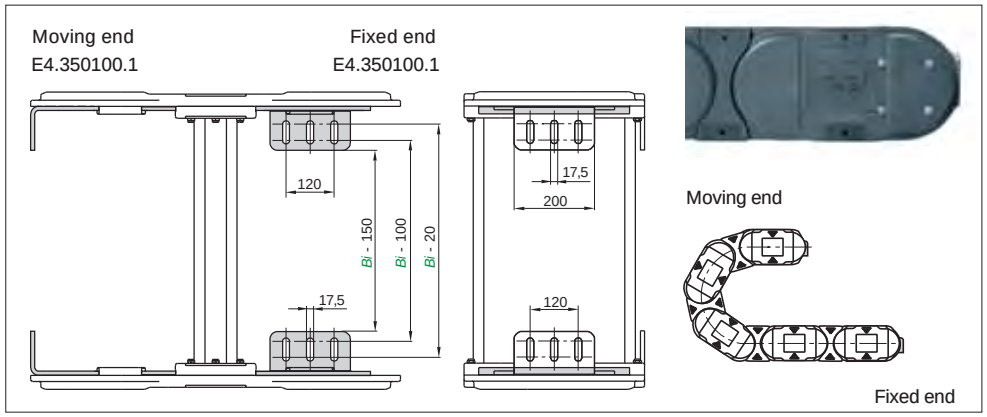
Shelf for horizontal subdivision	
unassembled	450.X
assembled	451.X

Shelf for horizontal subdivision 450.X

For horizontal separation with clips separators for vertical subdivision. Horizontal shelves of various widths can be arranged at 3 different levels.

Horizontal shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
50	450.50	451.50	225	450.225	451.225	400	450.400	451.400
65	450.65	451.65	237	450.237	451.237	412	450.412	451.412
75	450.75	451.75	250	450.250	451.250	425	450.425	451.425
87	450.87	451.87	262	450.262	451.262	437	450.437	451.437
100	450.100	451.100	275	450.275	451.275	450	450.450	451.450
112	450.112	451.112	287	450.287	451.287	462	450.462	451.462
125	450.125	451.125	300	450.300	451.300	475	450.475	451.475
137	450.137	451.137	312	450.312	451.312	487	450.487	451.487
150	450.150	451.150	325	450.325	451.325	500	450.500	451.500
162	450.162	451.162	337	450.337	451.337	512	450.512	451.512
175	450.175	451.175	350	450.350	451.350	525	450.525	451.525
187	450.187	451.187	362	450.362	451.362	537	450.537	451.537
200	450.200	451.200	375	450.375	451.375	550	450.550	451.550
212	450.212	451.212	387	450.387	451.387	600	450.600	451.600



Steel mounting brackets

Part No.	Mounting bracket locking
E4.350100.1.12.VS.E	Full set (both sides), ending with outer side link, screwed - Standard
E4.350100.1.12.E	Full set (both sides), ending with outer side link, not screwed - Standard

- For locking connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)





Robust steel mounting bracket for secure fixation and connection



The worldwide largest polymer e-chain® used for sludge treatment. The heavy hoses (approx. 100 kg/m) have to be routed safely and protected from mechanical abrasion on the bridge. More Information ► www.igus.eu/eu/amoras



igus®
E4.1 light

e-chains® and e-tubes,
high dynamics, light
and cost-effective

R4.1 light - New in this catalog

High dynamics, light and cost-effective - E4.1 light

All-round e-chains® and e-tubes for high dynamics. The E4.1 light series have been developed to combine the advantages of the E2/000 and E4.1 in one series. The stability of the E4.1 system on the one hand and the easy accessibility of the E2/000 system on the other. The stability and the price of E4.1 light lies exactly between these systems and thus constitutes a perfect alternative for you if the stability of E2/000 is insufficient and an E4.1 is oversized.

- Weight reduction and high stability at the same time
- 30% lighter and lower-priced than E4.1
- Crossbars, lid and shelves pivotable on either side
- Very tightly fitting lids and bottoms, virtually no gaps and openings
- Snap-open along the inner and outer radius
- Ideal ratio of internal and external dimensions through thinner outer links and optimised crossbar geometry
- Inner diameter completely accessible for easy filling

Typical industries and applications

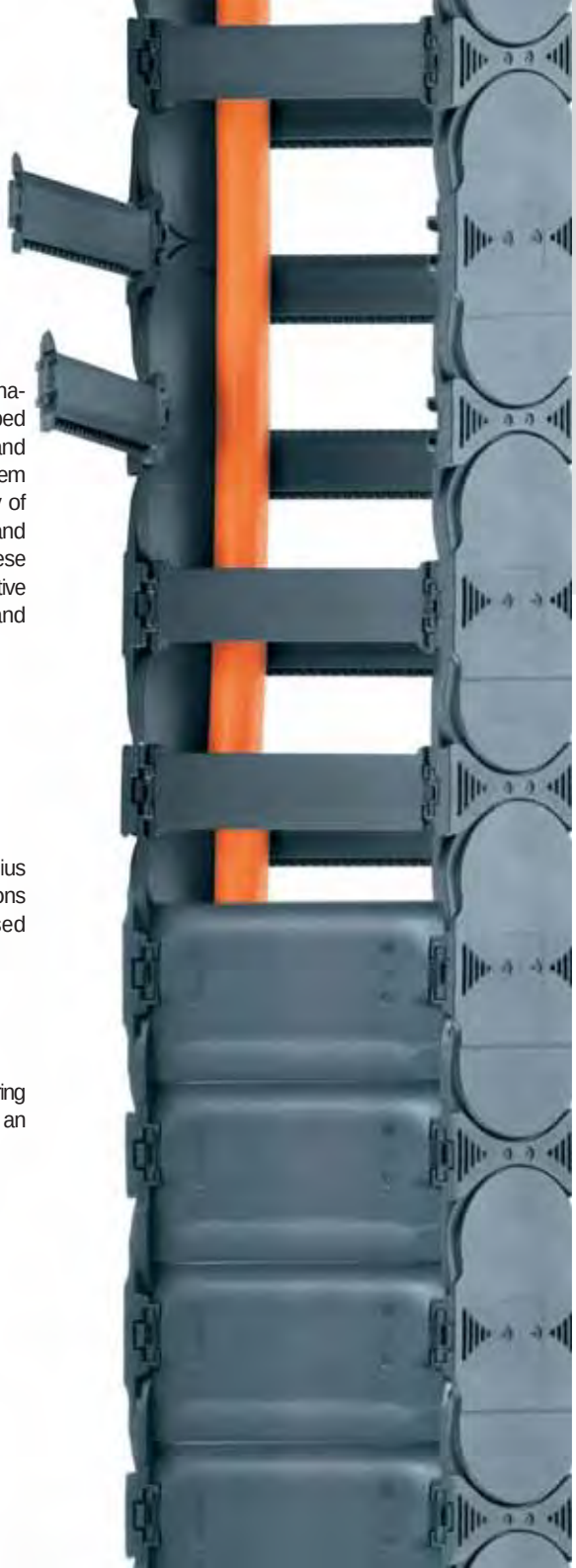
● Machine tools ● General mechanical engineering ● If the stability of the E2/000 is insufficient, but an E4.1 is oversized

ESD classification: Electrically conductive ESD/ATEX version upon request

Low noise operation: Due to integrated "brakes"

High torsional rigidity

System E4 - 4-piece e-chain® links







New snap-open mechanism, Series E4.1 and R4.1 light choice of snap-open on left or right



Denseness test at the igus®-lab: High chip protection in this test scenario. Stop dogs completely free of chips



Lightweight, stabile E4.1 light e-chains®. now available as closed e-tube. Very tight closing "rounded" lids

Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
 **Crossbars every link** Crossbars on both sides pivotable, snap-open along the inner and outer radius							
E4.38L	38	50 - 175	66 - 191	54	063 - 300	2,75	754
E4.48L	48	50 - 175	70 - 195	64	075 - 350	3,75	764
 **e-tubes, fully enclosed** Lids on both sides pivotable, snap-open along the inner and outer radius							
R4.38L New*	38	100	116	54	125 - 300	2,75	754
R4.48L New*	48	75 - 175	95 - 195	64	125 - 350	3,75	764

*New in this catalog

New size E4.1 light - 31 mm inner height

● Light, highly dynamic, cost-effective e-chains® and e-tubes with 31 mm inner height available ● Snaps open on both sides ● Reduced weight, higher dynamics ● Optimized interior-exterior dimensions ratio ● Quick assembly Delivery time upon request.
More information ▶ www.igus.eu/eu/E41.light



Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

1



Line up two inner side links, side by side...

2



...attach an outer side link between

3



Insert crossbar at one side, close and snap-in

4



Openable, just place the screwdriver at the inner site of the closing mechansim and lever to open

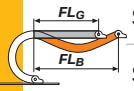
Technical Data, overview ▶ page 752

e-chain® links as single parts, overview ▶ page 752

Configuration options and order keys, overview ▶ page 753

Assembly video available online at ▶ www.igus.eu/E4L_assembly

Technical Data - E4.1 light



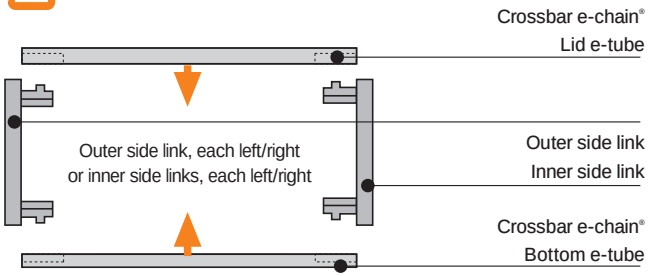
Gliding speed / acceleration (maximum)	upon request
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° bis +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

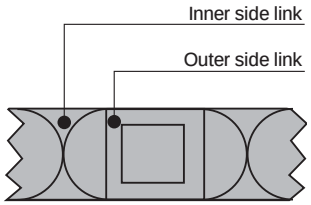
FL_G = unsupported with straight upper run FL_B = unsupported with permitted sag

Installation methods overview, maximum travels - E4.1 light

e-chain® Series	Unsupported application	Gliding application	Vertical hanging	Vertical standing	Side mounted unsupported
E4.38L/R4.38L*	≤ 2,75 m	≤ 80 m	≤ 50 m	≤ 3 m	≤ 1,0 m
E4.48L/R4.48L*	≤ 3,75 m	≤ 100 m	≤ 80 m	≤ 3 m	≤ 1,2 m

Part No. 4-piece e-chain® links as single parts - E4.1 light





Series	Crossbar[1] e-chain®	Lid[1] e-tube	Bottom[1] e-tube	Outer side link[2]	Inner side link[3]
E4.38L/R4.38L*	C622.*Bi*	E4.385.*Bi*	E4.386.*Bi*	E4.38L.01	E4.38L.02.*R*
E4.48L/R4.48L*	C622.*Bi*	E4.485.*Bi*	E4.486.*Bi*	E4.48L.01	E4.48L.02.*R*

1) Crossbar (bottom) - supplement Part No. with required width index (*Bi*), example: C622.150
2) Outer side link - suitable for all radii
3) Inner side link - supplement Part No. with required width index (*Bi*) and required radius (*R*), example: . E4.38L.02.150

*New in this catalog

Options with order keys based on Series E4.38 light

Standard	*Simply turn outer side link without additional work*	*Reverse bending radius for circular movements*	*Unsupported lengths +25% possible*	*ESD / ATEX classified e-chains® Ex II 2 GD*
Part No. **Standard**	Part No. **NC-Version**	Part No. **RBR**	Part No. **XXL-Material[1]**	Part No. **ESD-Material**
E4.38L.12.*R*.0 Crossbar every link	E4.38L.12.*R*.0.NC Crossbar every link	E4.38L.12.*R1/R2*.0 Crossbar every link	E4.38L.12.*R*.0.XXL Crossbar every link	E4.38L.12.*R*.0.ESD Crossbar every link
R4.38L.12.*R*.0 e-tube, closed	R4.38L.12.*R*.0.NC e-tube, closed	*RBR* for e-tubes - please consult igus®	R4.38L.12.*R*.0.XXL e-tube, closed	R4.38L.12.*R*.0.ESD e-tube, closed
Delivery time* 24h or today!	Delivery time* 24h or today!	Delivery time* 5-10 work days	Delivery time* upon request	Delivery time* 10 work days

* Delivery time means time until shipping of goods (after technical release)

(2-5 work days with express surcharge)

1) Sidebands made from XXL-Material

Order example | Order key and color options based on Series E4.38 light

Order example for complete e-chain® (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 18 links	E4.38L.100.150.0
+ Mounting brackets	KMA - 1 set (with odd number of links and integrated C-profiles)	E4.380.100.2.12.C
+ Interior separation	with 2 separators assembled every 2nd link	2 x 38.1.1

Order text: 1,0 m E4.38L.100.150.0 + E4.380.100.2.12.C + 2 x Part No. 38.1.1

Order key

e-chain®, crossbars every link E4.38L.100.150.0
e-tube, fully enclosed R4.38L.100.150.0

Series / Type
Width index (depends on *Bi*)
Bending radius *R*
Color index (standard black)

General igus® color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

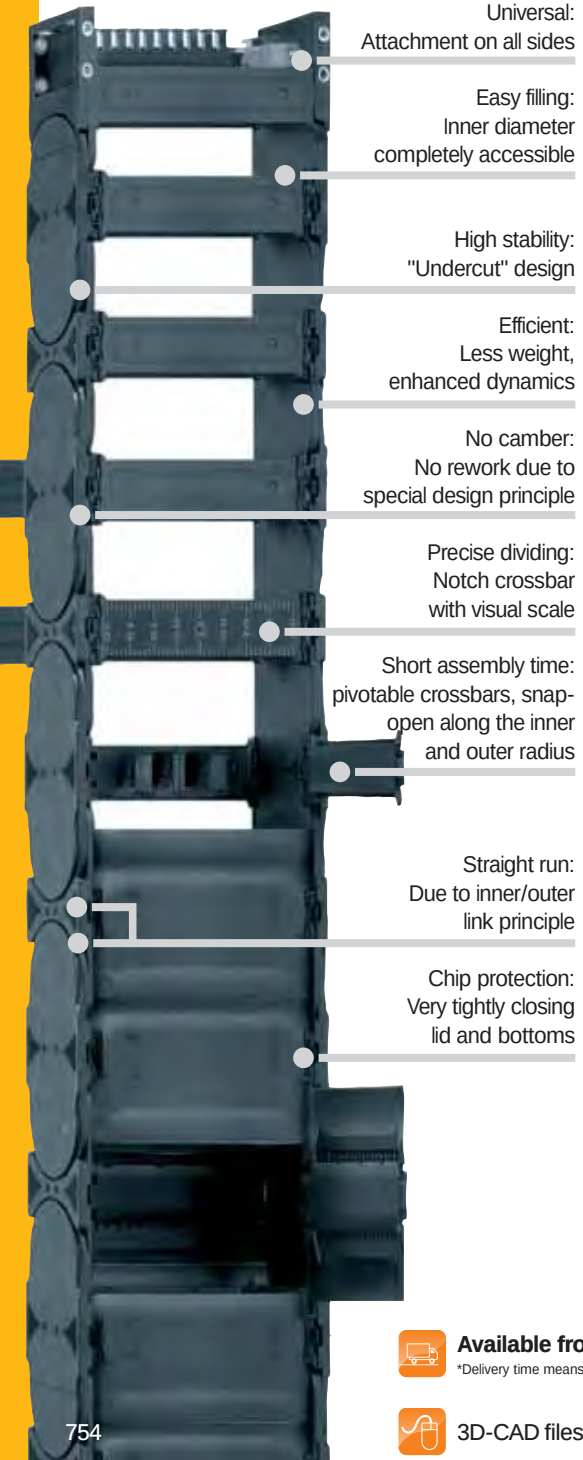
Black e-chains® available from stock!
Delivery time for special colors: upon request

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 light | Series E4.38L·R4.38L* | Introduction

38

*New in this catalog



High dynamics, low weight and cost-effective

When to use Series E4.38L·R4.38L:

- If a lightweight, cost-effective e-chain® with 38 mm inner height for high dynamics is desired
- Less weight, enhanced dynamics possible
- For unsupported lengths up to 2,75 m and fill weights up to 13 kg/m
- Optimized interior-exterior dimensions ratio due to narrow outer links
- If very tightly fitting lids and bottoms are required
- Also suitable for side-mounted, vertical standing or hanging applications
- If short assembly times are required

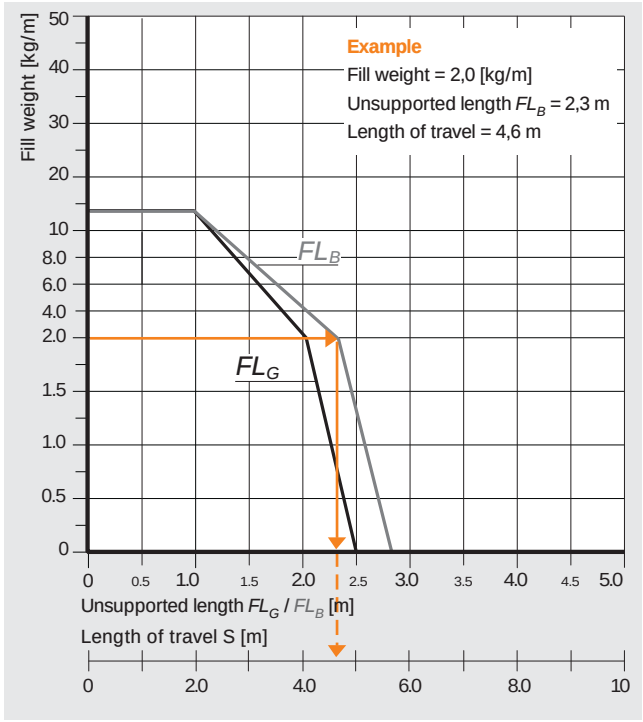
When to use a different igus® Series:

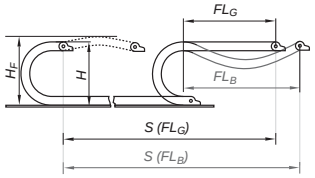
- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.35, page 938
- If higher stabiltiy is required
  ▶ Series E4.32, page 646
- For long travels with gliding applications
  ▶ Series E4.32, page 646
- If weight and price reduction as well as a compromise in strength is needed
  ▶ Series 2600/2700, page 444

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.38L

E4.1 light | E4.38L·R4.38L | Dimensions | Unsupported



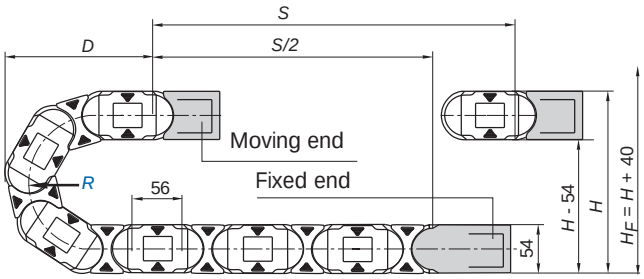


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 80 m.
More information ▶ page 762



Technical Data

Speed, material, temperature and flammability class ▶ page 752

Pitch = 56 mm/link
Links/m = 18 (1008 mm)
Chain length = $S/2 + K$

R	063 1)	075 1)	100 1)	125	150	175	200	250	300	350*
H	180	204	254	304	354	404	454	554	654	754
D	174	186	211	236	261	286	311	361	411	461
K	310	350	430	505	585	665	745	900	1055	1215

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

1) Radius not available for e-tubes *Radius available upon request, please consult igus® for delivery time!

FL_G = unsupported with straight upper run
FL_B = unsupported with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | E4.38L crossbars every link | pivotable on both sides, snap-open along inner and outer radius

Part No. e-chain®	Bi [mm]	Ba [mm]	E4.38L [kg/m]
E4.38L. 050. R.0	50	66	≈ 1,13
E4.38L. 062. R.0	62,5	78,5	≈ 1,19
E4.38L. 075. R.0	75	91	≈ 1,26
E4.38L 087. R.0	87,5	103,5	≈ 1,30
E4.38L. 100. R.0	100	116	≈ 1,37
E4.38L. 105. R.0	105	125	≈ 1,39
E4.38L. 112. R.0**	112,5	128,5	≈ 1,44
E4.38L. 125. R.0	125	141	≈ 1,50
E4.38L. 137. R.0**	137,5	153,5	≈ 1,55
E4.38L. 150. R.0	150	166	≈ 1,65
E4.38L. 162. R.0**	162,5	178,5	≈ 1,69
E4.38L. 175. R.0	175	191	≈ 1,74
E4.38L. 187. R.0**	187,5	203,5	≈ 1,80
E4.38L. 200. R.0**	200	216	≈ 1,86
E4.38L. 212. R.0**	212,5	228,5	≈ 1,90

Part No. e-chain®	Bi [mm]	Ba [mm]	E4.38L [kg/m]
E4.38L. 225. R.0**	225	241	≈ 1,97
E4.38L. 237. R.0**	237,5	253,5	≈ 2,05
E4.38L. 250. R.0**	250	266	≈ 2,11
E4.38L. 262. R.0**	262,5	278,5	≈ 2,15
E4.38L. 275. R.0**	275	291	≈ 2,22
E4.38L. 287. R.0**	287,5	303,5	≈ 2,30
E4.38L. 300. R.0**	300	316	≈ 2,36
E4.38L. 312. R.0**	312,5	328,5	≈ 2,40
E4.38L. 325. R.0**	325	341	≈ 2,47
E4.38L. 337. R.0**	337,5	353,5	≈ 2,55
E4.38L. 350. R.0**	350	366	≈ 2,57
E4.38L. 362. R.0**	362,5	378,5	≈ 2,60
E4.38L. 375. R.0**	375	391	≈ 2,65
E4.38L. 387. R.0**	387,5	403,5	≈ 2,76
E4.38L. 400. R.0**	400	416	≈ 2,83

**Width available upon request, please consult igus® for delivery time! *Radius available upon request, please consult igus® for delivery time!

Available bending radii *R* [mm] 063 | 075 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | 350*|

Supplement Part No. with required radius (*R*), example: E4.38L.100.150.0

e-chain® links as single parts, overview ▶ page 752

Configuration options and order keys, overview ▶ page 753

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | R4.38L fully enclosed | pivotable on both sides, snap-open along inner and outer radius

Part No. e-rtube	Bi [mm]	Ba [mm]	R4.38L [kg/m]
R4.38L. 050. R.0**	50	66	≈ 1,20
R4.38L. 075. R.0**	75	91	≈ 1,38
R4.38L. 100. R.0	100	116	≈ 1,60
R4.38L. 125. R.0**	125	141	≈ 1,75
R4.38L. 150. R.0**	150	166	≈ 1,92

Part No. e-tube	Bi [mm]	Ba [mm]	R4.38L [kg/m]
R4.38L. 175. R.0**	175	191	≈ 2,10
R4.38L. 200. R.0**	200	216	≈ 2,29
R4.38L. 250. R.0**	250	266	≈ 2,65
R4.38L. 300. R.0**	300	316	≈ 3,00

**Width available upon request, please consult igus® for delivery time! *Radius available upon request, please consult igus® for delivery time!

Available bending radii *R* [mm] 125 | 150 | 175 | 200 | 250 | 300 | 350*|

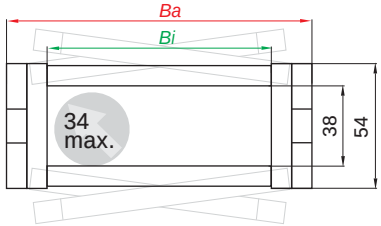
Supplement Part No. with required radius (*R*), example: R4.38L.100.150.0

Order key

E4.38L.100.150.0 e-chain®, crossbars every link

R4.38L.100.150.0 e-tube, fully enclosed

- Series / Type
- Width index (depends on *Bi*)
- Bending radius *R*
- Color index (standard black)



e-chain® links as single parts, overview ▶ page 752

Configuration options and order keys, overview ▶ page 753

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



NC-Version | Without pretension

Part No. e-chain®	Part No. e-tube	Bi [mm]	Ba [mm]	Part No. e-chain®	Part No. e-tube	Bi [mm]	Ba [mm]
E4.38L. 050. R.0.NC	R4.38L.050. R.0.NC**	50	66	E4.38L. 225. R.0.NC**	–	225	241
E4.38L. 062. R.0.NC	–	62,5	78,5	E4.38L. 237. R.0.NC**	–	237,5	253,5
E4.38L. 075. R.0.NC	R4.38L.075. R.0.NC**	75	91	E4.38L. 250. R.0.NC**	R4.38L.250. R.0.NC**	250	266
E4.38L 087. R.0.NC	–	87,5	103,5	E4.38L. 262. R.0.NC**	–	262,5	278,5
E4.38L. 100. R.0.NC	R4.38L.100. R.0.NC	100	116	E4.38L. 275. R.0.NC**	–	275	291
E4.38L. 105. R.0.NC	–	105	125	E4.38L. 287. R.0.NC**	–	287,5	303,5
E4.38L. 112. R.0.NC**	–	112,5	128,5	E4.38L. 300. R.0.NC**	R4.38L.300. R.0.NC**	300	316
E4.38L. 125. R.0.NC	R4.38L.125. R.0.NC**	125	141	E4.38L. 312. R.0.NC**	–	312,5	328,5
E4.38L. 137. R.0.NC**	–	137,5	153,5	E4.38L. 325. R.0.NC**	–	325	341
E4.38L. 150. R.0.NC	R4.38L.150. R.0.NC**	150	166	E4.38L. 337. R.0.NC**	–	337,5	353,5
E4.38L. 162. R.0.NC**	–	162,5	178,5	E4.38L. 350. R.0.NC**	–	350	366
E4.38L. 175. R.0.NC	R4.38L.175. R.0.NC**	175	191	E4.38L. 362. R.0.NC**	–	362,5	378,5
E4.38L. 187. R.0.NC**	–	187,5	203,5	E4.38L. 375. R.0.NC**	–	375	391
E4.38L. 200. R.0.NC**	R4.38L.200. R.0.NC**	200	216	E4.38L. 387. R.0.NC**	–	387,5	403,5
E4.38L. 212. R.0.NC**	–	212,5	228,5	E4.38L. 400. R.0.NC**	–	400	416

**Width available upon request, please consult igus® for delivery time! *Radius available upon request, please consult igus® for delivery time! 1) Radius not available for e-tubes

Available bending radii *R* [mm] 063[1)] | 075[1)] | 100[1)] | 125 | 150 | 175 | 200 | 250 | 300 | 350*|

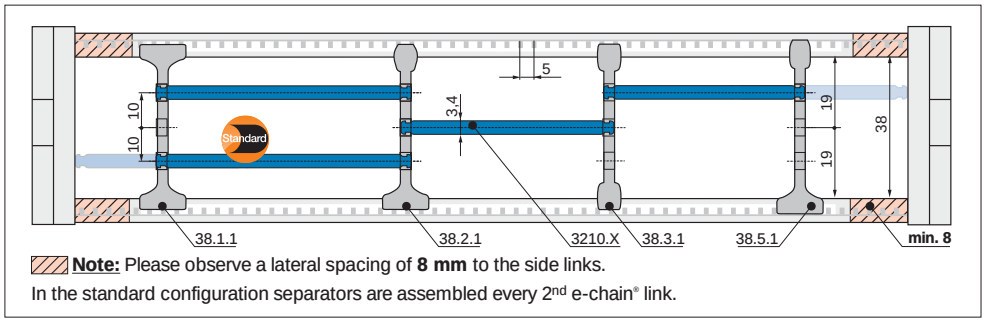
Supplement Part No. with required radius *(R)*, example: E4.38L.100.150.0.NC

Configuration options and order keys, overview ►page 753

NC-Version - Delivery time* in 24h or today!

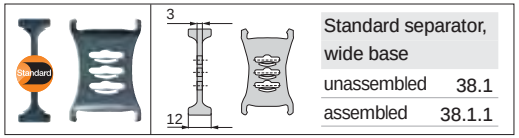
*Delivery time means time until shipping of goods (after technical release)

New generation interior separation - for e-chains® and e-tubes



Note: Please observe a lateral spacing of **8 mm** to the side links.

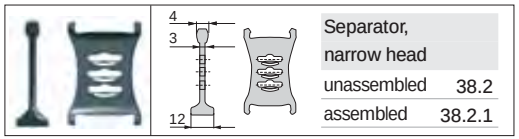
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	38.1
assembled	38.1.1

Standard - for all applications

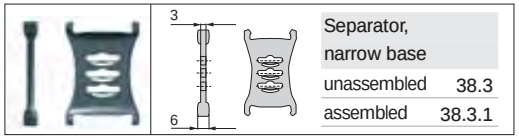
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow head	
unassembled	38.2
assembled	38.2.1

For even faster installation

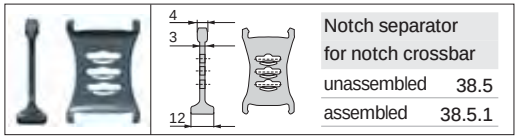
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	38.3
assembled	38.3.1

For many thin cables

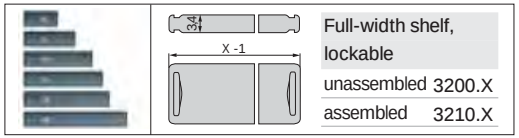
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	38.5
assembled	38.5.1

Locks safely in 5 mm increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

Lockable full-width shelves



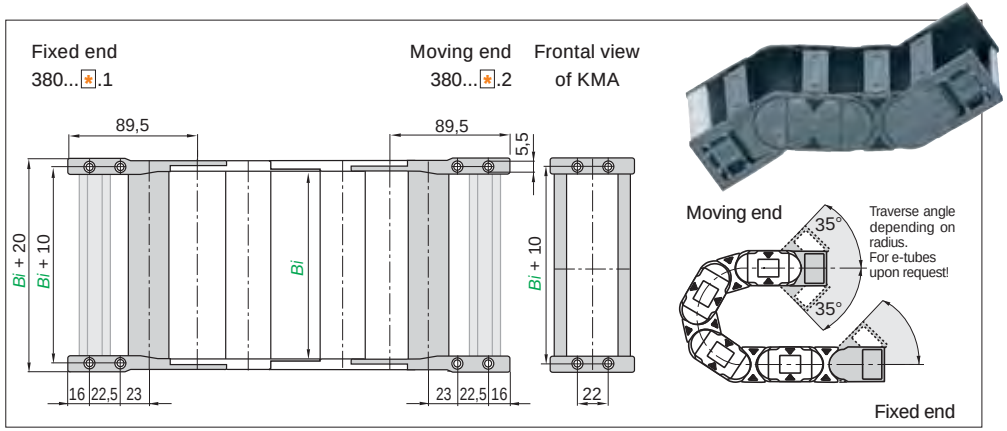
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

Interior separation with single-part order. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E4.1 light | E4.38L·R4.38L | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment

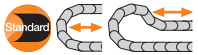


KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
050.	E4. R4.** 380.050.*.12.C	50	225.	E4.**– 380.225.*.12.C	225
062.	E4. – 380.062.*.12.C	62,5	237.	E4.**– 380.237.*.12.C	237,5
075.	E4. R4.** 380.075.*.12.C	75	250.	E4.**R4.** 380.250.*.12.C	250
087.	E4. – 380.087.*.12.C	87,5	262.	E4.**– 380.262.*.12.C	262,5
100.	E4. R4. 380.100.*.12.C	100	275.	E4.**– 380.275.*.12.C	275
105.	E4. – 380.105.*.12.C	105	287.	E4.**– 380.287.*.12.C	287,5
112.	E4.**– 380.112.*.12.C	112,5	300.	E4.**R4.** 380.300.*.12.C	300
125.	E4. R4.** 380.125.*.12.C	125	312.	E4.**– 380.312.*.12.C	312,5
137.	E4.**– 380.137.*.12.C	137,5	325.	E4.**– 380.325.*.12.C	325
150.	E4. R4.** 380.150.*.12.C	150	337.	E4.**– 380.337.*.12.C	337,5
162.	E4.**– 380.162.*.12.C	162,5	350.	E4.**– 380.350.*.12.C	350
175.	E4. R4.** 380.175.*.12.C	175	362.	E4.**– 380.362.*.12.C	362,5
187.	E4.**– 380.187.*.12.C	187,5	375.	E4.**– 380.375.*.12.C	375
200.	E4.**R4.** 380.200.*.12.C	200	387.	E4.**– 380.387.*.12.C	387,5
212.	E4.**– 380.212.*.12.C	212,5	400.	E4.**– 380.400.*.12.C	400

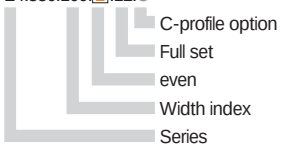
*Width available upon request. Please consult igus® for delivery time.

(KMA = Polymer Metal Mounting Bracket)



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)
E4.380.100.2.12.C



Single-part order:
Mounting bracket Moving end
E4.380.100.2.2.C (even number of links)
Mounting bracket Fixed end
E4.380.100.2.2.C (even number of links)

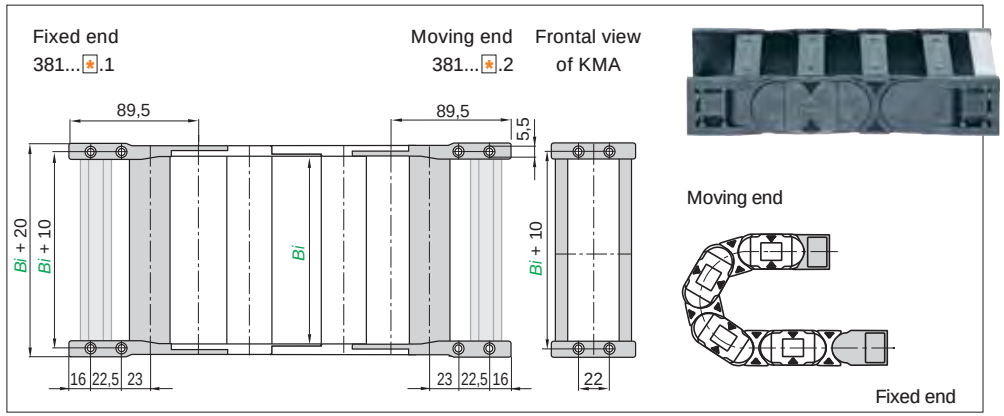
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 light | E4.38L·R4.38L | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment

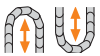


KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
050.	E4. R4.** 381.050.*.12.C	50	225.	E4.**– 381.225.*.12.C	225
062.	E4. – 381.062.*.12.C	62,5	237.	E4.**– 381.237.*.12.C	237,5
075.	E4. R4.** 381.075.*.12.C	75	250.	E4.**R4.** 381.250.*.12.C	250
087.	E4. – 381.087.*.12.C	87,5	262.	E4.**– 381.262.*.12.C	262,5
100.	E4. R4. 381.100.*.12.C	100	275.	E4.**– 381.275.*.12.C	275
105.	E4. – 381.105.*.12.C	105	287.	E4.**– 381.287.*.12.C	287,5
112.	E4.**– 381.112.*.12.C	112,5	300.	E4.**R4.** 381.300.*.12.C	300
125.	E4. R4.** 381.125.*.12.C	125	312.	E4.**– 381.312.*.12.C	312,5
137.	E4.**– 381.137.*.12.C	137,5	325.	E4.**– 381.325.*.12.C	325
150.	E4. R4.** 381.150.*.12.C	150	337.	E4.**– 381.337.*.12.C	337,5
162.	E4.**– 381.162.*.12.C	162,5	350.	E4.**– 381.350.*.12.C	350
175.	E4. R4.** 381.175.*.12.C	175	362.	E4.**– 381.362.*.12.C	362,5
187.	E4.**– 381.187.*.12.C	187,5	375.	E4.**– 381.375.*.12.C	375
200.	E4.**R4.** 381.200.*.12.C	200	387.	E4.**– 381.387.*.12.C	387,5
212.	E4.**– 381.212.*.12.C	212,5	400.	E4.**– 381.400.*.12.C	400

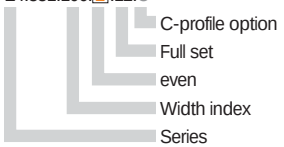
*Width available upon request. Please consult igus® for delivery time.

(KMA = Polymer Metal Mounting Bracket)



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)
E4.381.100.2.12.C



Single-part order:
Mounting bracket Moving end
E4.381.100.2.2.C (even number of links)
Mounting bracket Fixed end
E4.381.100.2.2.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index 1 (for odd) or 2 (for even)!

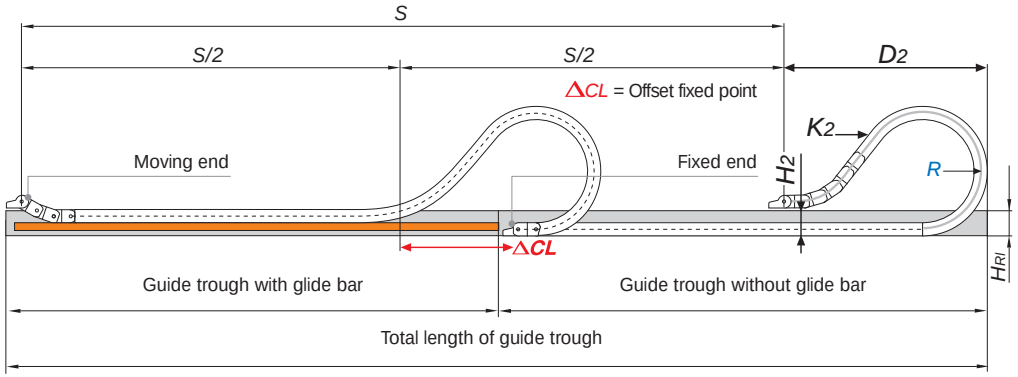


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 light | E4.38L·R4.38L | Dimensions | Long travels

Gliding applications | For long travels from 10 m to max. 80 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. Remark: Please avoid raw dirt and dust. Please mind of an exact alignment of the trough. We recommend to realize the engineering of such a plant by our technicians. In case of travels between 5 and 10 m we recommend a longer unsupported length.



Pitch = 56 mm/link · Links/m= 18 (1008 mm) · Chain length = $S/2 + K$

R	063 1)	075 1)	100 1)	125	150	175	200	250 2)	300 2)	350 2)
H_2	*	*	96	96	96	96	96	–	–	–
D_2	*	*	370	470	500	655	770	–	–	–
K_2	*	*	616	784	896	1120	1288	–	–	–
ΔCL	*	*	160	210	240	370	460	–	–	–

1) Radius not available for e-tubes 2) Radius not suitable for long travel applications. Please consult igus® *Values such as unsupported applications

More solutions | For long travel applications

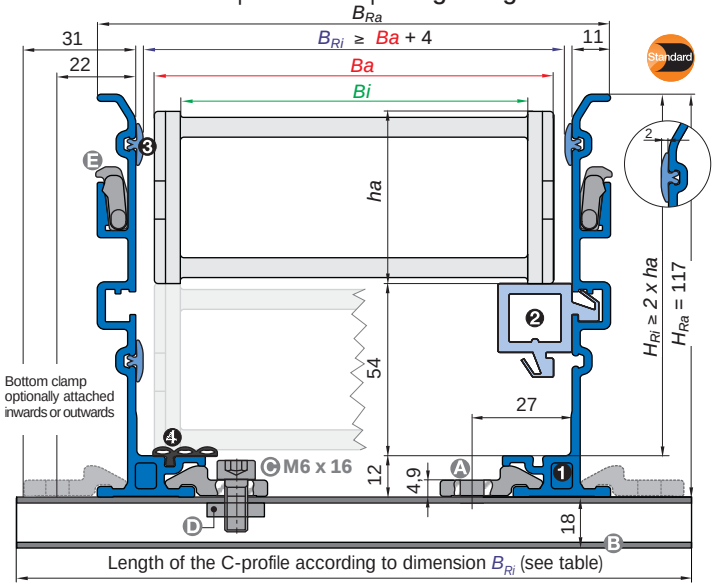
System P4.32 - profile-rol e-chain®, low-noise	Travels up to 600 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 2828R - rolling instead of gliding	Travels up to 400 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		
autoglide E4.32.*Bi*.*R*.0.AG - self-guiding, no guide troughs	Travels ≤ 50 m	v_{max} 1,5 m/s
Self-guiding e-chainsystems® - No guide troughs required!		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

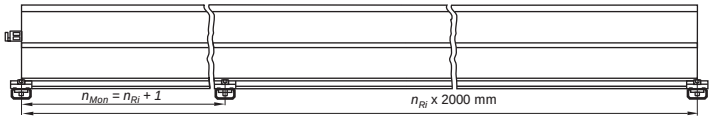
Part No. 972.30.SL | 972.31.SL | Trough height: 117 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E4.38L.100.150.0 with B_{Ri} = 120

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	972.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	972.31.SL
Installation set "Basic" complete (guide trough-sets + 1)		
Order text: 17 installation sets	Part No.	960.30.175
Module for the fixed end		
Order text: 1 set	Part No.	972.80.4
Option: For an additional noise dampening		
with silencer profile, please add Index A - Example:	Part No.	972.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Dutyn" version for heavy machinery ▶ from page 1198

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

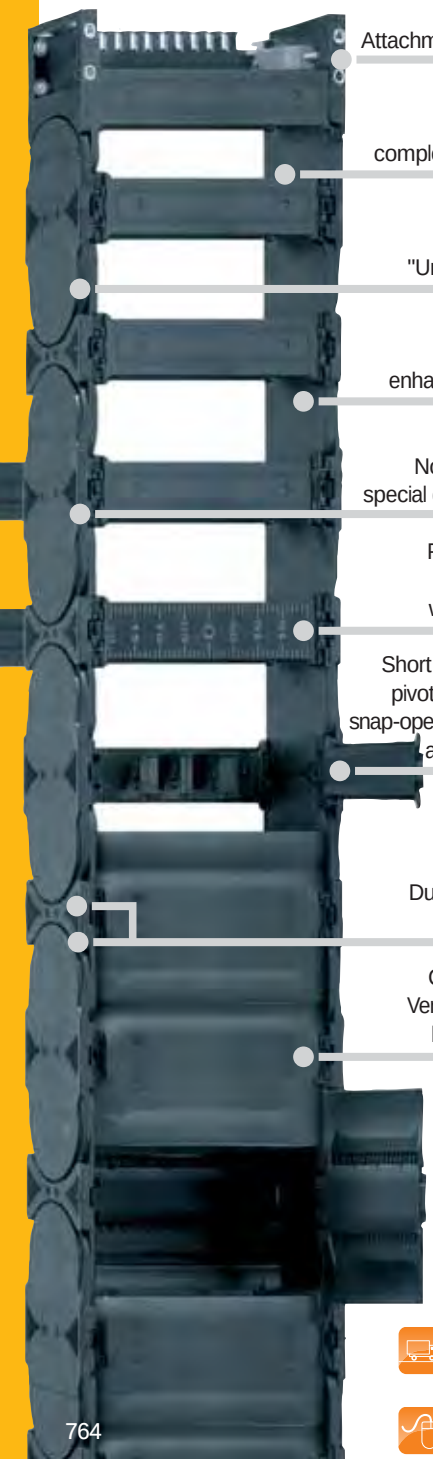
Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
050.	70	upon request	960.30.200
062.	82	upon request	960.30.200
075.	95	upon request	960.30.225
087.	107	upon request	960.30.225
100.	120	960.30.175	960.30.250
112.	132	960.30.200	960.30.250
125.	145	960.30.200	960.30.275
137.	157	960.30.225	960.30.275
150.	170	960.30.225	960.30.300
162.	182	960.30.250	960.30.300
175.	195	960.30.250	960.30.325
187.	207	960.30.275	960.30.325
200.	220	960.30.275	960.30.350
212.	232	960.30.300	960.30.350
225.	245	960.30.300	960.30.375
237.	257	960.30.325	960.30.375
250.	270	960.30.325	960.30.400
262.	282	960.30.350	960.30.400
275.	295	960.30.350	960.30.425
287.	307	960.30.375	960.30.425
300.	320	960.30.375	960.30.450
312.	332	960.30.400	960.30.450
325.	345	960.30.400	960.30.475
337.	357	960.30.425	960.30.475
350.	370	960.30.425	960.30.500
362.	382	960.30.450	960.30.500
375.	395	960.30.450	960.30.525
387.	407	960.30.475	960.30.525
400.	420	960.30.475	960.30.550

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"

E4.1 light | Series E4.48L·R4.48L* | Introduction

*New in this catalog



High dynamics, low weight and cost-effective

When to use Series E4.48L·R4.48L:

- If a lightweight, cost-effective e-chain® with 48 mm inner height for high dynamics is desired
- Less weight, enhanced dynamics possible
- Inner widths up to 150 mm
- For unsupported lengths up to 3,75 m and fill weights up to 26 kg/m
- Optimized interior-exterior dimensions ratio due to narrow outer links
- If very tightly fitting lids and bottoms are required
- Also suitable for side-mounted, vertical standing or hanging applications
- If short assembly times are required

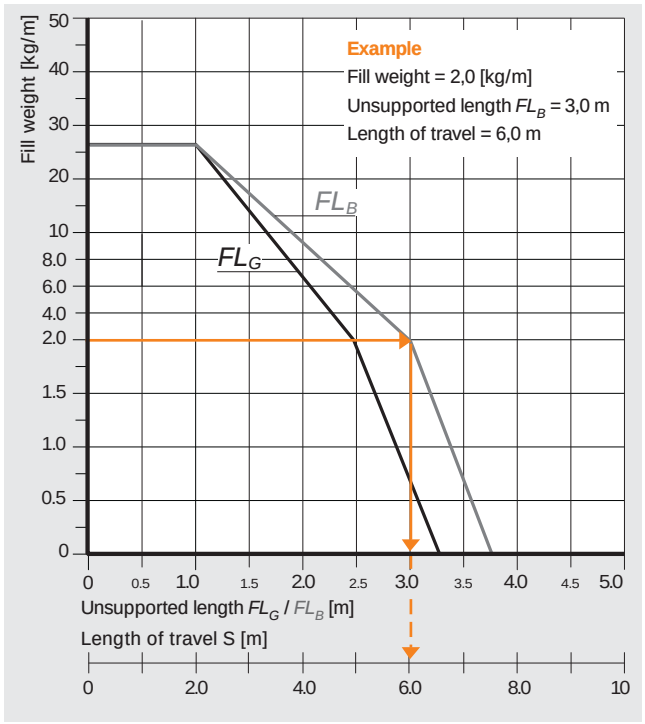
When to use a different igus® Series:

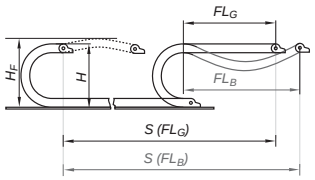
- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.40, page 946
- If higher stabiltiy is required
  ▶ Series E4.42, page 662
- For long travels with gliding applications
  ▶ Series E4.42, page 662
- If weight and price reduction as well as a compromise in strength is needed
  ▶ Series 3400/3500, page 462

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E4.48L

E4.1 light | E4.48L·R4.48L | Dimensions | Unsupported



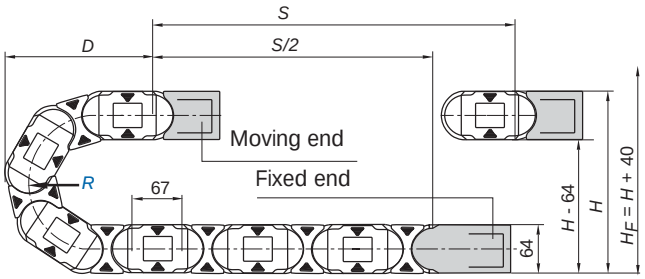


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 100 m.
More information ▶ page 772



Technical Data

Speed, material, temperature and flammability class ▶ page 752

Pitch = 67 mm/link
Links/m = 15 (1005 mm)
Chain length = $S/2 + K$

R	075[1]	100[1]	125	150	175	200	250	300	350
H	214	264	314	364	414	464	564	664	764
D	208	233	258	283	308	333	383	433	483
K	370	450	530	610	685	765	920	1080	1235

The required clearance height: $H_F = H + 40$ mm (with 2,5 kg/m fill weight)

1) Radius not available for e-tubes

FL_G = unsupported with straight upper run
FL_B = unsupported with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R + $ "safety"



e-chains® | E4.48L crossbars every link | pivotable on both sides, snap-open along inner and outer radius

Part No. e-chain®	Bi [mm]	Ba [mm]	E4.48L [kg/m]
E4.48L. 050. R.0	50	70	≈ 1,53
E4.48L. 062. R.0	62,5	82,5	≈ 1,58
E4.48L. 075. R.0	75	95	≈ 1,64
E4.48L. 087. R.0	87,5	107,5	≈ 1,67
E4.48L. 100. R.0	100	120	≈ 1,73
E4.48L. 105. R.0	105	125	≈ 1,74
E4.48L. 112. R.0**	112,5	132,5	≈ 1,79
E4.48L. 125. R.0	125	145	≈ 1,84
E4.48L. 137. R.0**	137,5	157,5	≈ 1,88
E4.48L. 150. R.0	150	170	≈ 1,97
E4.48L. 162. R.0**	162,5	182,5	≈ 2,00
E4.48L. 175. R.0	175	195	≈ 2,04
E4.48L. 187. R.0**	187,5	207,5	≈ 2,09
E4.48L. 200. R.0**	200	220	≈ 2,14
E4.48L. 212. R.0**	212,5	232,5	≈ 2,18

Part No. e-chain®	Bi [mm]	Ba [mm]	E4.48L [kg/m]
E4.48L. 225. R.0**	225	245	≈ 2,24
E4.48L. 237. R.0**	237,5	257,5	≈ 2,30
E4.48L. 250. R.0**	250	270	≈ 2,35
E4.48L. 262. R.0**	262,5	282,5	≈ 2,39
E4.48L. 275. R.0**	275	295	≈ 2,45
E4.48L. 287. R.0**	287,5	307,5	≈ 2,51
E4.48L. 300. R.0**	300	320	≈ 2,56
E4.48L. 312. R.0**	312,5	332,5	≈ 2,60
E4.48L. 325. R.0**	325	345	≈ 2,66
E4.48L. 337. R.0**	337,5	357,5	≈ 2,72
E4.48L. 350. R.0**	350	370	≈ 2,74
E4.48L. 362. R.0**	362,5	382,5	≈ 2,77
E4.48L. 375. R.0**	375	395	≈ 2,81
E4.48L. 387. R.0**	387,5	407,5	≈ 2,90
E4.48L. 400. R.0**	400	420	≈ 2,96

**Width available upon request, please consult igus® for delivery time!

Available bending radii *R* [mm] 075 | 100 | 125 | 150 | 175 | 200 | 250 | 300 | 350 |
Supplement Part No. with required radius (*R*), example: E4.48L.175.150.0

e-chain® links as single parts, overview ▶ page 752

Configuration options and order keys, overview ▶ page 753

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 light | E4.48L·R4.48L | Product range | Standard



e-tubes | R4.48L fully enclosed | pivotable on both sides, snap-open along inner and outer radius

Part No. e-tube	Bi [mm]	Ba [mm]	R4.48L [kg/m]
R4.48L. 050. R.0**	50	70	≈ 1,64
R4.48L. 075. R.0	75	95	≈ 1,82
R4.48L. 087. R.0**	87,5	107,5	≈ 1,91
R4.48L. 100. R.0**	100	120	≈ 2,01
R4.48L. 125. R.0**	125	145	≈ 2,18

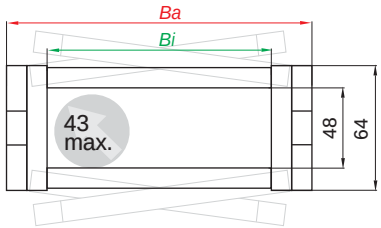
Part No. e-tube	Bi [mm]	Ba [mm]	R4.48L [kg/m]
R4.48L. 150. R.0**	150	170	≈ 2,36
R4.48L. 175. R.0	175	195	≈ 2,58
R4.48L. 200. R.0**	200	220	≈ 2,70
R4.48L. 250. R.0**	250	270	≈ 3,08
R4.48L. 300. R.0**	300	320	≈ 3,42

**Width available upon request, please consult igus® for delivery time!

Available bending radii *R* [mm] 125 | 150 | 175 | 200 | 250 | 300 | 350 |
Supplement Part No. with required radius (*R*), example: R4.48L.175.150.0

Order key
E4.48L.175.150.0 e-chain®, crossbars every link
R4.48L.175.150.0 e-tube, fully enclosed

Series / Type
Width index (depends on *Bi*)
Bending radius *R*
Color index (standard black)



e-chain® links as single parts, overview ▶ page 752

Configuration options and order keys, overview ▶ page 753

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 light | Series E4.48L·R4.48L | Product range | Options



NC-Version | Without pretension

Part No. e-chain®	Part No. e-tube	Bi [mm]	Ba [mm]	Part No. e-chain®	Part No. e-tube	Bi [mm]	Ba [mm]
E4.48L.050.R.0.NC	R4.48L.050.R.0.NC**	50	70	E4.48L.225.R.0.NC**	–	225	245
E4.48L.062.R.0.NC	–	62,5	82,5	E4.48L.237.R.0.NC**	–	237,5	257,5
E4.48L.075.R.0.NC	R4.48L.075.R.0.NC	75	95	E4.48L.250.R.0.NC**	R4.48L.250.R.0.NC**	250	270
E4.48L 087.R.0.NC	R4.48L 087.R.0.NC**	87,5	107,5	E4.48L.262.R.0.NC**	–	262,5	282,5
E4.48L.100.R.0.NC	R4.48L.100.R.0.NC**	100	120	E4.48L.275.R.0.NC**	–	275	295
E4.48L.105.R.0.NC	–	105	125	E4.48L.287.R.0.NC**	–	287,5	307,5
E4.48L.112.R.0.NC**	–	112,5	132,5	E4.48L.300.R.0.NC**	R4.48L.300.R.0.NC**	300	320
E4.48L.125.R.0.NC	R4.48L.125.R.0.NC**	125	145	E4.48L.312.R.0.NC**	–	312,5	332,5
E4.48L.137.R.0.NC**	–	137,5	157,5	E4.48L.325.R.0.NC**	–	325	345
E4.48L.150.R.0.NC	R4.48L.150.R.0.NC**	150	170	E4.48L.337.R.0.NC**	–	337,5	357,5
E4.48L.162.R.0.NC**	–	162,5	182,5	E4.48L.350.R.0.NC**	–	350	370
E4.48L.175.R.0.NC	R4.48L.175.R.0.NC	175	195	E4.48L.362.R.0.NC**	–	362,5	382,5
E4.48L.187.R.0.NC**	–	187,5	207,5	E4.48L.375.R.0.NC**	–	375	395
E4.48L.200.R.0.NC**	R4.48L.200.R.0.NC**	200	220	E4.48L.387.R.0.NC**	–	387,5	407,5
E4.48L.212.R.0.NC**	–	212,5	232,5	E4.48L.400.R.0.NC**	–	400	420

**Width available upon request, please consult igus® for delivery time! 1) Radius not available for e-tubes

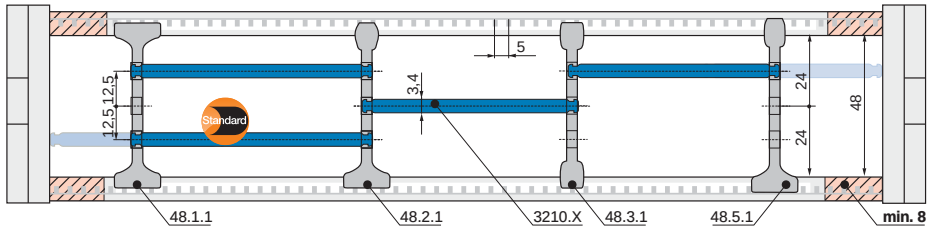
Available bending radii *R* [mm] 075[1)] | 100[1)] | 125 | 150 | 175 | 200 | 250 | 300 | 350 |
Supplement Part No. with required radius *(R)*, example: E4.38L.175.150.0.NC

Configuration options and order keys, overview ►page 753

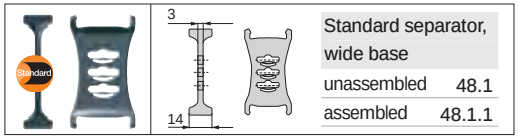
NC-Version - Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 light | Series E4.48L·R4.48L | Interior separation

New generation interior separation - for e-chains® and e-tubes

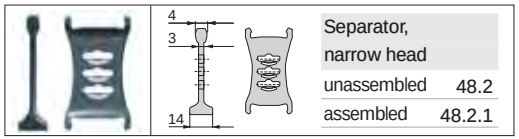


Note: Please observe a lateral spacing of **8 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link.



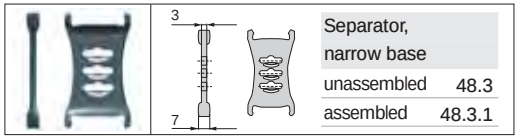
Standard separator, wide base
unassembled 48.1
assembled 48.1.1

Standard - for all applications
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



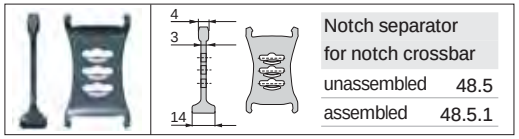
Separator, narrow head
unassembled 48.2
assembled 48.2.1

For even faster installation
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



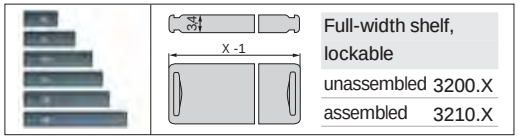
Separator, narrow base
unassembled 48.3
assembled 48.3.1

For many thin cables
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar
unassembled 48.5
assembled 48.5.1

Locks safely in 5 mm increments
Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable
unassembled 3200.X
assembled 3210.X

Horizontal separation
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

Lockable full-width shelves

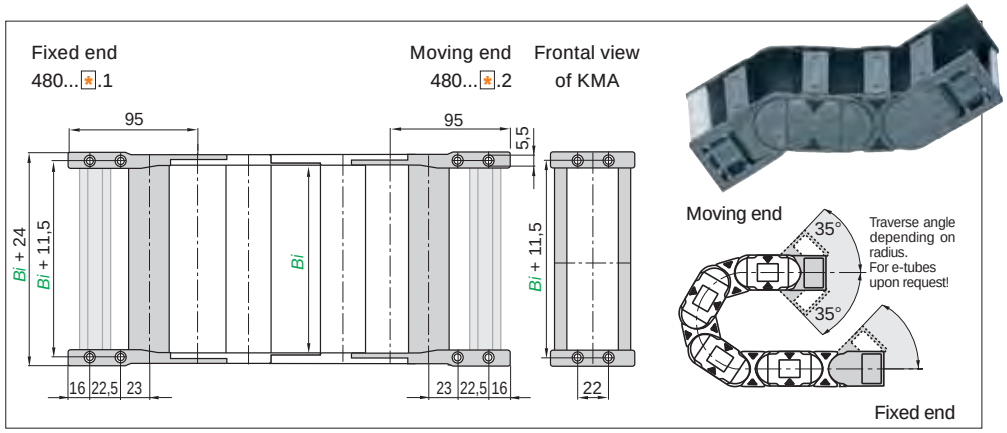


Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4.1 light | E4.48L·R4.48L | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment

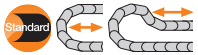


KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
050.	E4. R4.** 480 .050 .[*].12.C	50	225.	E4.** – 480 .225 .[*].12.C	225
062.	E4. – 480 .062 .[*].12.C	62,5	237.	E4.** – 480 .237 .[*].12.C	237,5
075.	E4. R4. 480 .075 .[*].12.C	75	250.	E4.** R4.** 480 .250 .[*].12.C	250
087.	E4. R4.** 480 .087 .[*].12.C	87,5	262.	E4.** – 480 .262 .[*].12.C	262,5
100.	E4. R4.** 480 .100 .[*].12.C	100	275.	E4.** – 480 .275 .[*].12.C	275
105.	E4. – 480 .105 .[*].12.C	105	287.	E4.** – 480 .287 .[*].12.C	287,5
112.	E4.** – 480 .112 .[*].12.C	112,5	300.	E4.** R4.** 480 .300 .[*].12.C	300
125.	E4. R4.** 480 .125 .[*].12.C	125	312.	E4.** – 480 .312 .[*].12.C	312,5
137.	E4.** – 480 .137 .[*].12.C	137,5	325.	E4.** – 480 .325 .[*].12.C	325
150.	E4. R4.** 480 .150 .[*].12.C	150	337.	E4.** – 480 .337 .[*].12.C	337,5
162.	E4.** – 480 .162 .[*].12.C	162,5	350.	E4.** – 480 .350 .[*].12.C	350
175.	E4. R4. 480 .175 .[*].12.C	175	362.	E4.** – 480 .362 .[*].12.C	362,5
187.	E4.** – 480 .187 .[*].12.C	187,5	375.	E4.** – 480 .375 .[*].12.C	375
200.	E4.** R4.** 480 .200 .[*].12.C	200	387.	E4.** – 480 .387 .[*].12.C	387,5
212.	E4.** – 480 .212 .[*].12.C	212,5	400.	E4.** – 480 .400 .[*].12.C	400

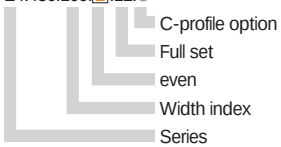
*Width available upon request. Please consult igus® for delivery time.

(KMA = Polymer Metal Mounting Bracket)



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)
E4.480.100.[2].12.C



Single-part order:
Mounting bracket Moving end
E4.480.100.[2].2.C (even number of links)
Mounting bracket Fixed end
E4.480.100.[2].1.C (even number of links)

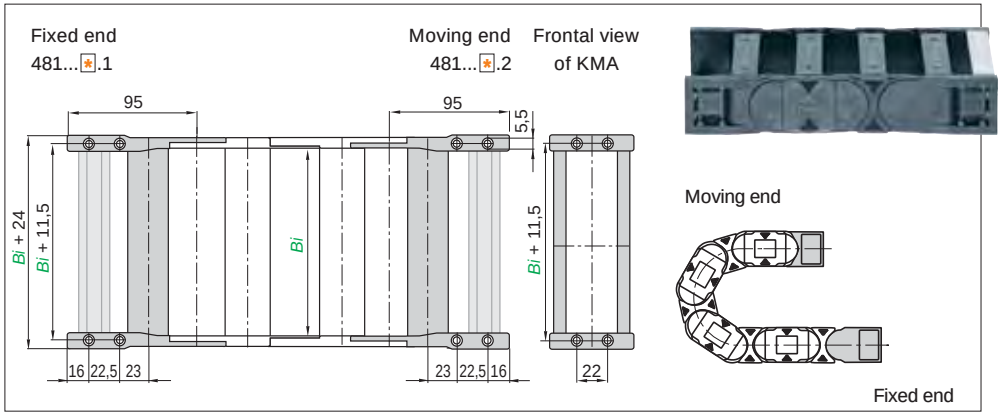
Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index [1] (for odd) or [2] (for even)!



Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 light | E4.48L·R4.48L | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment

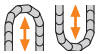


KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
050.	E4. R4.** 481 .050 .[*].12.C	50	225.	E4.** – 481 .225 .[*].12.C	225
062.	E4. – 481 .062 .[*].12.C	62,5	237.	E4.** – 481 .237 .[*].12.C	237,5
075.	E4. R4. 481 .075 .[*].12.C	75	250.	E4.** R4.** 481 .250 .[*].12.C	250
087.	E4. R4.** 481 .087 .[*].12.C	87,5	262.	E4.** – 481 .262 .[*].12.C	262,5
100.	E4. R4.** 481 .100 .[*].12.C	100	275.	E4.** – 481 .275 .[*].12.C	275
105.	E4. – 481 .105 .[*].12.C	105	287.	E4.** – 481 .287 .[*].12.C	287,5
112.	E4.** – 481 .112 .[*].12.C	112,5	300.	E4.** R4.** 481 .300 .[*].12.C	300
125.	E4. R4.** 481 .125 .[*].12.C	125	312.	E4.** – 481 .312 .[*].12.C	312,5
137.	E4.** – 481 .137 .[*].12.C	137,5	325.	E4.** – 481 .325 .[*].12.C	325
150.	E4. R4.** 481 .150 .[*].12.C	150	337.	E4.** – 481 .337 .[*].12.C	337,5
162.	E4.** – 481 .162 .[*].12.C	162,5	350.	E4.** – 481 .350 .[*].12.C	350
175.	E4. R4. 481 .175 .[*].12.C	175	362.	E4.** – 481 .362 .[*].12.C	362,5
187.	E4.** – 481 .187 .[*].12.C	187,5	375.	E4.** – 481 .375 .[*].12.C	375
200.	E4.** R4.** 481 .200 .[*].12.C	200	387.	E4.** – 481 .387 .[*].12.C	387,5
212.	E4.** – 481 .212 .[*].12.C	212,5	400.	E4.** – 481 .400 .[*].12.C	400

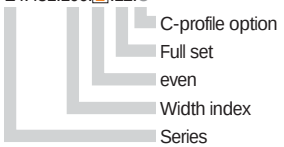
*Width available upon request. Please consult igus® for delivery time.

(KMA = Polymer Metal Mounting Bracket)



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (locking)
E4.481.100.[2].12.C



Single-part order:
Mounting bracket Moving end
E4.481.100.[2].2.C (even number of links)
Mounting bracket Fixed end
E4.481.100.[2].1.C (even number of links)

Note*: The E4.1 System may end with either an inner or an outer side link. Keep in mind that an outer side link always forms the first e-chain® link at the moving end.
The Part Nos. depend on an even or odd numbers of links.
Please insert: Index [1] (for odd) or [2] (for even)!

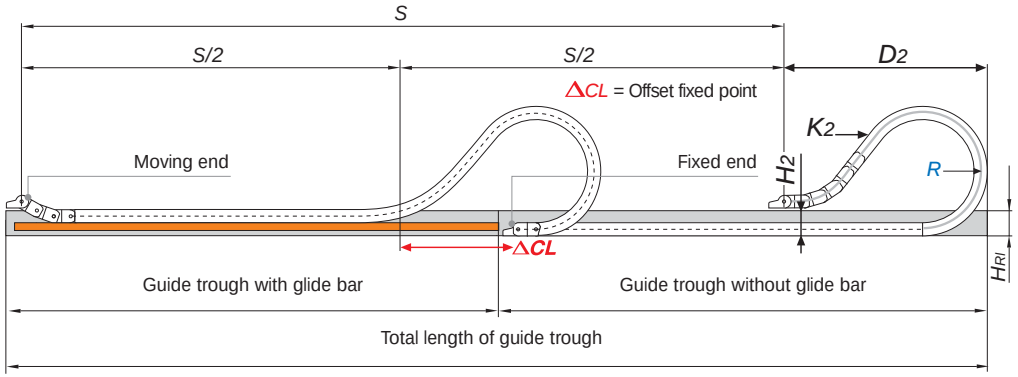


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4.1 light | E4.48L·R4.48L | Dimensions | Long travels

Gliding applications | For long travels from 10 m to max. 100 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. Remark: Please avoid raw dirt and dust. Please mind of an exact alignment of the trough. We recommend to realize the engineering of such a plant by our technicians. In case of travels between 5 and 10 m we recommend a longer unsupported length.



Pitch = 67 mm/link · Links/m = 15 (1005 mm) · Chain length = $S/2 + K$

R	075 1)	100 1)	125	150	175	200	250	300 2)	350 2)
H_2	*	*	106	106	106	106	106	–	–
D_2	*	*	475	570	670	780	1030	–	–
K_2	*	*	804	938	1139	1340	1675	–	–
ΔCL	*	*	230	300	380	460	660	–	–

1) Radius not available for e-tubes 2) Radius not suitable for long travel applications. Please consult igus® *Values such as unsupported applications

More solutions | For long travel applications

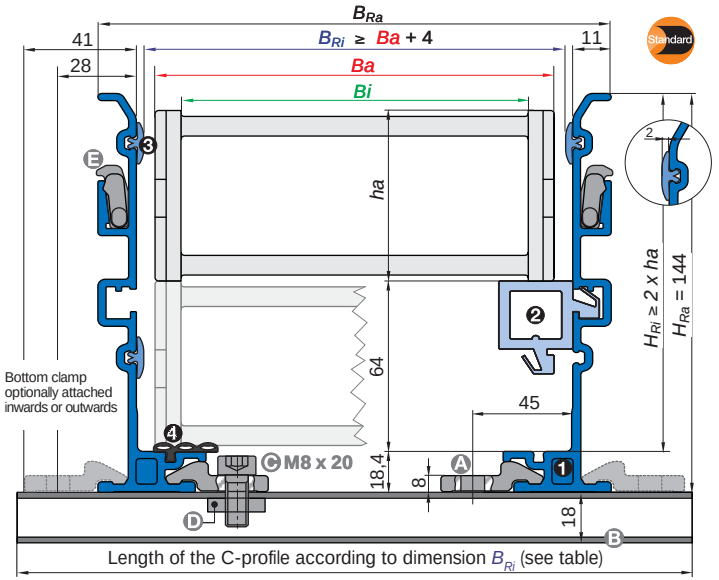
System P4.42 - profile-rol e-chain®, low-noise	Travels up to 800 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 3838R - rolling instead of gliding	Travels up to 600 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		
autoglide E4.42.*Bi*.*R*.0.AG - self-guiding, no guide troughs	Travels ≤ 50 m	v_{max} 1,5 m/s
Self-guiding e-chainsystems® - No guide troughs required!		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{RI} = Inner trough height S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

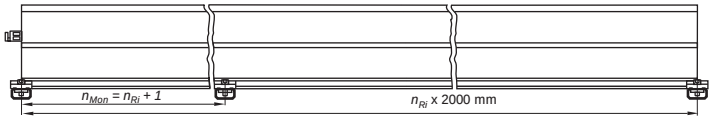
Part No. 973.30.SL | 973.31.SL | Trough height: 144 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m -
Center mounted for Series E4.48L.100.100.0 with B_{Ri} = 124

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 973.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 973.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.175
Module for the fixed end	
Order text: 1 set	Part No. 973.81.5
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 973.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the
"Heavy-Dutyn" version for heavy machinery ▶ from page 1202

● Trough set ● Installation set ● Glide bar ● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

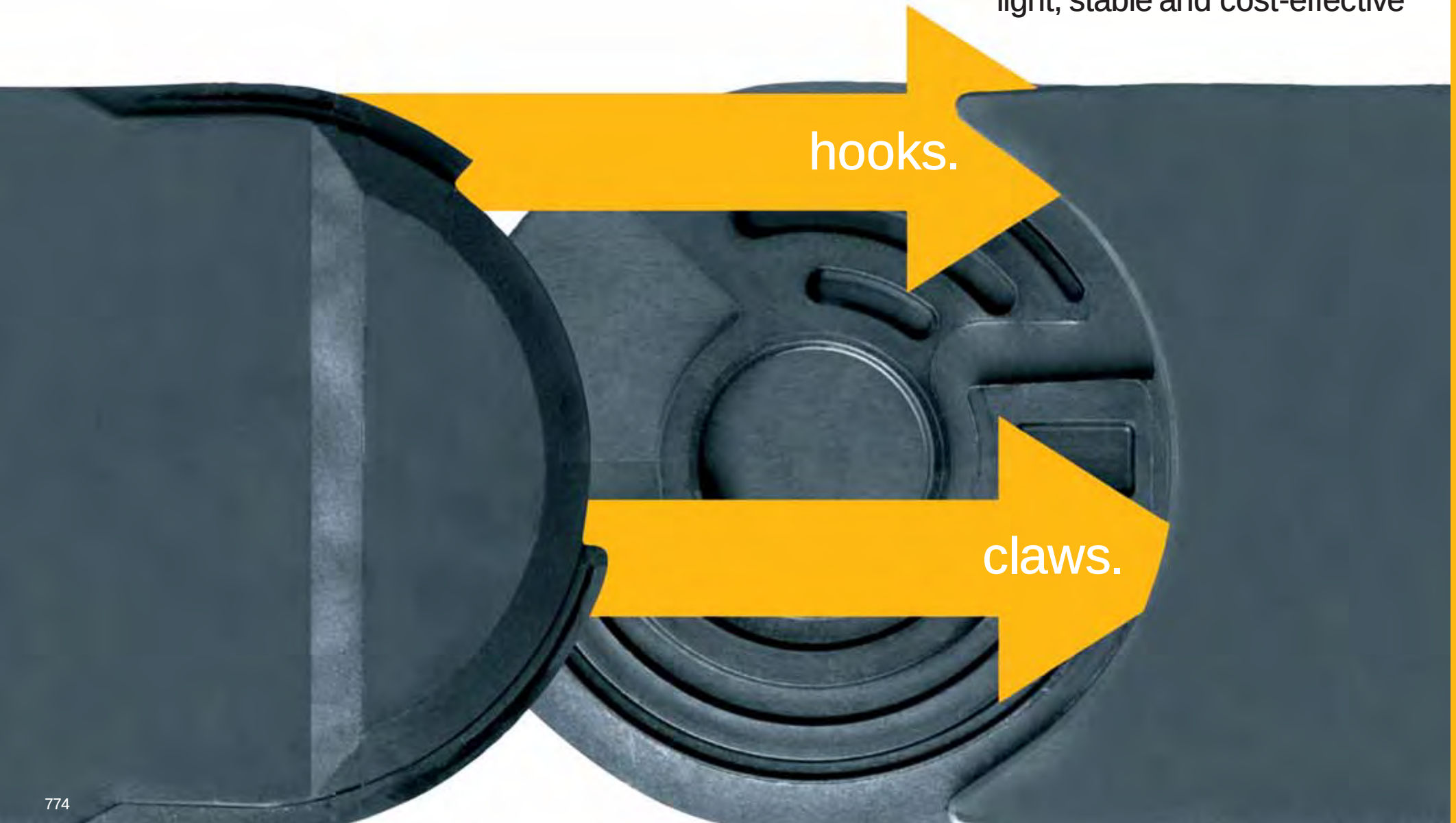
Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
050.	74	upon request	960.40.200
062.	86	upon request	960.40.200
075.	99	upon request	960.40.225
087.	111	upon request	960.40.225
100.	124	960.40.175	960.40.250
112.	136	960.40.200	960.40.250
125.	149	960.40.200	960.40.275
137.	161	960.40.225	960.40.275
150.	174	960.40.225	960.40.300
162.	186	960.40.250	960.40.300
175.	199	960.40.250	960.40.325
187.	211	960.40.275	960.40.325
200.	224	960.40.275	960.40.350
212.	236	960.40.300	960.40.350
225.	249	960.40.300	960.40.375
237.	261	960.40.325	960.40.375
250.	274	960.40.325	960.40.400
262.	286	960.40.350	960.40.400
275.	299	960.40.350	960.40.425
287.	311	960.40.375	960.40.425
300.	324	960.40.375	960.40.450
312.	336	960.40.400	960.40.450
325.	349	960.40.400	960.40.475
337.	361	960.40.425	960.40.475
350.	374	960.40.425	960.40.500
362.	386	960.40.450	960.40.500
375.	399	960.40.450	960.40.525
387.	411	960.40.475	960.40.525
400.	424	960.40.475	960.40.550

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of 960.40.XXX on the right column "attached outwards"

igus®
E4/light

light, stable and cost-effective



Light, stable and cost-effective - E4/light

E4/light - Weight reduction, a large interior space and price reduction result as well as a compromise in strength. The "light" features appear in two places: A reduced thickness of the side links (for all types), and a thinner crossbar (for some types: 14240, 14340). E4/light e-chains® achieve optimum price-performance solutions for many industries. Especially for unsupported short travels, hanging and short standing designs. E4/light types are often first choice.

Typical industries and applications

- Machine tools
- Material handling
- Stone cutting machines
- Woodworking machines
- General machinery
- Vehicles
- Construction machinery
- Limited long travel applications



Special equipment: Electrically conductive ESD/ATEX version upon request



Side-mounted - unsupported



High torsional rigidity



System E4 - 4-piece design link





E4/light e-chaines® and e-tubes are ideal in machine tools



E4/light is popular for hanging applications



With the space-saving igus® E4 e-chains® the overall dimension for the installation of this crane system was considerably reduced

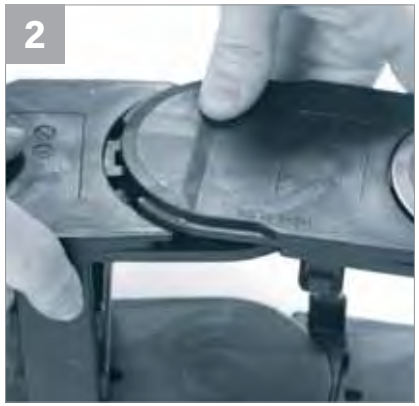
Contents, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
							
Crossbars every link Recommemdation: ● Lateral acceleration > 0,5m/s² ● High fill weights and rigid hydraulic hoses ● Humidity: > 85%, temperature: > 50°C (122° F)							
14040	56	50 - 600	76 - 626	84	135 - 500	4,0	784
14240	62	50 - 400	76 - 426	84	135 - 500	4,0	800
14550	70	50 - 600	77 - 627	98	150 - 600	4,2	816
15050	80	50 - 600	80 - 630	108	150 - 600	4,6	830
15250	86	50 - 400	80 - 430	108	150 - 600	4,6	846
1640	112	50 - 600	84 - 634	140	200 - 600	4,5	860
							
Crossbars every 2nd link Standard: ● Suitable for nearly all applications ● cost-effective							
14140	56	50 - 600	76 - 626	84	135 - 500	4,0	784
14340	62	50 - 400	76 - 426	84	135 - 500	4,0	800
14650	70	50 - 600	77 - 627	98	150 - 600	4,2	816
15150	80	50 - 600	80 - 630	108	150 - 600	4,6	830
15350	86	50 - 400	80 - 430	108	150 - 600	4,6	846
							
e-tubes Recommemdation: ● Excellent cable protection ● Lids along the entire inner radius are completely removable							
R18840	56	75 - 462	101 - 489	84	150 - 500	4,0	784
R19050	70	75 - 462	102 - 489	98	200 - 600	4,2	816
R19850	80	75 - 462	105 - 493	108	200 - 500	4,6	830
R1608	108	200 - 400	234 - 434	140	250 - 600	4,5	860

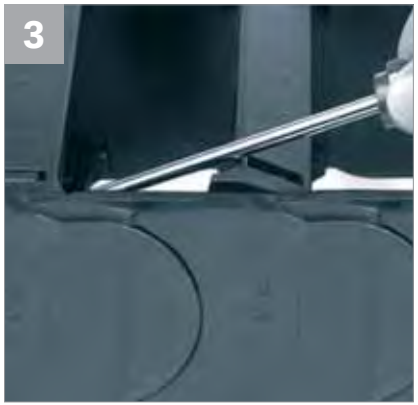
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Position side links at one side...
...and snap in



Position opposite side,
press together and snap in



Assemble crossbars - push down
and snap in by using a screwdriver



e-tube: assemble lids/bottoms -
attach to the connector at an angle - snap in

The E4 e-chain® opener reduces assembly time

e-chain® opener tools for convenient opening and closing of E4 series igus® e-chains® ● Especially for e-chains® with many crossbars the assembly is much easier ● Especially in areas difficult to access mounting is simplified big savings in assembly time. More information ▶**www.igus.eu/E4savetime**



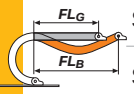
Technical Data, overview ▶page 780

e-chain® links as single parts, overview ▶page 781

Configuration options and order keys, overview ▶page 782

Assembly video available online at ▶ www.igus.eu/eu/E4_assembly

Technical data - E4/light



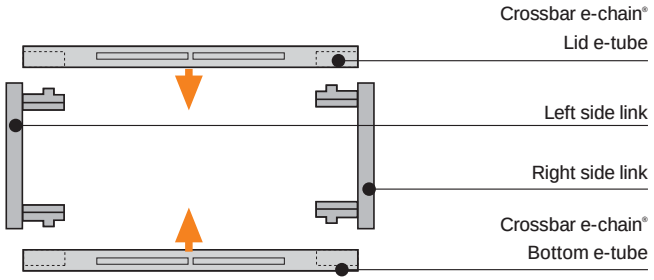
Gliding speed / acceleration (maximum)	max. 5 [m/s] / max. 50 [m/s²]
Speed / acceleration FL_G *max.*	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B *max.*	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

FL_G = unsupported with straight upper run FL_B = unsupported with permitted sag

Installation methods overview, maximum travels - E4/light

Series e-chain® / e-tube	Unsupported application	Gliding application	Vertical hanging	Vertical standing	Side mounted unsupported	Rotary application	Zig-zag application	Unsupported length lower run
14040/14140/18840	≤ 4,0 m	≤ 150 m	≤ 80 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
14240/14340	≤ 4,0 m	≤ 150 m	≤ 80 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
14550/14650/19050	≤ 4,2 m	≤ 250 m	≤ 90 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
15050/15150/19850	≤ 4,6 m	≤ 250 m	≤ 100 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
15250/15350	≤ 4,6 m	≤ 250 m	≤ 100 m	≤ 6,0 m	≤ 2,0 m	with rework	upon request	upon request
1640/1608	≤ 4,5 m	≤ 400 m	≤ 100 m	≤ 5,0 m	≤ 2,0 m	with rework	upon request	upon request

Part No. 4-piece e-chain® links as single parts - E4/light



Series	Crossbar* e-chain®	Lid* e-tube	Bottom* e-tube	Left side link**	Right side link***
14040/14140/18840	450.*Bi*	885.*Bi*	886.*Bi*	14040.01.*R*	14040.02.*R*
14240/14340	385.*Bi*	–	–	14240.01.*R*	14240.02.*R*
14550/14650/19050	450.*Bi*	885.*Bi*	886.*Bi*	14550.01.*R*	14550.02.*R*
15050/15150/19850	450.*Bi*	885.*Bi*	886.*Bi*	15050.01.*R*	15050.02.*R*
15250/15350	385.*Bi*	–	–	15250.01.*R*	15250.02.*R*
1640/1608	450.*Bi*	16085.*Bi*	16086.*Bi*	1600.01.*R*	1600.02.*R*

* Crossbar / lid / bottom - supplement Part No. with required width index (*Bi*), example: 450.150
** Left side link - supplement Part No. with required radius (*R*). Example: 14040.01.100
*** Right side link - supplement Part No. with required radius (*R*). Example: 14040.02.100

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E4/light | Configuration options and order key (based on Series 14040)

Standard	*Additional noise dampening with pads*	*QuickLock crossbar - reduce assembly time up to 25%*		
Part No. **Standard** e-chains®/e-tubes	Part No. **Low noise (with pads)** e-chains®/e-tubes	Part No. **QuickLock crossbar for inner radius**	Part No. **QuickLock crossbar for outer radius**	Part No. **QuickLock crossbar for both radii**
		QuickLock crossbars: inner widths from Bi 15 (150 mm)!		
14040.30.*R*.0 Crossbar every link	S14040.30.*R*.0 Crossbar every link	14040.30QZ.*R*.0 Crossbar every link	14040.30QE.*R*.0 Crossbar every link	14040.30Q.*R*.0 Crossbar every link
14140.30.*R*.0 Crossbar every 2nd link	S14140.30.*R*.0 Crossbar every 2nd link	14140.30QZ.*R*.0 Crossbar every 2nd link	14140.30QE.*R*.0 Crossbar every 2nd link	14140.30Q.*R*.0 Crossbar every 2nd link
18840.30.*R*.0 e-tube, closed	S18840.30.*R*.0 e-tube, closed			
Delivery time* 24h or today!	Delivery time* 3-5 work days	Delivery time* 3-5 work days	Delivery time* 3-5 work days	Delivery time* 3-5 work days

*Delivery time means time until shipping of goods (after technical release)

E4/light | Configuration options and order key (based on Series 14040)

NC-Version - (no camber) without pretension	*Reverse bending radius for circular movements*	*Unsupported lengths +25% possible*	*No burning-in of hot chips up to 850°C (1562° F)*	*ATEX/ESD classified e-chains® - Ex II 2 GD*
Part No. **NC-version** e-chains®/e-tubes NC	Part No. **RBR** e-chains®/e-tubes	Part No. **XXL-Material** 1) e-chains®/e-tubes +25% – 7 m	Part No. **HT-Material** only for e-tubes	Part No. **ESD-Material** e-chains®/e-tubes EX
14040.30.*R*.0.NC Crossbar every link	14040.30.*R1/R2*.0 Crossbar every link	14040.30.*R*.0.XXL Crossbar every link	18840.30.*R*.0.HT Complete e-tube2)	14040.30.*R*.0.ESD Crossbar every link
14140.30.*R*.0.NC Crossbar every 2nd link	14140.30.*R1/R2*.0 Crossbar every 2nd link	14140.30.*R*.0.XXL Crossbar every 2nd link	18840.30HT.*R*.0 Lid and bottom	14140.30.*R*.0.ESD Crossbar every 2nd link
18840.30.*R*.0.NC e-tube, closed	*RBR* for e-tubes - please consult igus®	18840.30.*R*.0.XXL e-tube, closed	18840.30HTZ.*R*.0 Bottom only	18840.30.*R*.0.ESD e-tube, closed
			18840.30HTE.*R*.0 Lid only	
Delivery time* 2-5 work days	Delivery time* 5-10 work days	Delivery time* 5 work days	Delivery time* 7-10 work days	Delivery time* - Some E4/light series from stock

(2-5 work days with express surcharge)

1) Sidebands made from XXL-Material

2) for gliding applications please consult igus®

Combination possibilities | Examples

	Low-noise option	QuickLock crossbar	NC-Version	RBR-Version	XXL-Material	HT-Material2)	ESD-Material
Low-noise option		S14040.30Q.*R*.0	S14040.30.*R*.0.NC	–	S14040.30.*R*.0.XXL	S18840.30.*R*.0.HT	S14040.30.*R*.0.ESD
QuickLock crossbar	S14040.30Q.*R*.0		14040.30Q.*R*.0.NC	14040.30Q.*R1/R2*.0	14040.30Q.*R*.0.XXL	–	14040.30Q.*R*.0.ESD
NC-Version	S14040.30.*R*.0.NC	14040.30Q.*R*.0.NC		–	–	18840.30.*R*.0.HT.NC	14040.30.*R*.0.ESD.NC
RBR-Version	–	14040.30Q.*R1/R2*.0	–		–	18840.30.*R1/R2*.0.HT	14040.30.*R1/R2*.0.ESD
XXL-Material	S14040.30.*R*.0.XXL	14040.30Q.*R*.0.XXL	–	–		–	–
HT-Material2)	S18840.30.*R*.0.HT	–	18840.30.*R*.0.HT.NC	18840.30.*R1/R2*.0.HT	–		–
ESD-	S14040.30.*R*.0.ESD	14040.30Q.*R*.0.ESD	14040.30.*R*.0.ESD.NC	14040.30.*R1/R2*.0.ESD	–	–	

2) for gliding applications please consult igus®

Order example | Order key and color options

Order example for complete e-chain® series 14040 (3,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (3,0 m)	Please indicate e-chain® length or number of links: 3,0 m or 33 links	14040.30.300.0
+ Mounting brackets	1 set (with odd number of links and integrated C-profiles)	141400.30.12.C
+ Interior separation	with 2 separators assembled every 2nd link	2 x 56.1.1

Order text: 3,0 m 14040.30.300.0 + 141400.30.12.C + 2 x 56.1.1

Order key
14040.30.300.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	.0	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



"Light design", large inner height

When to use Series 14040·14140·18840:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 56 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 40 kg/m
- For long travels up to 150 m
- Also suitable for side-mounted, vertical standing or hanging applications

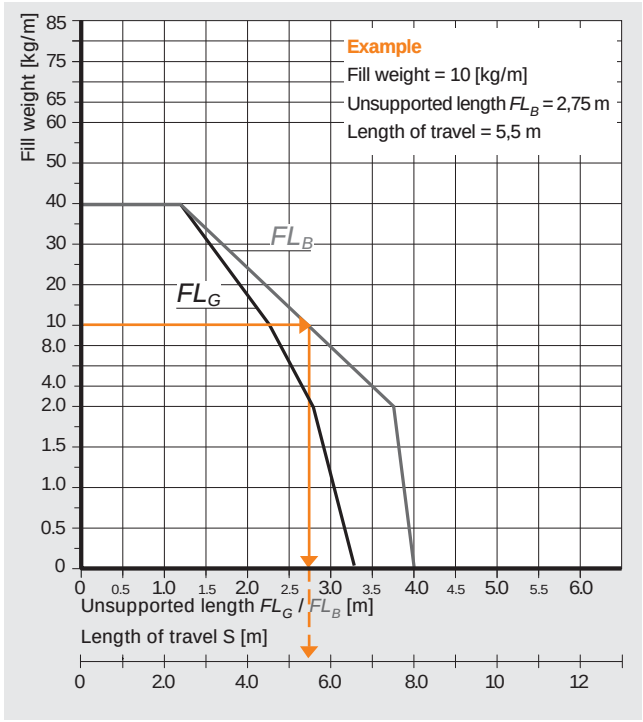
When to use a different igus® Series:

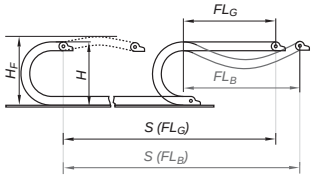
- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.52, page 956
- If larger unsupported lengths are required in side-mounted applications
  ▶ Series E4.56, page 678
- If increased unsupported lengths and longer travels are required
  ▶ Series E4.56, page 678

The igus® E4 **e-chain® opener** reduces assembly time ▶ page 779

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/14040



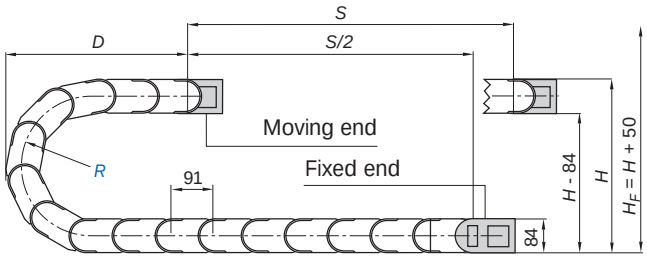


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 150 m.
More information ▶ page 798



Technical Data

Speed, material, temperature and flammability class ▶ page 780

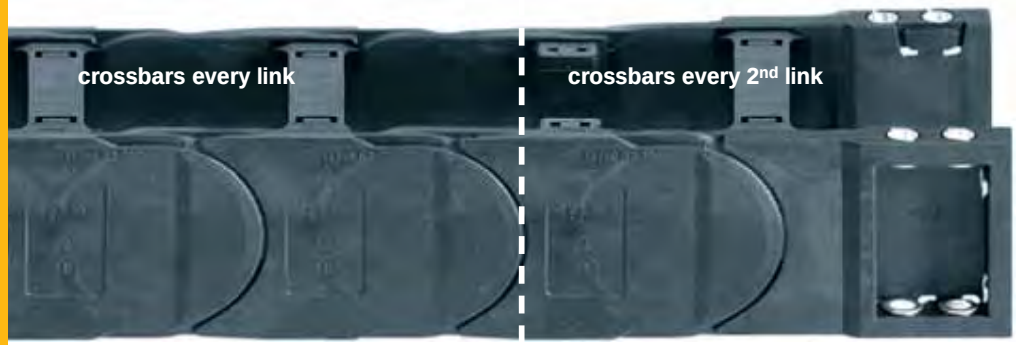
Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$

R	135*	150	175	200	250	300	400	500
H_{+25}^{0}	354	384	434	484	584	684	884	1084
D	314	329	354	379	429	479	579	679
K	610	655	735	815	970	1125	1440	1755

The required clearance height: $H_F = H + 50$ mm (with 2,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series 14040 crossbars every link | Series 14140 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	14040 [kg/m]	14140 [kg/m]
14040.	14140. 05. R.0	50	76	≈ 2,66	≈ 2,48
14040.	14140. 06. R.0	65	91	≈ 2,47	≈ 2,51
14040.	14140. 07. R.0	75	101	≈ 2,75	≈ 2,25
14040.	14140. 08. R.0	87	113	≈ 2,84	≈ 2,44
14040.	14140. 10. R.0	100	126	≈ 2,93	≈ 2,61
14040.	14140. 11. R.0	112	139	≈ 3,06	≈ 2,67
14040.	14140. 12. R.0	125	151	≈ 3,12	≈ 2,71
14040.	14140. 13. R.0	137	164	≈ 3,26	≈ 2,77
14040.	14140. 15. R.0	150	176	≈ 3,32	≈ 2,81
14040.	14140. 16. R.0	162	189	≈ 3,43	≈ 2,86
14040.	14140. 17. R.0	175	201	≈3,54	≈ 2,92
14040.	14140. 18. R.0	187	214	≈ 3,65	≈ 2,97
14040.	14140. 20. R.0	200	226	≈ 3,67	≈ 2,98
14040.	14140. 21. R.0	212	239	≈ 3,78	≈ 3,04
14040.	14140. 22. R.0	225	251	≈ 3,85	≈ 3,07
14040.	14140. 23. R.0	237	264	≈ 3,98	≈ 3,14
14040.	14140. 25. R.0	250	276	≈ 4,07	≈ 3,18
14040.	14140. 26. R.0	262	289	≈ 4,16	≈ 3,22
14040.	14140. 27. R.0	275	301	≈ 4,27	≈ 3,28
14040.	14140. 28. R.0	287	314	≈ 4,29	≈ 3,29
14040.	14140. 30. R.0	300	326	≈ 4,51	≈ 3,40
14040.	14140. 31. R.0	312	339	≈ 4,57	≈ 3,42
14040.	14140. 32. R.0	325	351	≈ 4,60	≈ 3,44
14040.	14140. 33. R.0	337	364	≈ 4,77	≈ 3,53
14040.	14140. 35. R.0	350	376	≈ 4,93	≈ 3,61
14040.	14140. 36. R.0	362	389	≈ 4,94	≈ 3,61
14040.	14140. 37. R.0	375	401	≈ 4,95	≈ 3,62
14040.	14140. 38. R.0	387	414	≈ 5,04	≈ 3,66
14040.	14140. 40. R.0	400	426	≈ 5,24	≈ 3,76
14040.	14140. 41. R.0	412	439	≈ 5,39	≈ 3,84
14040.	14140. 42. R.0	425	451	≈ 5,54	≈ 3,92
14040.	14140. 43. R.0	437	464	≈ 5,61	≈ 3,95
14040.	14140. 45. R.0	450	476	≈ 5,68	≈ 3,98
14040.	14140. 46. R.0	462	489	≈ 5,70	≈ 3,99
14040.	14140. 47. R.0	475	501	≈ 5,83	≈ 4,06
14040.	14140. 48. R.0	487	514	≈ 5,86	≈ 4,08
14040.	14140. 50. R.0	500	526	≈ 5,96	≈ 4,13
14040.	14140. 51. R.0	512	539	≈ 5,98	≈ 4,14
14040.	14140. 52. R.0	525	551	≈ 6,03	≈ 4,16
14040.	14140. 53. R.0	537	564	≈ 6,18	≈ 4,24
14040.	14140. 55. R.0	550	576	≈ 6,67	≈ 4,48
14040.	14140. 60. R.0	600	626	≈ 6,98	≈ 4,58

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14040.30.300.0

e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series 18840 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	18840 [kg/m]
18840. 07. R.0*	75	101	≈ 3,20
18840. 10. R.0	100	126	≈ 3,49
18840. 12. R.0	125	151	≈ 3,85
18840. 15. R.0	150	176	≈ 4,28
18840. 17. R.0	175	201	≈ 4,54
18840. 20. R.0	200	226	≈ 4,85
18840. 25. R.0	250	276	≈ 5,58
18840. 27. R.0	275	301	≈ 5,85
18840. 30. R.0	300	326	≈ 6,24
18840. 35. R.0	350	376	≈ 6,99
18840. 40. R.0	400	426	≈ 7,94
18840. 46. R.0	462	489	≈ 8,40

Available bending radii *R* [mm] 150 | 175 | 200 | 250 | 300 | 400 | 500

*Removable lid only, no hinged option

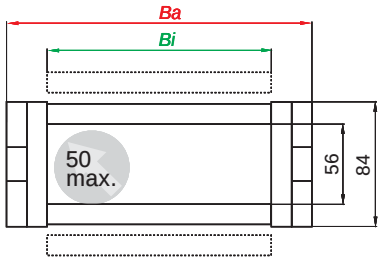
Supplement Part No. with required radius (*R*). Example: 18840.30.300.0

Order key for all types

14040. 30. 300. 0 e-chain®, crossbars every link)
14140. 30. 300. 0 e-chain®, crossbars every 2nd link)
18840. 30. 300. 0 e-tube, fully enclosed

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
14040.	14140.	15QZ.R.0	15QE.R.0	15Q. R.0	150
14040.	14140.	16QZ.R.0	16QE.R.0	16Q. R.0	162
14040.	14140.	17QZ.R.0	17QE.R.0	17Q. R.0	175
14040.	14140.	18QZ.R.0	18QE.R.0	18Q. R.0	187
14040.	14140.	20QZ.R.0	20QE.R.0	20Q. R.0	200
14040.	14140.	21QZ.R.0	21QE.R.0	21Q. R.0	212
14040.	14140.	22QZ.R.0	22QE.R.0	22Q. R.0	225
14040.	14140.	23QZ.R.0	23QE.R.0	23Q. R.0	237
14040.	14140.	25QZ.R.0	25QE.R.0	25Q. R.0	250
14040.	14140.	26QZ.R.0	26QE.R.0	26Q. R.0	262
14040.	14140.	27QZ.R.0	27QE.R.0	27Q. R.0	275
14040.	14140.	28QZ.R.0	28QE.R.0	28Q. R.0	287
14040.	14140.	30QZ.R.0	30QE.R.0	30Q. R.0	300
14040.	14140.	31QZ.R.0	31QE.R.0	31Q. R.0	312
14040.	14140.	32QZ.R.0	32QE.R.0	32Q. R.0	325
14040.	14140.	33QZ.R.0	33QE.R.0	33Q. R.0	337
14040.	14140.	35QZ.R.0	35QE.R.0	35Q. R.0	350
14040.	14140.	36QZ.R.0	36QE.R.0	36Q. R.0	362
14040.	14140.	37QZ.R.0	37QE.R.0	37Q. R.0	375
14040.	14140.	38QZ.R.0	38QE.R.0	38Q. R.0	387
14040.	14140.	40QZ.R.0	40QE.R.0	40Q. R.0	400

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
14040.	14140.	41QZ.R.0	41QE.R.0	41Q. R.0	412
14040.	14140.	42QZ.R.0	42QE.R.0	42Q. R.0	425
14040.	14140.	43QZ.R.0	43QE.R.0	43Q. R.0	437
14040.	14140.	45QZ.R.0	45QE.R.0	45Q. R.0	450
14040.	14140.	46QZ.R.0	46QE.R.0	46Q. R.0	462
14040.	14140.	47QZ.R.0	47QE.R.0	47Q. R.0	475
14040.	14140.	48QZ.R.0	48QE.R.0	48Q. R.0	487
14040.	14140.	50QZ.R.0	50QE.R.0	50Q. R.0	500
14040.	14140.	51QZ.R.0	51QE.R.0	51Q. R.0	512
14040.	14140.	52QZ.R.0	52QE.R.0	52Q. R.0	525
14040.	14140.	53QZ.R.0	53QE.R.0	53Q. R.0	537
14040.	14140.	55QZ.R.0	55QE.R.0	55Q. R.0	550
14040.	14140.	60QZ.R.0	60QE.R.0	60Q. R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

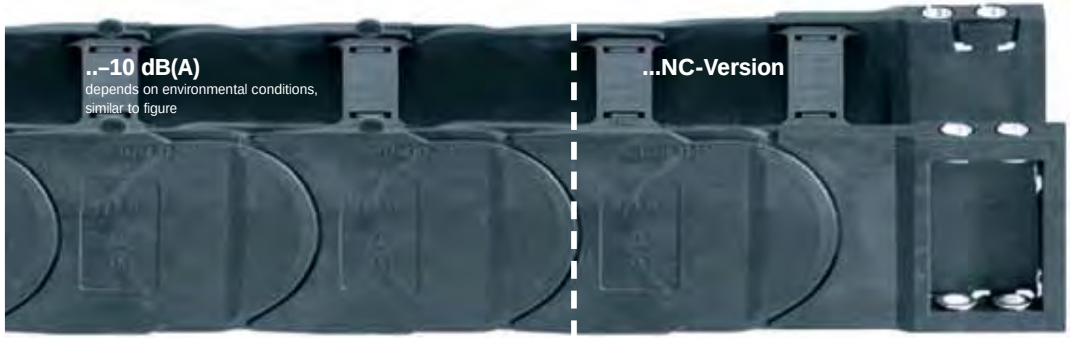
Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14040.30QZ.300.0

Configuration options and order keys, overview ▶page 782

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≈ –10 dB(A)

With pads 14040.1)	14140.1)	18840.1)	Bi [mm]
S14040.	S14140.	–	05.R.0	50
S14040.	S14140.	–	06.R.0	65
S14040.	S14140.	S18840.	07.R.0	75
S14040.	S14140.	–	08.R.0	87
S14040.	S14140.	S18840.	10.R.0	100
S14040.	S14140.	–	11.R.0	112
S14040.	S14140.	S18840.	12.R.0	125
S14040.	S14140.	–	13.R.0	137
S14040.	S14140.	S18840.	15.R.0	150
S14040.	S14140.	–	16.R.0	162
S14040.	S14140.	S18840.	17.R.0	175
S14040.	S14140.	–	18.R.0	187
S14040.	S14140.	S18840.	20.R.0	200
S14040.	S14140.	–	21.R.0	212
S14040.	S14140.	–	22.R.0	225
S14040.	S14140.	–	23.R.0	237
S14040.	S14140.	S18840.	25.R.0	250
S14040.	S14140.	–	26.R.0	262
S14040.	S14140.	S18840.	27.R.0	275
S14040.	S14140.	–	28.R.0	287
S14040.	S14140.	S18840.	30.R.0	300

With pads 14040.1)	14140.1)	18840.1)	Bi [mm]
S14040.	S14140.	–	31.R.0	312
S14040.	S14140.	–	32.R.0	325
S14040.	S14140.	S18840.	33.R.0	337
S14040.	S14140.	–	35.R.0	350
S14040.	S14140.	S18840.	36.R.0	362
S14040.	S14140.	–	37.R.0	375
S14040.	S14140.	S18840.	38.R.0	387
S14040.	S14140.	–	40.R.0	400
S14040.	S14140.	S18840.	41.R.0	412
S14040.	S14140.	–	42.R.0	425
S14040.	S14140.	S18840.	43.R.0	437
S14040.	S14140.	–	45.R.0	450
S14040.	S14140.	S18840.	46.R.0	462
S14040.	S14140.	–	47.R.0	475
S14040.	S14140.	–	48.R.0	487
S14040.	S14140.	–	50.R.0	500
S14040.	S14140.	–	51.R.0	512
S14040.	S14140.	–	52.R.0	525
S14040.	S14140.	–	53.R.0	537
S14040.	S14140.	–	55.R.0	550
S14040.	S14140.	–	60.R.0	600

NC-Version | Without pretension

NC-Version 14040.1)	14140.1)	18840.1)	Bi [mm]
14040.	14140.	–	05. R.0.NC	50
14040.	14140.	–	06. R.0.NC	65
14040.	14140.	18840.	07. R.0.NC	75
14040.	14140.	–	08. R.0.NC	87
14040.	14140.	18840.	10. R.0.NC	100
14040.	14140.	–	11. R.0.NC	112
14040.	14140.	18840.	12. R.0.NC	125
14040.	14140.	–	13. R.0.NC	137
14040.	14140.	18840.	15. R.0.NC	150
14040.	14140.	–	16. R.0.NC	162
14040.	14140.	18840.	17. R.0.NC	175
14040.	14140.	–	18. R.0.NC	187
14040.	14140.	18840.	20. R.0.NC	200
14040.	14140.	–	21. R.0.NC	212
14040.	14140.	–	22. R.0.NC	225
14040.	14140.	–	23. R.0.NC	237
14040.	14140.	18840.	25. R.0.NC	250
14040.	14140.	–	26. R.0.NC	262
14040.	14140.	18840.	27. R.0.NC	275
14040.	14140.	–	28. R.0.NC	287
14040.	14140.	18840.	30. R.0.NC	300

NC-Version 14040.1)	14140.1)	18840.1)	Bi [mm]
14040.	14140.	–	31. R.0.NC	312
14040.	14140.	–	32. R.0.NC	325
14040.	14140.	18840.	33. R.0.NC	337
14040.	14140.	–	35. R.0.NC	350
14040.	14140.	18840.	36. R.0.NC	362
14040.	14140.	–	37. R.0.NC	375
14040.	14140.	18840.	38. R.0.NC	387
14040.	14140.	–	40. R.0.NC	400
14040.	14140.	18840.	41. R.0.NC	412
14040.	14140.	–	42. R.0.NC	425
14040.	14140.	18840.	43. R.0.NC	437
14040.	14140.	–	45. R.0.NC	450
14040.	14140.	18840.	46. R.0.NC	462
14040.	14140.	–	47. R.0.NC	475
14040.	14140.	–	48. R.0.NC	487
14040.	14140.	–	50. R.0.NC	500
14040.	14140.	18840.	51. R.0.NC	512
14040.	14140.	–	52. R.0.NC	525
14040.	14140.	18840.	53. R.0.NC	537
14040.	14140.	–	55. R.0.NC	550
14040.	14140.	18840.	60. R.0.NC	600

Available bending radii *R* [mm] 135* | 150 | 175 | 200 | 250 | 300 | 400 | 500 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: S14040.30.300.0 or 14040.30.300.0.NC

1) 14040 = e-chain® with crossbars every link 14140 = e-chain® with crossbars every 2nd link 18840 = e-tube fully enclosed

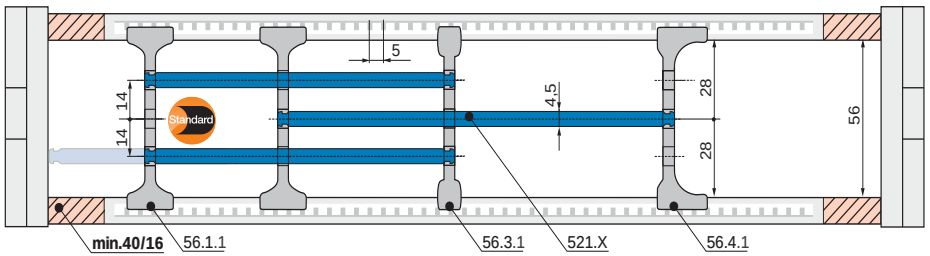
Configuration options and order keys, overview ▶page 782

Noise dampening and NC-Version - Delivery time* 3-5 work days

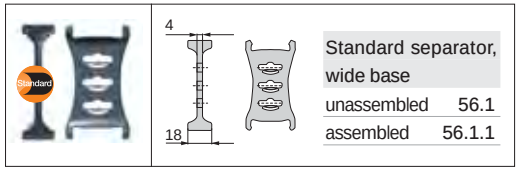
*Delivery time means time until shipping of goods (after technical release)

E4/light | 14040·14140·18840 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



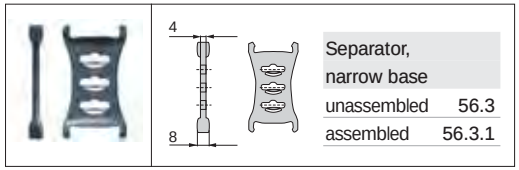
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	56.1
assembled	56.1.1

Standard - for all applications

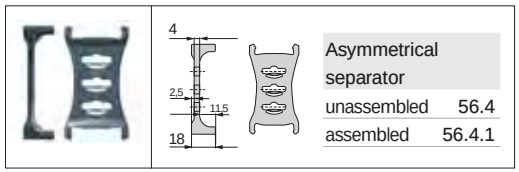
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	56.3
assembled	56.3.1

For many thin cables

Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	56.4
assembled	56.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.





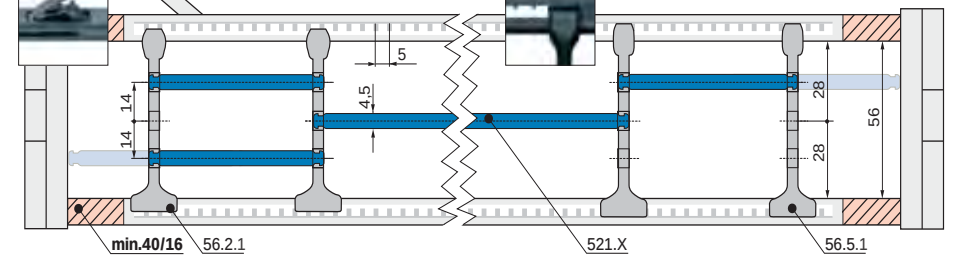
① Standard separator, wide base - Part No. 56.1 ③ Separator, narrow base - Part No. 56.3 ⑤ Notch separator - Part No. 56.5
② Separator for QuickLock crossbar - Part No. 56.2 ④ Separator, asymmetrical - Part No. 56.4 ⑥ Full-width self, lockable - Part No. 520.X

Interior separation single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

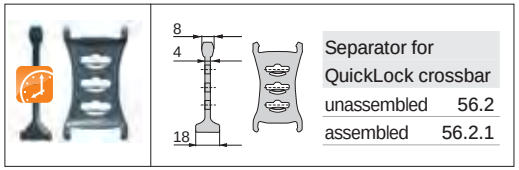
E4/light | 14040·14140·18840 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes

14040
14140
18840



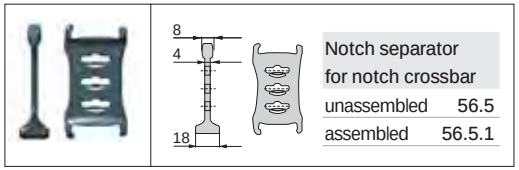
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	56.2
assembled	56.2.1

For even faster installation

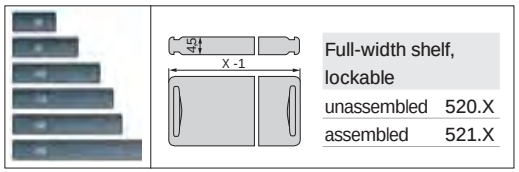
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	56.5
assembled	56.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

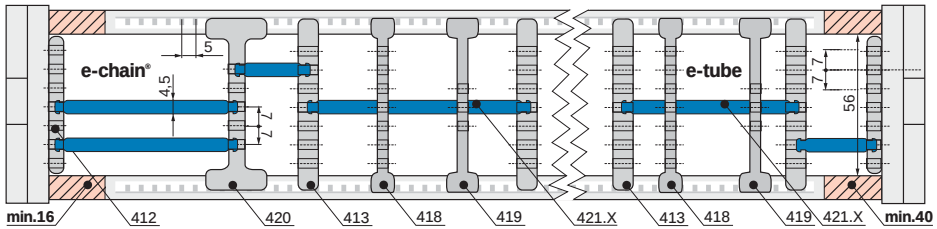
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



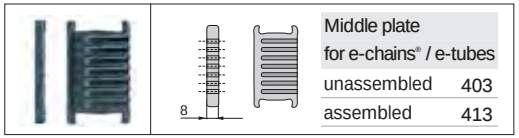
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	175	520.175	521.175	362	520.362	520.362
065	520.065	521.065	200	520.200	521.200	375	520.375	520.375
075	520.075	521.075	225	520.225	521.225	387	520.387	520.387
100	520.100	521.100	250	520.250	521.250	450	520.450	521.450
125	520.125	521.125	300	520.300	521.300			
150	520.150	521.150	350	520.350	521.350			

Option | Shelves for e-chains® and e-tubes



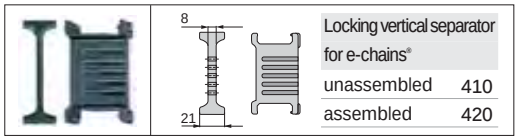
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	403
assembled	413

Middle plate 403

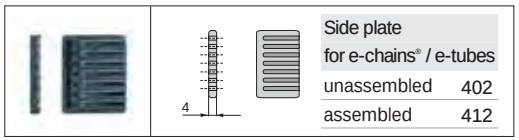
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 7 different heights (in 7 mm increments).



Locking vertical separator for e-chains®	
unassembled	410
assembled	420

Locking vertical separator 410 (e-chains® only)

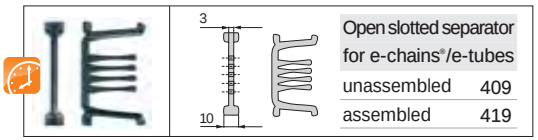
Works like middle plate, for applications exposed to very high humidity (> 85%).



Side plate for e-chains® / e-tubes	
unassembled	402
assembled	412

Side plate 402

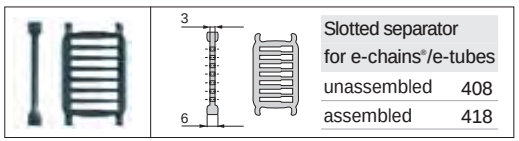
Works like middle plate.
Allows modular shelving close to the side links.



Open slotted separator for e-chains®/e-tubes	
unassembled	409
assembled	419

Open, slotted separator 409 (unilateral open)

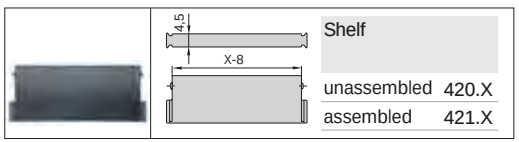
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Slotted separator for e-chains®/e-tubes	
unassembled	408
assembled	418

Slotted separator 408

For very fine subdivisions. However, they cannot be retro-fitted into an existing separation system without dismantling the interior separators first.



Shelf	
unassembled	420.X
assembled	421.X

Shelf 420.X

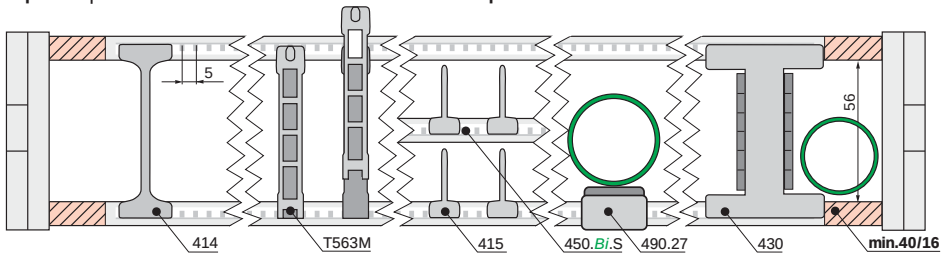
For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments). (not in combination with 404).

E4/light | 14040·14140·18840 | Interior separation | Options

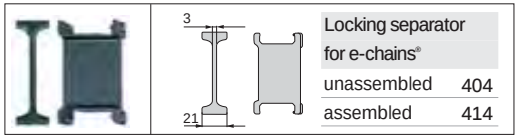
Previous interior separation All elements can still be ordered ► www.igus.eu/eu/14040

14040
14140
18840

Option | Additional elements for interior separation



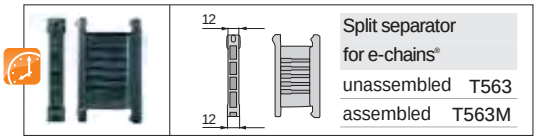
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Locking separator for e-chains®	
unassembled	404
assembled	414

Locking separator 404 (e-chains® only)

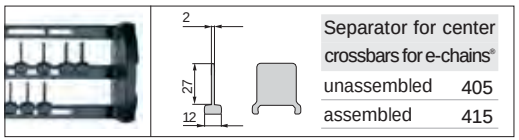
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Split separator for e-chains®	
unassembled	T563
assembled	T563M

Split separator T563 (e-chains® only)

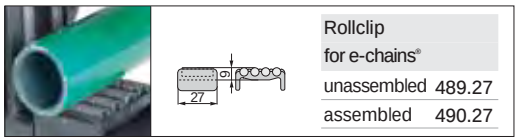
Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.



Separator for center crossbars for e-chains®	
unassembled	405
assembled	415

Separator for center crossbars (e-chains® only)

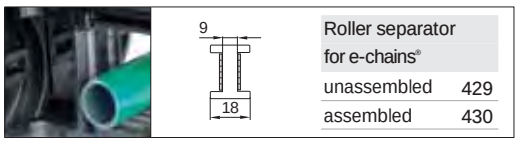
For applications with a large number of thin cables. The separator for center crossbars Part No. 450.*Bi*.S offers the option of subdividing the e-chain® independently into upper and lower halves.



Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

Rollclip

Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.



Roller separator for e-chains®	
unassembled	429
assembled	430

Roller separator

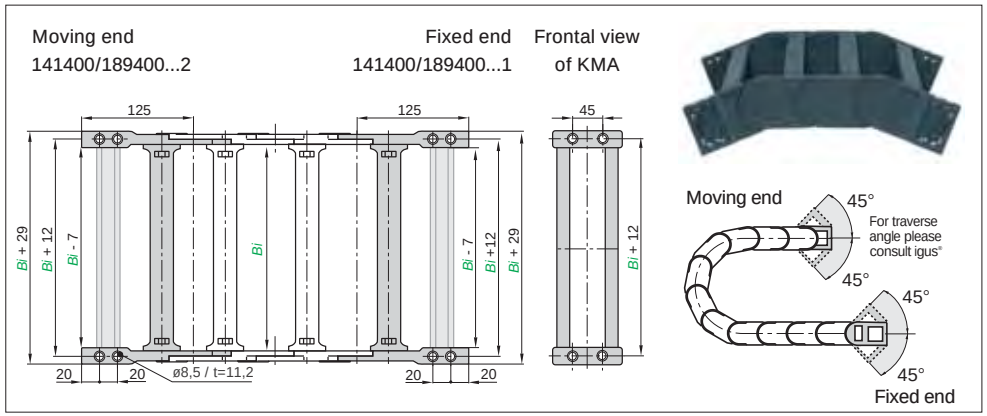
Performs a similar function to the Rollclip, but doubles as a separator. For rigid cables and hoses.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

14040·14140·18840 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)			Bi [mm]
05.	141400.	–	05.12.C	50
06.	141400.	–	06.12.C	65
07.	141400.	189400.	07.12.C	75
08.	141400.	–	08.12.C	87
10.	141400.	189400.	10.12.C	100
11.	141400.	–	11.12.C	112
12.	141400.	189400	12.12.C	125
13.	141400.	–	13.12.C	137
15.	141400.	189400	15.12.C	150
16.	141400.	–	16.12.C	162
17.	141400.	189400	17.12.C	175
18.	141400.	–	18.12.C	187
20.	141400.	189400	20.12.C	200
21.	141400.	–	21.12.C	212
22.	141400.	–	22.12.C	225
23.	141400.	–	23.12.C	237
25.	141400.	189400	25.12.C	250
26.	141400.	–	26.12.C	262
27.	141400.	189400	27.12.C	275
28.	141400.	–	28.12.C	287
30.	141400.	189400	30.12.C	300

Width index	Part No. full set **pivoting** (+ C-profile option)			Bi [mm]
31.	141400.	–	31.12.C	312
32.	141400.	–	32.12.C	325
33.	141400.	–	33.12.C	337
35.	141400.	189400	35.12.C	350
36.	141400.	–	36.12.C	362
37.	141400.	–	37.12.C	375
38.	141400.	–	38.12.C	387
40.	141400.	189400	40.12.C	400
41.	141400.	–	41.12.C	412
42.	141400.	–	42.12.C	425
43.	141400.	–	43.12.C	437
45.	141400.	–	45.12.C	450
46.	141400.	189400	46.12.C	462
47.	141400.	–	47.12.C	475
48.	141400.	–	48.12.C	487
50.	141400.	–	50.12.C	500
51.	141400.	–	51.12.C	512
52.	141400.	–	52.12.C	525
53.	141400.	–	53.12.C	537
55.	141400.	–	55.12.C	550
60.	141400.	–	60.12.C	600

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

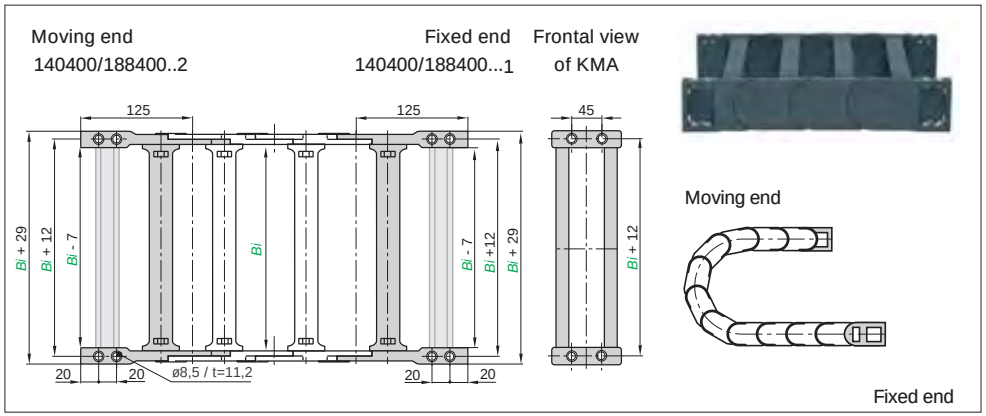
Part No. structure (pivoting)
141400.30.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
141400.30.2.C
Mounting bracket Fixed end
141400.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

14040·14140·18840 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)			Bi [mm]
05.	140400.	–	05.12.C	50
06.	140400.	–	06.12.C	65
07.	140400.	188400.	07.12.C	75
08.	140400.	–	08.12.C	87
10.	140400.	188400.	10.12.C	100
11.	140400.	–	11.12.C	112
12.	140400.	188400	12.12.C	125
13.	140400.	–	13.12.C	137
15.	140400.	188400	15.12.C	150
16.	140400.	–	16.12.C	162
17.	140400.	188400	17.12.C	175
18.	140400.	–	18.12.C	187
20.	140400.	188400	20.12.C	200
21.	140400.	–	21.12.C	212
22.	140400.	–	22.12.C	225
23.	140400.	–	23.12.C	237
25.	140400.	188400	25.12.C	250
26.	140400.	–	26.12.C	262
27.	140400.	188400	27.12.C	275
28.	140400.	–	28.12.C	287
30.	140400.	188400	30.12.C	300

Width index	Part No. full set **locking** (+ C-profile option)			Bi [mm]
31.	140400.	–	31.12.C	312
32.	140400.	–	32.12.C	325
33.	140400.	–	33.12.C	337
35.	140400.	188400	35.12.C	350
36.	140400.	–	36.12.C	362
37.	140400.	–	37.12.C	375
38.	140400.	–	38.12.C	387
40.	140400.	188400	40.12.C	400
41.	140400.	–	41.12.C	412
42.	140400.	–	42.12.C	425
43.	140400.	–	43.12.C	437
45.	140400.	–	45.12.C	450
46.	140400.	188400	46.12.C	462
47.	140400.	–	47.12.C	475
48.	140400.	–	48.12.C	487
50.	140400.	–	50.12.C	500
51.	140400.	–	51.12.C	512
52.	140400.	–	52.12.C	525
53.	140400.	–	53.12.C	537
55.	140400.	–	55.12.C	550
60.	140400.	–	60.12.C	600

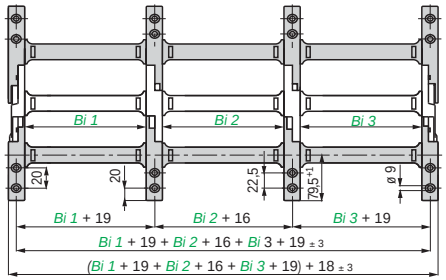
- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)
140400.30.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
140400.30.2.C
Mounting bracket Fixed end
140400.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



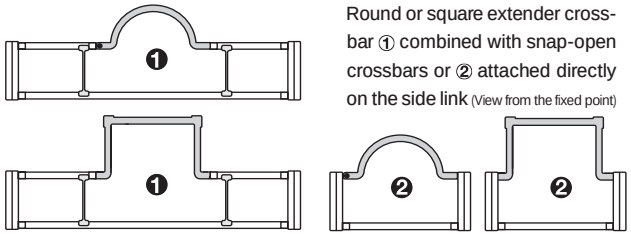


Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
14040.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
14040.10 / 20 / 10.200.0
Extension link - single-part order
422.*R*. (please indicate radius)





Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 245 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	180	□ square	yes	no
450.35.D250	195	□ square	yes	no
450.40.D300	245	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	180	□ square	no	yes
450.30.HD250	195	□ square	no	yes

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
14040.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
14040.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
14040.17RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
14040.17RDZ115.*R*.0

E4/light | 14040·14140·18840 | More options

14040
14140
18840





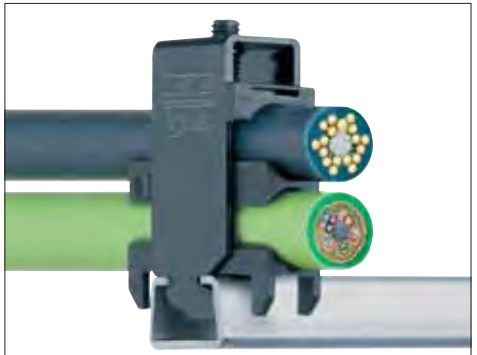
E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 150)
Locking clip, openable along inner radius "Z":
14040.15.B12.200Z.*R*.0
Locking clip, openable along outer radius "E":
14040.15.B12.200E.*R*.0

E4/light | 14040·14140·18840 | e-chain® accessories



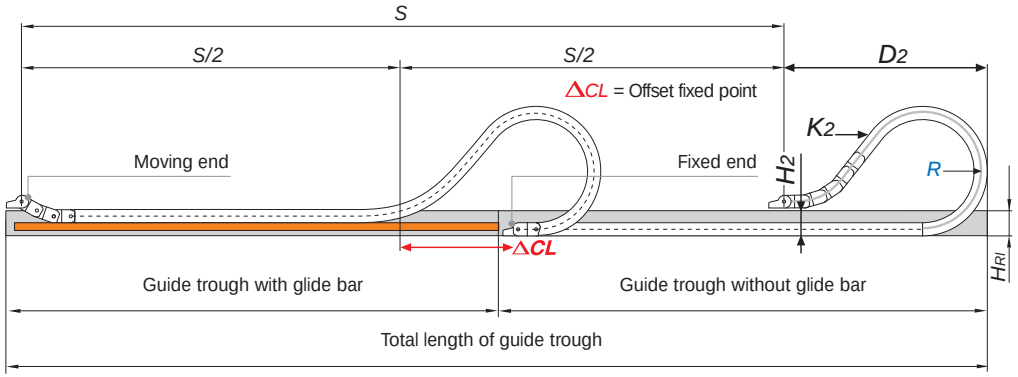
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 12 m to max. 150 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 8 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K_2$

R	135*	150	175	200	250	300	400	500
H_2	266	266	266	266	266	266	266	266
$D_2{}^{+25}$	390	450	530	710	920	1120	1530	1830
K_2	728	819	1001	1274	1638	1911	2548	3185
ΔCL	124	159	209	359	509	659	959	1159

*Radius not available for e-tubes

More solutions | For long travel applications

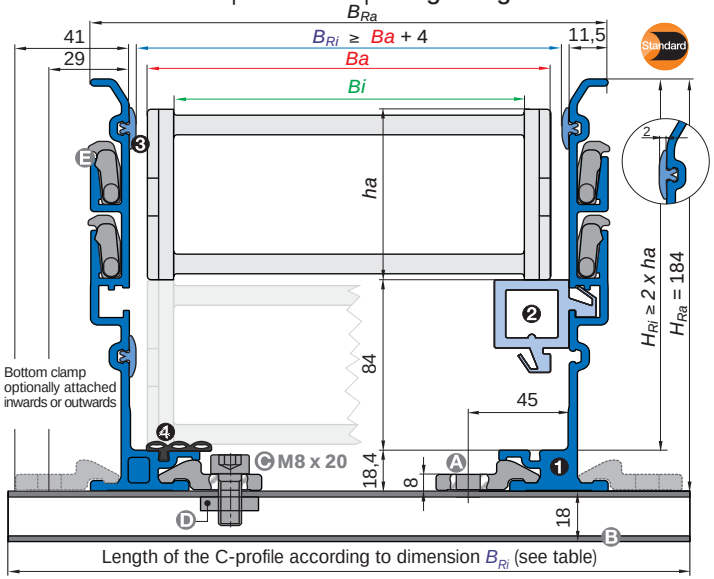
System P4.56 - profile-rol e-chain®, low-noise	Travels up to 800 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 4040R - rolling instead of gliding	Travels up to 800 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height $S/2$ = Half length of travel

Aluminum SuperTrough | Basic Version

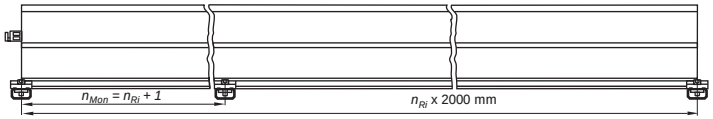
Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 14040.10.200.0 with B_{Ri} = 130

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 974.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 974.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.200
Module for the fixed end	
Order text: 1 set	Part No. 974.81.5
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 974.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Dutyn" version for heavy machinery ▶ from page 1204

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	upon request	960.50.200
.06	95	upon request	960.50.225
.07	105	upon request	960.50.225
.08	117	960.50.175	960.50.225
.10	130	960.50.200	960.50.250
.11	143	960.50.200	960.50.275
.12	155	960.50.225	960.50.275
.13	168	960.50.225	960.50.300
.15	180	960.50.250	960.50.300
.16	193	960.50.250	960.50.325
.17	205	960.50.275	960.50.325
.18	218	960.50.275	960.50.350
.20	230	960.50.300	960.50.350
.21	243	960.50.300	960.50.375
.22	255	960.50.325	960.50.375
.23	268	960.50.325	960.50.400
.25	280	960.50.350	960.50.400
.26	293	960.50.350	960.50.425
.27	305	960.50.375	960.50.425
.28	318	960.50.375	960.50.450
.30	330	960.50.400	960.50.450
.31	343	960.50.400	960.50.475
.32	355	960.50.425	960.50.475
.33	368	960.50.425	960.50.500
.35	380	960.50.450	960.50.500
.36	393	960.50.450	960.50.525
.37	405	960.50.475	960.50.525
.38	418	960.50.475	960.50.550
.40	430	960.50.500	960.50.550
.41	443	960.50.500	960.50.575
.42	455	960.50.525	960.50.575
.43	468	960.50.525	960.50.600
.45	480	960.50.550	960.50.600
.46	493	960.50.550	960.50.625
.47	505	960.50.575	960.50.625
.48	518	960.50.575	960.50.650
.50	530	960.50.600	960.50.650
.51	543	960.50.600	960.50.675
.52	555	960.50.625	960.50.675
.53	568	960.50.625	960.50.700
.55	580	960.50.650	960.50.700
.60	630	960.50.700	960.50.750

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



"Light design", large inner height

When to use Series 14240·14340:

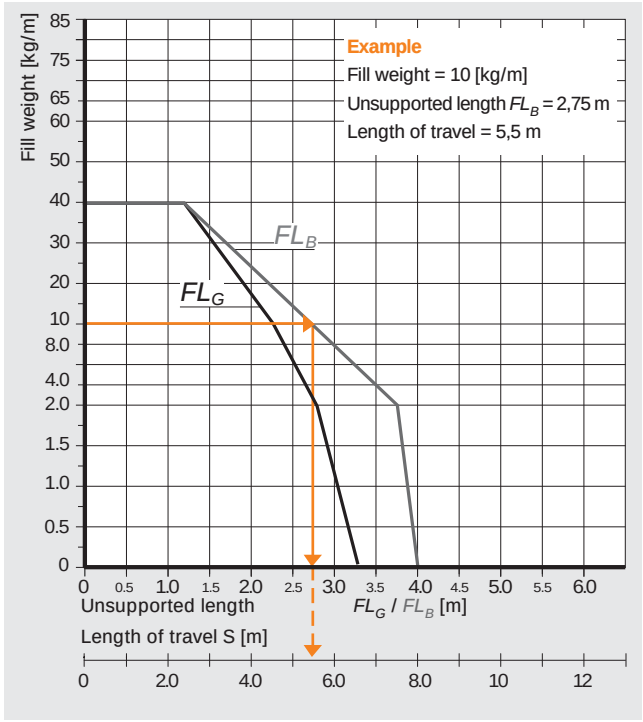
- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 62 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,0 m and fill weights up to 40 kg/m
- For long travels up to 150 m
- Also suitable for side-mounted, vertical standing or hanging applications

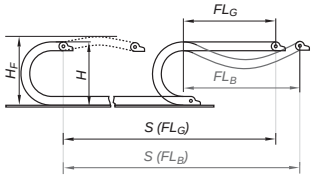
When to use a different igus® Series:

- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.62, page 966
- If larger unsupported lengths are required in side-mounted applications
  ▶ Series E4.56, page 678
- If increased unsupported lengths and longer travels are required
  ▶ Series E4.56, page 678
- If high fill weights and/or stiff cables and hoses are used
  ▶ Series 14040, page 784
- If chip protection is necessary
  ▶ Series 18840, page 784

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/14240



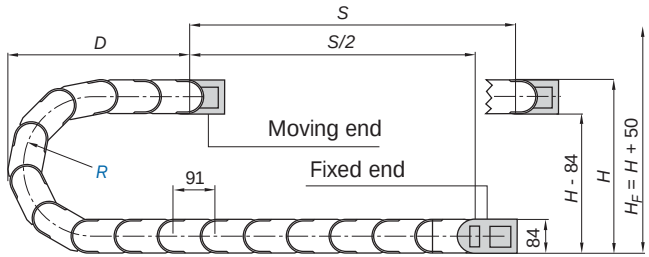


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 150 m.
More information ▶ page 814



Technical Data

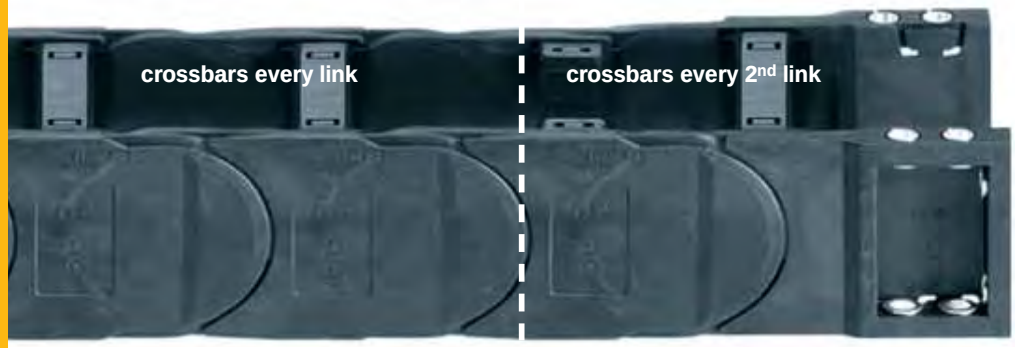
Speed, material, temperature and flammability class ▶ page 780

Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$

R	135	150	175	200	250	300	400	500
H^{0}_{+25}	354	384	434	484	584	684	884	1084
D	314	329	354	379	429	479	579	679
K	610	655	735	815	970	1125	1440	1755

The required clearance height: $H_F = H + 50$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series 14240 crossbars every link | Series 14340 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	14240 [kg/m]	14340 [kg/m]
14240.	14340. 05. R.0	50	76	≈ 2,37	≈ 2,32
14240.	14340. 06. R.0	68	94	≈ 2,40	≈ 2,33
14240.	14340. 07. R.0	75	101	≈ 2,42	≈ 2,34
14240.	14340. 087. R.0	87	114	≈ 2,47	≈ 2,36
14240.	14340. 097. R.0	97	123	≈ 2,51	≈ 2,38
14240.	14340. 10. R.0	100	126	≈ 2,52	≈ 2,39
14240.	14340. 11. R.0	108	134	≈ 2,55	≈ 2,40
14240.	14340. 112. R.0	112	139	≈ 2,55	≈ 2,41
14240.	14340. 12. R.0	125	151	≈ 2,62	≈ 2,44
14240.	14340. 137. R.0	137	164	≈ 2,66	≈ 2,46
14240.	14340. 15. R.0	150	176	≈ 2,72	≈ 2,49
14240.	14340. 162. R.0	162	189	≈ 2,73	≈ 2,49
14240.	14340. 17. R.0	168	194	≈ 2,79	≈ 2,52
14240.	14340. 18. R.0	175	201	≈ 2,82	≈ 2,53
14240.	14340. 187. R.0	187	214	≈ 2,84	≈ 2,55
14240.	14340. 20. R.0	200	226	≈ 2,89	≈ 2,58
14240.	14340. 212. R.0	212	239	≈ 2,95	≈ 2,60
14240.	14340. 23. R.0	225	251	≈ 3,01	≈ 2,63
14240.	14340. 237. R.0	237	264	≈ 3,04	≈ 2,65
14240.	14340. 25. R.0	250	276	≈ 3,10	≈ 2,68
14240.	14340. 262. R.0	262	289	≈ 3,11	≈ 2,69
14240.	14340. 28. R.0	275	301	≈ 3,19	≈ 2,72
14240.	14340. 29. R.0	287	314	≈ 3,20	≈ 2,73
14240.	14340. 30. R.0	300	326	≈ 3,30	≈ 2,78
14240.	14340. 312 R.0	312	339	≈ 3,31	≈ 2,79
14240.	14340. 325. R.0	325	351	≈ 3,37	≈ 2,81
14240.	14340. 337. R.0	337	364	≈ 3,40	≈ 2,83
14240.	14340. 350. R.0	350	376	≈ 3,56	≈ 2,91
14240.	14340. 362 R.0	362	389	≈ 3,61	≈ 2,93
14240.	14340. 375. R.0	375	401	≈ 3,64	≈ 2,95
14240.	14340. 387. R.0	387	414	≈ 3,69	≈ 2,97
14240.	14340. 400. R.0	400	426	≈ 3,73	≈ 2,99

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14240.30.300.0

e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



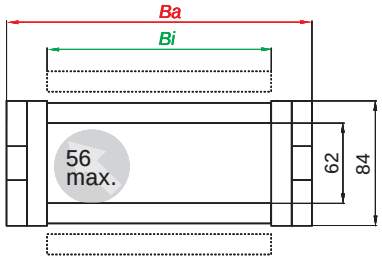
With the space-saving igus® E4 Polymer e-chains® the overall dimension for the installation of this crane system was considerably reduced

Order key for all types

14240. 30. 300. 0 e-chain®, crossbars every link)
14340. 30. 300. 0 e-chain®, crossbars every 2nd link)

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning





QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
14240. 14340.	10	QZ.R.0	10 QE.R.0	10 Q.R.0	100
14240. 14340.	11	QZ.R.0	11 QE.R.0	11 Q.R.0	108
14240. 14340.	112	QZ.R.0	112 QE.R.0	112 Q.R.0	112
14240. 14340.	12	QZ.R.0	12 QE.R.0	12 Q.R.0	125
14240. 14340.	137	QZ.R.0	137 QE.R.0	137 Q.R.0	137
14240. 14340.	15	QZ.R.0	15 QE.R.0	15 Q.R.0	150
14240. 14340.	162	QZ.R.0	162 QE.R.0	162 Q.R.0	162
14240. 14340.	17	QZ.R.0	17 QE.R.0	17 Q.R.0	168
14240. 14340.	18	QZ.R.0	18 QE.R.0	18 Q.R.0	175
14240. 14340.	187	QZ.R.0	187 QE.R.0	187 Q.R.0	187
14240. 14340.	20	QZ.R.0	20 QE.R.0	20 Q.R.0	200
14240. 14340.	212	QZ.R.0	212 QE.R.0	212 Q.R.0	212
14240. 14340.	23	QZ.R.0	23 QE.R.0	23 Q.R.0	225
14240. 14340.	237	QZ.R.0	237 QE.R.0	237 Q.R.0	237
14240. 14340.	25	QZ.R.0	25 QE.R.0	25 Q.R.0	250
14240. 14340.	262	QZ.R.0	262 QE.R.0	262 Q.R.0	262

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
14240. 14340.	28	QZ.R.0	28 QE.R.0	28 Q.R.0	275
14240. 14340.	29	QZ.R.0	29 QE.R.0	29 Q.R.0	287
14240. 14340.	30	QZ.R.0	30 QE.R.0	30 Q.R.0	300
14240. 14340.	312	QZ.R.0	312 QE.R.0	312 Q.R.0	312
14240. 14340.	325	QZ.R.0	325 QE.R.0	325 Q.R.0	325
14240. 14340.	337	QZ.R.0	337 QE.R.0	337 Q.R.0	337
14240. 14340.	350	QZ.R.0	350 QE.R.0	350 Q.R.0	350
14240. 14340.	362	QZ.R.0	362 QE.R.0	362 Q.R.0	362
14240. 14340.	375	QZ.R.0	375 QE.R.0	375 Q.R.0	375
14240. 14340.	387	QZ.R.0	387 QE.R.0	387 Q.R.0	387
14240. 14340.	400	QZ.R.0	400 QE.R.0	400 Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: 14240.30QZ.300.0

Configuration options and order keys, overview ▶ page 782

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)





Noise dampening | ≈ –10 dB(A)

With pads 14240[1] | 14340[1]	Bi [mm]
S14240. S14340. 05. R.0	50
S14240. S14340. 06. R.0	68
S14240. S14340. 07. R.0	75
S14240. S14340. 087.R.0	87
S14240. S14340. 097.R.0	97
S14240. S14340. 10. R.0	100
S14240. S14340. 11. R.0	108
S14240. S14340. 112.R.0	112
S14240. S14340. 12. R.0	125
S14240. S14340. 137.R.0	137
S14240. S14340. 15. R.0	150
S14240. S14340. 162.R.0	162
S14240. S14340. 17. R.0	168
S14240. S14340. 18. R.0	175
S14240. S14340. 187.R.0	187
S14240. S14340. 20. R.0	200

With pads 14240[1] | 14340[1]	Bi [mm]
S14240. S14340. 212.R.0	212
S14240. S14340. 23. R.0	225
S14240. S14340. 237.R.0	237
S14240. S14340. 25. R.0	250
S14240. S14340. 262.R.0	262
S14240. S14340. 28. R.0	275
S14240. S14340. 29. R.0	287
S14240. S14340. 30. R.0	300
S14240. S14340. 312 R.0	312
S14240. S14340. 325.R.0	325
S14240. S14340. 337.R.0	337
S14240. S14340. 350.R.0	350
S14240. S14340. 362 R.0	362
S14240. S14340. 375.R.0	375
S14240. S14340. 387.R.0	387
S14240. S14340. 400.R.0	400

NC-Version | Without pretension

NC-Version 14240[1] | 14340[1]	Bi [mm]
14240. 14340. 05. R.0.NC	50
14240. 14340. 06. R.0.NC	68
14240. 14340. 07. R.0.NC	75
14240. 14340. 087.R.0.NC	87
14240. 14340. 097.R.0.NC	97
14240. 14340. 10. R.0.NC	100
14240. 14340. 11. R.0.NC	108
14240. 14340. 112.R.0.NC	112
14240. 14340. 12. R.0.NC	125
14240. 14340. 137.R.0.NC	137
14240. 14340. 15. R.0.NC	150
14240. 14340. 162.R.0.NC	162
14240. 14340. 17. R.0.NC	168
14240. 14340. 18. R.0.NC	175
14240. 14340. 187.R.0.NC	187
14240. 14340. 20. R.0.NC	200

NC-Version 14240[1] | 14340[1]	Bi [mm]
14240. 14340. 212.R.0.NC	212
14240. 14340. 23. R.0.NC	225
14240. 14340. 237.R.0.NC	237
14240. 14340. 25. R.0.NC	250
14240. 14340. 262.R.0.NC	262
14240. 14340. 28. R.0.NC	275
14240. 14340. 29. R.0.NC	287
14240. 14340. 30. R.0.NC	300
14240. 14340. 312 R.0.NC	312
14240. 14340. 325.R.0.NC	325
14240. 14340. 337.R.0.NC	337
14240. 14340. 350.R.0.NC	350
14240. 14340. 362 R.0.NC	362
14240. 14340. 375.R.0.NC	375
14240. 14340. 387.R.0.NC	387
14240. 14340. 400.R.0.NC	400

Available bending radii *R* [mm] 135 | 150 | 175 | 200 | 250 | 300 | 400 | 500

Supplement Part No. with required radius (*R*). Example: S14240.30.300.0 or 14240.30.300.0.NC

1) 14240 = e-chain® with crossbars every link 14340 = e-chain® with crossbars every 2nd link

Configuration options and order keys, overview ▶ page 782

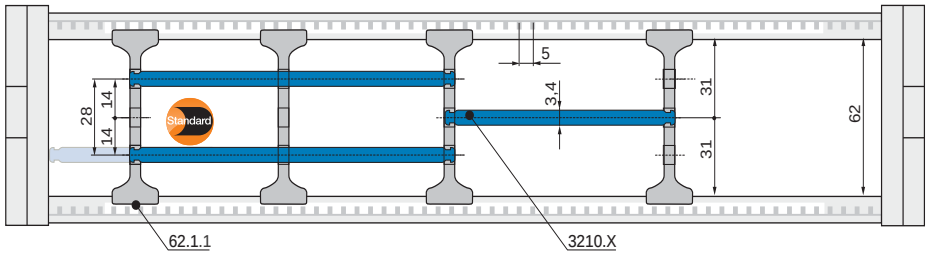
Noise dampening and NC-Version - Delivery time* 3-5 work days

*Delivery time means time until shipping of goods (after technical release)

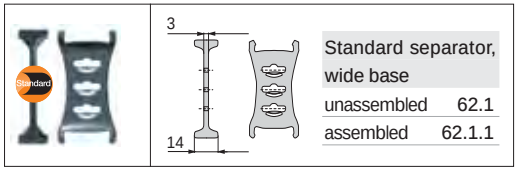
ESD/ATEX permanently conductive e-chains® - 14240 several widths with delivery from stock: Inner widths 50 - 200 mm, radii *R* 150 - 250 mm. Full ESD product range ▶ www.igus.eu/ESD

E4/light | Series 14240·14340 | Interior separation | Standard

New generation interior separation - for e-chains®



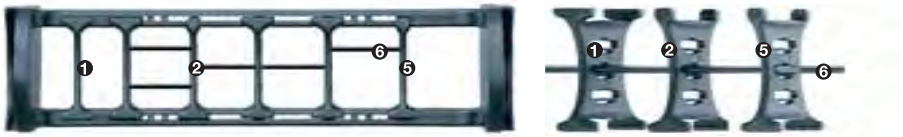
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	62.1
assembled	62.1.1

Standard - for all applications

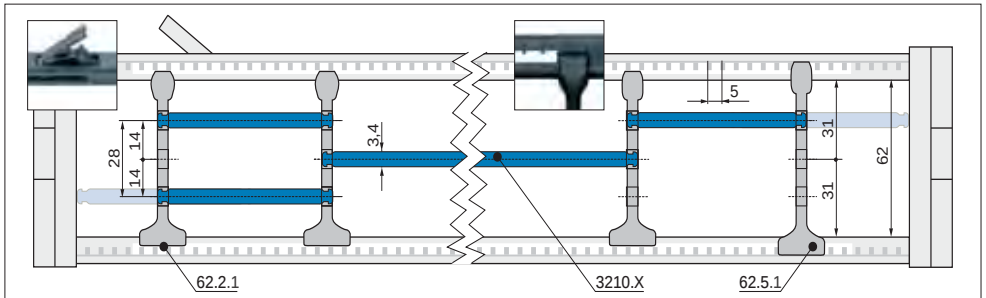
Separator with a wide base for maximum locking strength and safe standing in e-chains®.



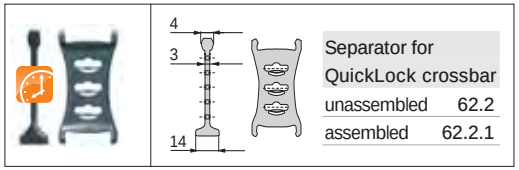
① Standard separator, wide base - Part No. 62.1 ⑤ Notch separator - Part No. 62.5
② Separator for QuickLock crossbar - Part No. 62.2 ⑥ Full-width self, lockable - Part No. 3200.X

E4/light | Series 14240·14340 | Interior separation | Standard

New generation interior separation - for e-chains®



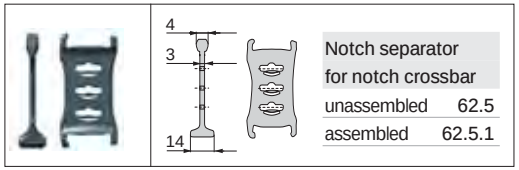
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	62.2
assembled	62.2.1

For even faster installation

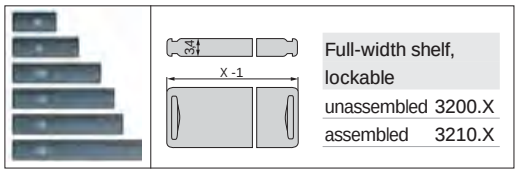
Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Notch separator for notch crossbar	
unassembled	62.5
assembled	62.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

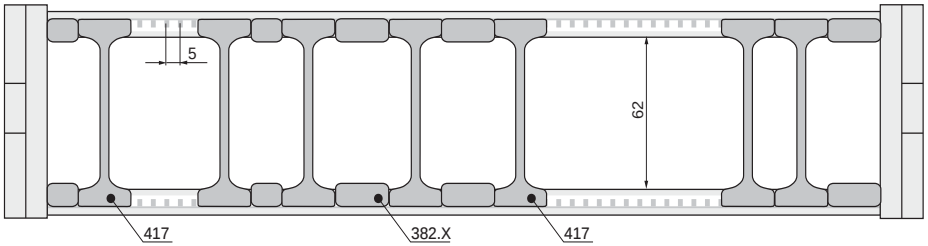
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



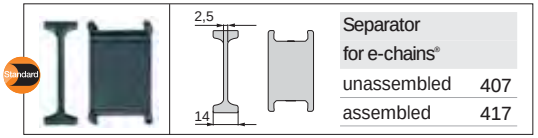
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

Option 1 | Separators and spacers* (*side-mounted applications)



Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-chains®	
unassembled	407
assembled	417

Spacer* for e-chains®	
unassembled	381.XX
assembled	382.XX

Separator 407

For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.

Spacer* 381.XX

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20 mm).

Shelves

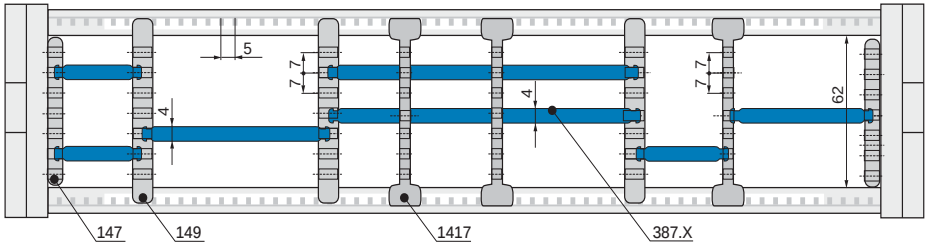
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	050	386.50	387.50	108	386.108	387.108
023	386.23	387.23	054	386.54	387.54	125	386.125	387.125
025	386.25	387.25	062	386.62	387.62	150	386.150	387.150
028	386.28	387.28	075	386.75	387.75	175	386.175	387.175
033	386.33	387.33	087	386.87	387.87	200	386.200	387.200
043	386.43	387.43	100	386.100	387.100	208	386.208	387.208

E4/light | Series 14240·14340 | Interior separation | Options

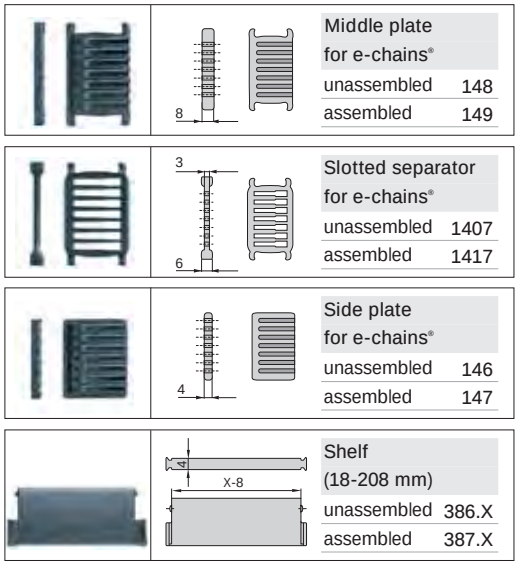
Previous interior separation All elements can still be ordered ► www.igus.eu/eu/14540

14240
14340

Option 2 | Shelves



Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains®	
unassembled	148
assembled	149

Slotted separator for e-chains®	
unassembled	1407
assembled	1417

Side plate for e-chains®	
unassembled	146
assembled	147

Shelf (18-208 mm)	
unassembled	386.X
assembled	387.X

Middle plate 148

Middle plates form the basic pattern of a shelf system. Shelves 386.X (table left page) can be arranged at 7 different heights (in 7 mm increments).

Slotted separator 1407

For very fine subdivisions. However, they cannot be retro-fitted into an existing separation system without dismantling the interior separators first.

Side plate 146

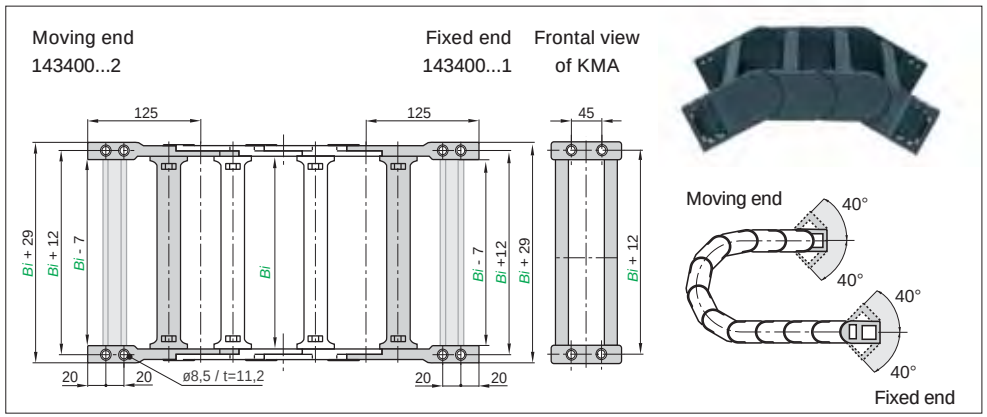
Works like middle plate.
Allows modular shelving close to the side links.

Shelf 386.X

For horizontal separation. Shelves of various widths can be arranged at 7 different heights (in 7 mm increments) .

E4/light | 14240·14340 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05.	143400. 05. 12.C	50	212.	143400. 212. 12.C	212
06.	143400. 06. 12.C	68	23.	143400. 23. 12.C	225
07.	143400. 07. 12.C	75	237.	143400. 237. 12.C	237
087.	143400. 087. 12.C	87	25.	143400. 25. 12.C	250
097.	143400. 097. 12.C	97	262.	143400. 262. 12.C	262
10.	143400. 10. 12.C	100	28.	143400. 28. 12.C	275
11.	143400. 11. 12.C	108	29.	143400. 29. 12.C	287
112.	143400. 112. 12.C	112	30.	143400. 30. 12.C	300
12.	143400. 12. 12.C	125	312	143400. 312 12.C	312
137.	143400. 137. 12.C	137	325.	143400. 325. 12.C	325
15.	143400. 15. 12.C	150	337.	143400. 337. 12.C	337
162.	143400. 162. 12.C	162	350.	143400. 350. 12.C	350
17.	143400. 17. 12.C	168	362	143400. 362 12.C	362
18.	143400. 18. 12.C	175	375.	143400. 375. 12.C	375
187.	143400. 187. 12.C	187	387.	143400. 387. 12.C	387
20.	143400. 20. 12.C	200	400.	143400. 400. 12.C	400

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

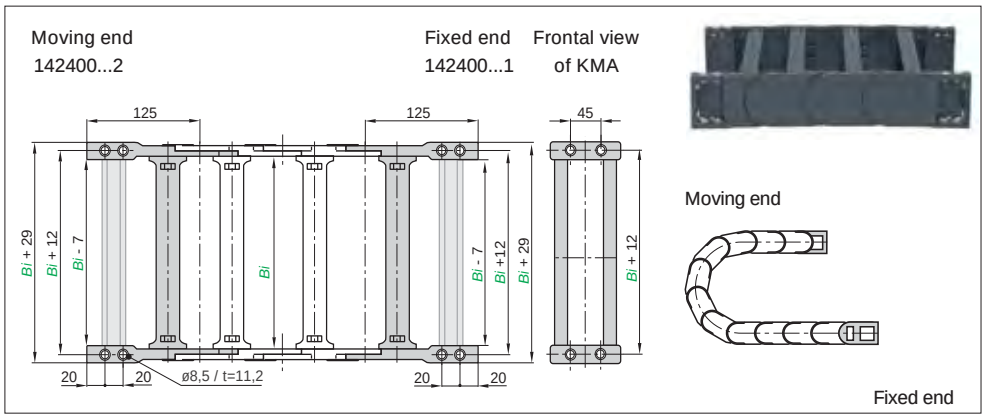
Part No. structure (pivoting)
143400.30.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
143400.30.2.C
Mounting bracket Fixed end
143400.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

E4/light | 14240·14340 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05.	142400. 05. 12.C	50	212.	142400. 212. 12.C	212
06.	142400. 06. 12.C	68	23.	142400. 23. 12.C	225
07.	142400. 07. 12.C	75	237.	142400. 237. 12.C	237
087.	142400. 087. 12.C	87	25.	142400. 25. 12.C	250
097.	142400. 097. 12.C	97	262.	142400. 262. 12.C	262
10.	142400. 10. 12.C	100	28.	142400. 28. 12.C	275
11.	142400. 11. 12.C	108	29.	142400. 29. 12.C	287
112.	142400. 112. 12.C	112	30.	142400. 30. 12.C	300
12.	142400. 12. 12.C	125	312	142400. 312 12.C	312
137.	142400. 137. 12.C	137	325.	142400. 325. 12.C	325
15.	142400. 15. 12.C	150	337.	142400. 337. 12.C	337
162.	142400. 162. 12.C	162	350.	142400. 350. 12.C	350
17.	142400. 17. 12.C	168	362	142400. 362 12.C	362
18.	142400. 18. 12.C	175	375.	142400. 375. 12.C	375
187.	142400. 187. 12.C	187	387.	142400. 387. 12.C	387
20.	142400. 20. 12.C	200	400.	142400. 400. 12.C	400

- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

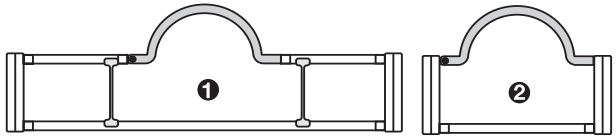
Part No. structure (locking)
142400.30.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
142400.30.2.C
Mounting bracket Fixed end
142400.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148



Round extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)



Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	115	○ round	no	yes
385.18.RD115	115	○ round	yes	no

Order examples - extender crossbar

① Combination with snap-open crossbars

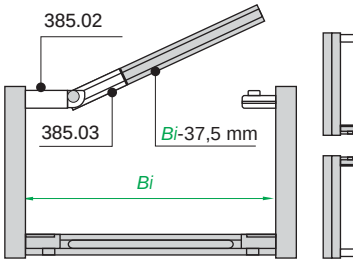
RHD115 for outer radius "E" incl. e-chain®:
14240.10/15RHDE115/10.*R*.0

RHD115 for inner radius "Z" incl. e-chain®:
14240.10/15RHDZ115/10.*R*.0

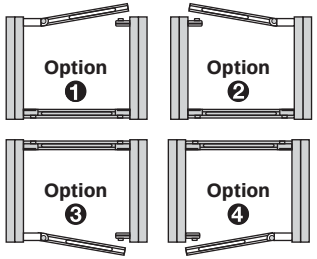
② Installation on side link

RD115 for outer radius "E" incl. e-chain®:
14240.18RDE115.*R*.0

RD115 for inner radius "Z" incl. e-chain®:
14240.18RDZ115.*R*.0



(View from the fixed point)





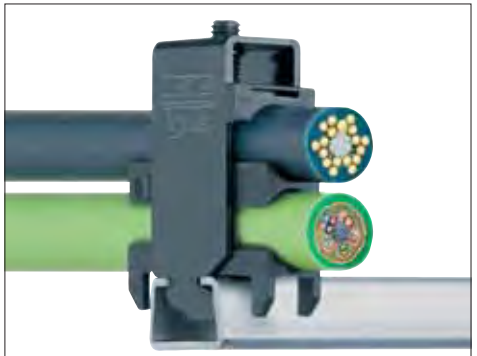
Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- Hinged crossbar: Part No. **385.02**
  Snap-open crossbar (shortened): *Bi*-37,5 mm Part No. **385.03**
  (smallest inner width *Bi* = 87,5)

Order example (here: inner width *Bi* 150)

14240.15.Z.*R*.0 =
14240.15.1.*R*.0

Supplement Index "Z" with required option number ①, ②, ③ or ④



Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



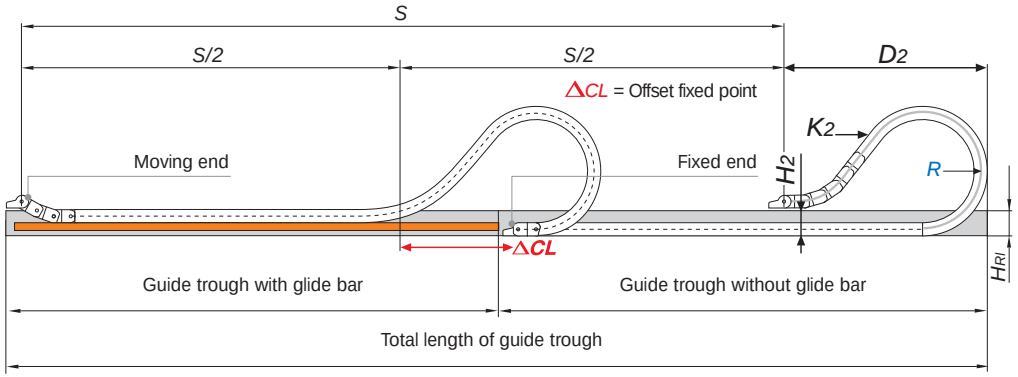
Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258



Series R188 for side-mounted applications - chip-proof e-tube from the E4 assembly kit on a machine tool here

Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 9 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K_2$

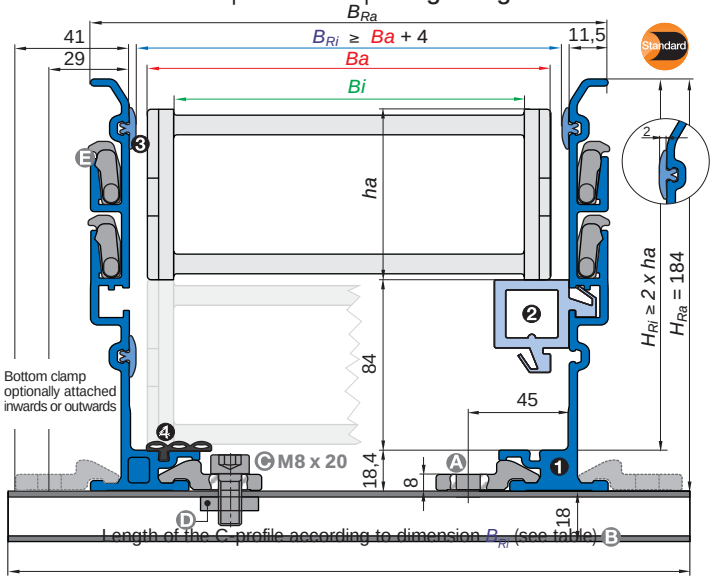
R	135	150	175	200	250	300	400	500
H_2	266	266	266	266	266	266	266	266
D_2^{+25}	390	450	550	710	920	1120	1530	1850
K_2	728	819	1001	1274	1638	1911	2548	3185
ΔCL	124	159	209	359	509	659	959	1159

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) | K_2 = Further add-on (if the moving end is set lower) | ΔCL = Offset fixed point | S = Length of travel
D_2 = Over length - long travels, gliding | R = Bending radius | H_{Ri} = Inner trough height | S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

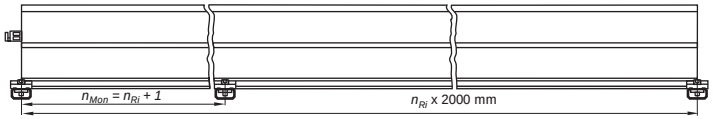
Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 14240.30.300.0 with B_{Ri} = 330

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 974.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 974.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.400
Module for the fixed end	
Order text: 1 set	Part No. 974.81.5
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 974.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Dutyn" version for heavy machinery ▶ from page 1204

● Trough set ● Installation set ● Glide bar | ● C-Profile | B_{Ri} = Inner trough width | H_{Ra} = Outer trough height
B_{Ra} = Outer trough width | Ba = Outer width e-chains® | n_{Mon} = Number of installation sets
H_{Ri} = Inner trough height | Bi = Inner width e-chains® | n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	upon request	960.50.200
.06	98	upon request	960.50.225
.07	105	upon request	960.50.225
.087	118	960.50.175	960.50.250
.10	130	960.50.200	960.50.250
.11	138	960.50.200	960.50.275
.112	143	960.50.200	960.50.275
.12	155	960.50.225	960.50.275
.137	168	960.50.225	960.50.300
.15	180	960.50.250	960.50.300
.162	193	960.50.250	960.50.325
.17	198	960.50.250	960.50.325
.18	205	960.50.275	960.50.325
.187	218	960.50.275	960.50.350
.20	230	960.50.300	960.50.350
.212	243	960.50.300	960.50.375
.23	255	960.50.325	960.50.375
.237	268	960.50.325	960.50.400
.25	280	960.50.350	960.50.400
.262	293	960.50.350	960.50.425
.28	305	960.50.375	960.50.425
.29	318	960.50.375	960.50.450
.30	330	960.50.400	960.50.450
.312	343	960.50.400	960.50.475
.325	355	960.50.425	960.50.475
.337	368	960.50.425	960.50.500
.350	380	960.50.450	960.50.500
.362	393	960.50.450	960.50.525
.375	405	960.50.475	960.50.525
.387	418	960.50.475	960.50.550
.400	430	960.50.500	960.50.550

Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



"Light design", large inner height

When to use Series 14550·14650·19050:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 70 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,2 m and fill weights up to 48 kg/m
- Also suitable for side-mounted, vertical standing or hanging applications

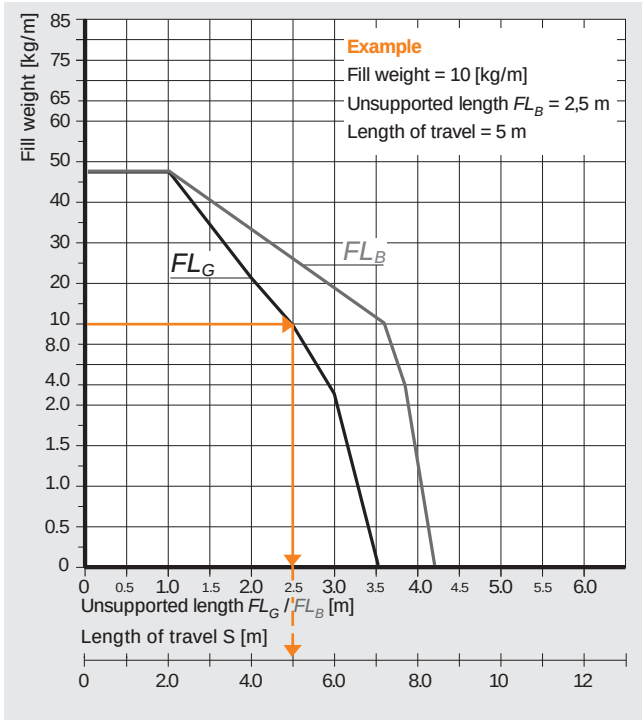
When to use a different igus® Series:

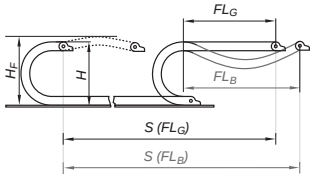
- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.80, page 984
- If larger unsupported lengths are required in side-mounted applications
  ▶ Series 15050, page 830
  ▶ Series E4.80, page 694
- If increased unsupported lengths and longer travels are required
  ▶ Series 15050, page 830
  ▶ Series E4.80, page 694

The igus® E4 **e-chain® opener** reduces assembly time ▶ page 779

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/14550



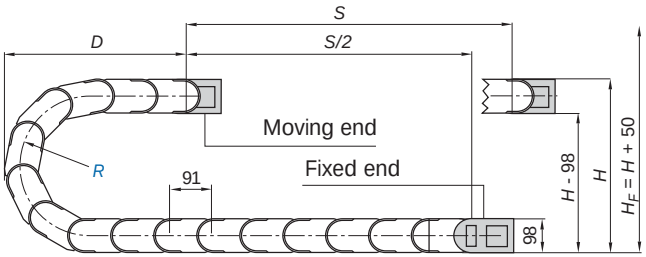


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 250 m.
More information ▶ page 828



Technical Data

Speed, material, temperature and flammability class ▶ page 780

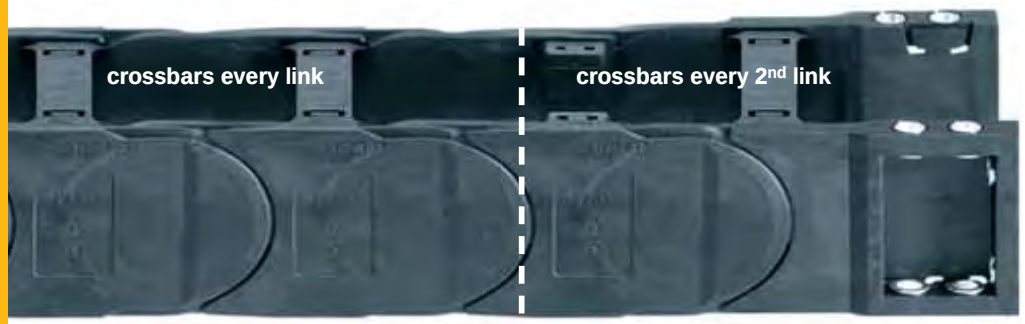
Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$

R	150*	175*	200	250	300	350	400	450	500	600
H	398	448	498	598	698	798	898	998	1098	1298
D	336	361	386	436	486	536	586	636	686	786
K	655	735	815	970	1125	1285	1440	1600	1755	2070

The required clearance height: $H_F = H + 50$ mm (with 2,5 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R +$ "safety"



e-chains® | Series 14550 crossbars every link | Series 14650 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	14550 [kg/m]	14650 [kg/m]
14550.	14650. 05. R.0	50	77	≈ 3,28	≈ 3,27
14550.	14650. 06. R.0	65	92	≈ 3,37	≈ 3,31
14550.	14650. 07. R.0	75	102	≈ 3,44	≈ 3,35
14550.	14650. 08. R.0	87	114	≈ 3,52	≈ 3,38
14550.	14650. 10. R.0	100	127	≈ 3,61	≈ 3,43
14550.	14650. 11. R.0	112	139	≈ 3,73	≈ 3,49
14550.	14650. 12. R.0	125	152	≈ 3,81	≈ 3,53
14550.	14650. 13. R.0	137	164	≈ 3,94	≈ 3,60
14550.	14650. 15. R.0	150	177	≈ 3,98	≈ 3,62
14550.	14650. 16. R.0	162	189	≈ 4,09	≈ 3,67
14550.	14650. 17. R.0	175	202	≈ 4,23	≈ 3,74
14550.	14650. 18. R.0	187	214	≈ 4,34	≈ 3,80
14550.	14650. 20. R.0	200	227	≈ 4,39	≈ 3,82
14550.	14650. 21 R.0	212	239	≈ 4,46	≈ 3,86
14550.	14650. 22. R.0	225	252	≈ 4,53	≈ 3,89
14550.	14650. 23. R.0	237	264	≈ 4,64	≈ 3,95
14550.	14650. 25. R.0	250	277	≈ 4,76	≈ 4,00
14550.	14650. 26. R.0	262	289	≈ 4,85	≈ 4,05
14550.	14650. 27. R.0	275	302	≈ 4,95	≈ 4,10
14550.	14650. 28. R.0	287	314	≈ 5,01	≈ 4,13
14550.	14650. 30. R.0	300	327	≈ 5,16	≈ 4,21
14550.	14650. 31. R.0	312	339	≈ 5,20	≈ 4,23
14550.	14650. 32. R.0	325	352	≈ 5,30	≈ 4,28
14550.	14650. 33. R.0	337	364	≈ 5,42	≈ 4,34
14550.	14650. 35. R.0	350	377	≈ 5,62	≈ 4,44
14550.	14650. 36. R.0	362	389	≈ 5,53	≈ 4,39
14550.	14650. 37. R.0	375	402	≈ 5,63	≈ 4,44
14550.	14650. 38. R.0	387	414	≈ 5,74	≈ 4,50
14550.	14650. 40. R.0	400	427	≈ 6,01	≈ 4,63
14550.	14650. 41. R.0	412	439	≈ 5,94	≈ 4,60
14550.	14650. 42. R.0	425	452	≈ 6,23	≈ 4,74
14550.	14650. 43. R.0	437	464	≈ 6,07	≈ 4,66
14550.	14650. 45. R.0	450	477	≈ 6,40	≈ 4,83
14550.	14650. 46. R.0	462	489	≈ 6,35	≈ 4,80
14550.	14650. 47. R.0	475	502	≈ 6,39	≈ 4,82
14550.	14650. 48. R.0	487	514	≈ 6,64	≈ 4,95
14550.	14650. 50. R.0	500	527	≈ 6,74	≈ 5,00
14550.	14650. 51. R.0	512	539	≈ 6,65	≈ 4,95
14550.	14650. 52. R.0	525	552	≈ 6,82	≈ 5,04
14550.	14650. 53. R.0	537	564	≈ 6,92	≈ 5,09
14550.	14650. 55. R.0	550	577	≈ 7,34	≈ 5,30
14550.	14650. 60. R.0	600	627	≈ 7,57	≈ 5,41

Available bending radii *R* [mm] 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 14550.10.300.0

e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series 19050 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	19050 [kg/m]
19050. 07. R.0	75	102	≈ 4,00
19050. 10. R.0	100	127	≈ 4,33
19050. 12. R.0	125	152	≈ 4,70
19050. 15. R.0	150	177	≈ 5,04
19050. 17. R.0	175	202	≈ 5,41
19050. 20. R.0	200	227	≈ 5,64
19050. 25. R.0	250	277	≈ 6,32
19050. 27. R.0	275	302	≈ 6,65
19050. 30. R.0	300	327	≈ 6,99
19050. 35. R.0	350	377	≈ 7,68
19050. 40. R.0	400	427	≈ 8,36
19050. 46. R.0	462	489	≈ 9,21

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

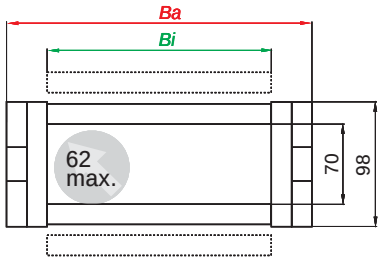
Supplement Part No. with required radius (*R*). Example: 19050.10.300.0

Order key for all types

14550. 10. 300. 0 e-chain®, crossbars every link)
14650. 10. 300. 0 e-chain®, crossbars every 2nd link)
19050. 10. 300. 0 e-tube, fully enclosed

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
14550.	14650.	15. QZ.R.0	15. QE.R.0	15. Q.R.0	150
14550.	14650.	16. QZ.R.0	16. QE.R.0	16. Q.R.0	162
14550.	14650.	17. QZ.R.0	17. QE.R.0	17. Q.R.0	175
14550.	14650.	18. QZ.R.0	18. QE.R.0	18. Q.R.0	187
14550.	14650.	20. QZ.R.0	20. QE.R.0	20. Q.R.0	200
14550.	14650.	21 QZ.R.0	21 QE.R.0	21 Q.R.0	212
14550.	14650.	22. QZ.R.0	22. QE.R.0	22. Q.R.0	225
14550.	14650.	23. QZ.R.0	23. QE.R.0	23. Q.R.0	237
14550.	14650.	25. QZ.R.0	25. QE.R.0	25. Q.R.0	250
14550.	14650.	26. QZ.R.0	26. QE.R.0	26. Q.R.0	262
14550.	14650.	27. QZ.R.0	27. QE.R.0	27. Q.R.0	275
14550.	14650.	28. QZ.R.0	28. QE.R.0	28. Q.R.0	287
14550.	14650.	30. QZ.R.0	30. QE.R.0	30. Q.R.0	300
14550.	14650.	31. QZ.R.0	31. QE.R.0	31. Q.R.0	312
14550.	14650.	32. QZ.R.0	32. QE.R.0	32. Q.R.0	325
14550.	14650.	33. QZ.R.0	33. QE.R.0	33. Q.R.0	337
14550.	14650.	35. QZ.R.0	35. QE.R.0	35. Q.R.0	350
14550.	14650.	36. QZ.R.0	36. QE.R.0	36. Q.R.0	362
14550.	14650.	37. QZ.R.0	37. QE.R.0	37. Q.R.0	375
14550.	14650.	38. QZ.R.0	38. QE.R.0	38. Q.R.0	387
14550.	14650.	40. QZ.R.0	40. QE.R.0	40. Q.R.0	400

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
14550.	14650.	41. QZ.R.0	41. QE.R.0	41. Q.R.0	412
14550.	14650.	42. QZ.R.0	42. QE.R.0	42. Q.R.0	425
14550.	14650.	43. QZ.R.0	43. QE.R.0	43. Q.R.0	437
14550.	14650.	45. QZ.R.0	45. QE.R.0	45. Q.R.0	450
14550.	14650.	46. QZ.R.0	46. QE.R.0	46. Q.R.0	462
14550.	14650.	47. QZ.R.0	47. QE.R.0	47. Q.R.0	475
14550.	14650.	48. QZ.R.0	48. QE.R.0	48. Q.R.0	487
14550.	14650.	50. QZ.R.0	50. QE.R.0	50. Q.R.0	500
14550.	14650.	51. QZ.R.0	51. QE.R.0	51. Q.R.0	512
14550.	14650.	52. QZ.R.0	52. QE.R.0	52. Q.R.0	525
14550.	14650.	53. QZ.R.0	53. QE.R.0	53. Q.R.0	537
14550.	14650.	55. QZ.R.0	55. QE.R.0	55. Q.R.0	550
14550.	14650.	60. QZ.R.0	60. QE.R.0	60. Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 150 | 175 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600

Supplement Part No. with required radius *(R)*. Example: 14550.10QZ.300.0

Configuration options and order keys, overview ▶ page 782

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≈ –10 dB(A)

With pads 14550[1]	14650[1]	19050[1]	Bi [mm]
S14550.	S14650.	– 05.R.0	50
S14550.	S14650.	– 06.R.0	65
S14550.	S14650.	S19050.07.R.0	75
S14550.	S14650.	– 08.R.0	87
S14550.	S14650.	S19050.10.R.0	100
S14550.	S14650.	– 11.R.0	112
S14550.	S14650.	S19050.12.R.0	125
S14550.	S14650.	– 13.R.0	137
S14550.	S14650.	S19050.15.R.0	150
S14550.	S14650.	– 16.R.0	162
S14550.	S14650.	S19050.17.R.0	175
S14550.	S14650.	– 18.R.0	187
S14550.	S14650.	S19050.20.R.0	200
S14550.	S14650.	– 21 R.0	212
S14550.	S14650.	– 22.R.0	225
S14550.	S14650.	– 23.R.0	237
S14550.	S14650.	S19050.25.R.0	250
S14550.	S14650.	– 26.R.0	262
S14550.	S14650.	S19050.27.R.0	275
S14550.	S14650.	– 28.R.0	287
S14550.	S14650.	S19050.30.R.0	300

With pads 14550[1]	14650[1]	19050[1]	Bi [mm]
S14550.	S14650.	– 31. R.0	312
S14550.	S14650.	– 32. R.0	325
S14550.	S14650.	– 33. R.0	337
S14550.	S14650.	S19050.35. R.0	350
S14550.	S14650.	– 36. R.0	362
S14550.	S14650.	– 37. R.0	375
S14550.	S14650.	– 38. R.0	387
S14550.	S14650.	S19050.40. R.0	400
S14550.	S14650.	– 41. R.0	412
S14550.	S14650.	– 42. R.0	425
S14550.	S14650.	– 43. R.0	437
S14550.	S14650.	– 45. R.0	450
S14550.	S14650.	S19050.46. R.0	462
S14550.	S14650.	– 47. R.0	475
S14550.	S14650.	– 48. R.0	487
S14550.	S14650.	– 50. R.0	500
S14550.	S14650.	– 51. R.0	512
S14550.	S14650.	– 52. R.0	525
S14550.	S14650.	– 53. R.0	537
S14550.	S14650.	– 55. R.0	550
		60. R.0	600

NC-Version | Without pretension

NC-Version 14550[1]	14650[1]	19050[1]	Bi [mm]
14550.	14650.	– 05. R.0.NC	50
14550.	14650.	– 06. R.0.NC	65
14550.	14650.	19050.07. R.0.NC	75
14550.	14650.	– 08. R.0.NC	87
14550.	14650.	19050.10. R.0.NC	100
14550.	14650.	– 11. R.0.NC	112
14550.	14650.	19050.12. R.0.NC	125
14550.	14650.	– 13. R.0.NC	137
14550.	14650.	19050.15. R.0.NC	150
14550.	14650.	– 16. R.0.NC	162
14550.	14650.	19050.17. R.0.NC	175
14550.	14650.	– 18. R.0.NC	187
14550.	14650.	19050.20. R.0.NC	200
14550.	14650.	– 21 R.0.NC	212
14550.	14650.	– 22. R.0.NC	225
14550.	14650.	– 23. R.0.NC	237
14550.	14650.	19050.25. R.0.NC	250
14550.	14650.	– 26. R.0.NC	262
14550.	14650.	19050.27. R.0.NC	275
14550.	14650.	– 28. R.0.NC	287
14550.	14650.	19050.30. R.0.NC	300

NC-Version 14550[1]	14650[1]	19050[1]	Bi [mm]
14550.	14650.	– 31. R.0.NC	312
14550.	14650.	– 32. R.0.NC	325
14550.	14650.	– 33. R.0.NC	337
14550.	14650.	19050.35. R.0.NC	350
14550.	14650.	– 36. R.0.NC	362
14550.	14650.	– 37. R.0.NC	375
14550.	14650.	– 38. R.0.NC	387
14550.	14650.	19050.40. R.0.NC	400
14550.	14650.	– 41. R.0.NC	412
14550.	14650.	– 42. R.0.NC	425
14550.	14650.	– 43. R.0.NC	437
14550.	14650.	– 45. R.0.NC	450
14550.	14650.	19050.46. R.0.NC	462
14550.	14650.	– 47. R.0.NC	475
14550.	14650.	– 48. R.0.NC	487
14550.	14650.	– 50. R.0.NC	500
14550.	14650.	– 51. R.0.NC	512
14550.	14650.	– 52. R.0.NC	525
14550.	14650.	– 53. R.0.NC	537
14550.	14650.	– 55. R.0.NC	550
14550.	14650.	– 60. R.0.NC	600

Available bending radii *R* [mm] 150* | 175* | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 600 *Radius not available for e-tubes

Supplement Part No. with required radius *(R)*. Example: S14550.10.300.0 or 14550.10.300.0.NC

1) 14550 = e-chain® with crossbars every link 14650 = e-chain® with crossbars every 2nd link 19050 = e-tube fully enclosed

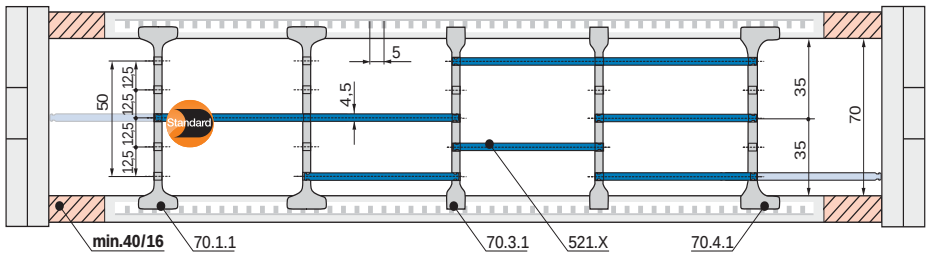
Configuration options and order keys, overview ▶ page 782

Noise dampening and NC-Version - Delivery time* 3-5 work days.

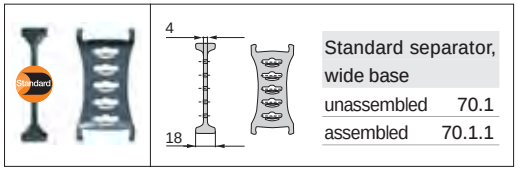
*Delivery time means time until shipping of goods (after technical release)

E4/light | 14550·14650·19050 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



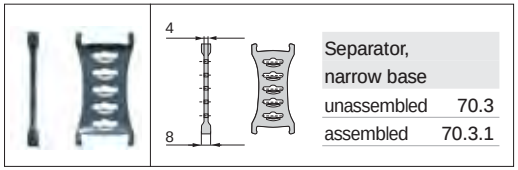
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	70.1
assembled	70.1.1

Standard - for all applications

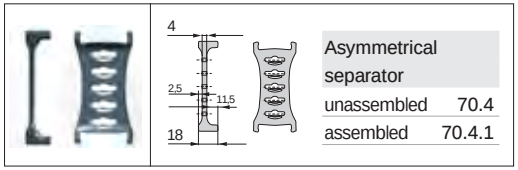
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	70.3
assembled	70.3.1

For many thin cables

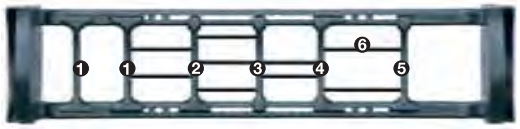
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	70.4
assembled	70.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.





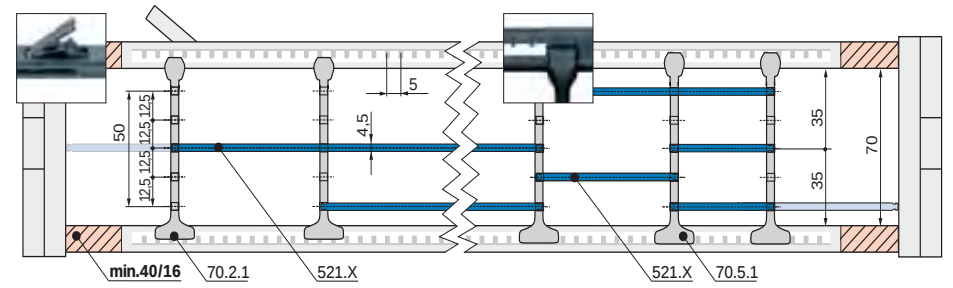
① Standard separator, wide base - Part No. 70.1 ③ Separator, narrow base - Part No. 70.3 ⑤ Notch separator - Part No. 70.5
② Separator for QuickLock crossbar - Part No. 70.2 ④ Separator, asymmetrical - Part No. 70.4 ⑥ Full-width self, lockable - Part No. 520.X

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

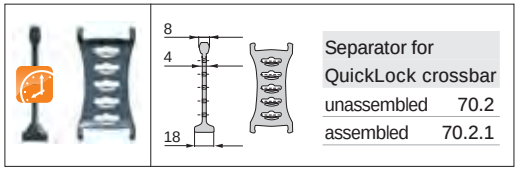
E4/light | 14550·14650·19050 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes

14550
14650
19050



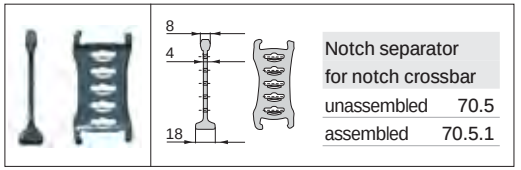
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	70.2
assembled	70.2.1

For even faster installation

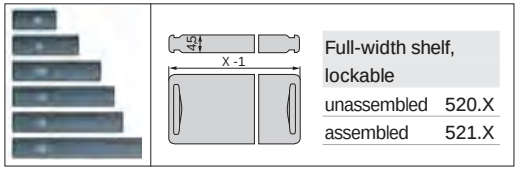
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	70.5
assembled	70.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.

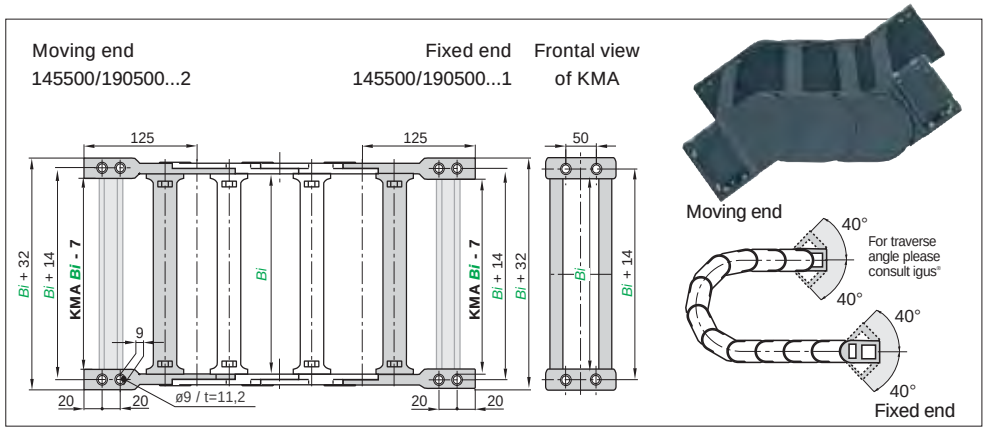


Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	175	520.175	521.175	362	520.362	520.362
065	520.065	521.065	200	520.200	521.200	375	520.375	520.375
075	520.075	521.075	225	520.225	521.225	387	520.387	520.387
100	520.100	521.100	250	520.250	521.250	450	520.450	521.450
125	520.125	521.125	300	520.300	521.300			
150	520.150	521.150	350	520.350	521.350			

14550·14650·19050 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05.	145500. – 05. 12.C	50	31.	145500. – 31. 12.C	312
06.	145500. – 06. 12.C	65	32.	145500. – 32. 12.C	325
07.	145500. 190500. 07. 12.C	75	33.	145500. – 33. 12.C	337
08.	145500. – 08. 12.C	87	35.	145500. 190500. 35. 12.C	350
10.	145500. 190500. 10. 12.C	100	36.	145500. – 36. 12.C	362
11.	145500. – 11. 12.C	112	37.	145500. – 37. 12.C	375
12.	145500. 190500. 12. 12.C	125	38.	145500. – 38. 12.C	387
13.	145500. – 13. 12.C	137	40.	145500. 190500. 40. 12.C	400
15.	145500. 190500. 15. 12.C	150	41.	145500. – 41. 12.C	412
16.	145500. – 16. 12.C	162	42.	145500. – 42. 12.C	425
17.	145500. 190500. 17. 12.C	175	43.	145500. – 43. 12.C	437
18.	145500. – 18. 12.C	187	45.	145500. – 45. 12.C	450
20.	145500. 190500. 20. 12.C	200	46.	145500. 190500. 46. 12.C	462
21	145500. – 21 12.C	212	47.	145500. – 47. 12.C	475
22.	145500. – 22. 12.C	225	48.	145500. – 48. 12.C	487
23.	145500. – 23. 12.C	237	50.	145500. – 50. 12.C	500
25.	145500. 190500. 25. 12.C	250	51.	145500. – 51. 12.C	512
26.	145500. – 26. 12.C	262	52.	145500. – 52. 12.C	525
27.	145500. 190500. 27. 12.C	275	53.	145500. – 53. 12.C	537
28.	145500. – 28. 12.C	287	55.	145500. – 55. 12.C	550
30.	145500. 190500. 30. 12.C	300	60.	145500. – 60. 12.C	600

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

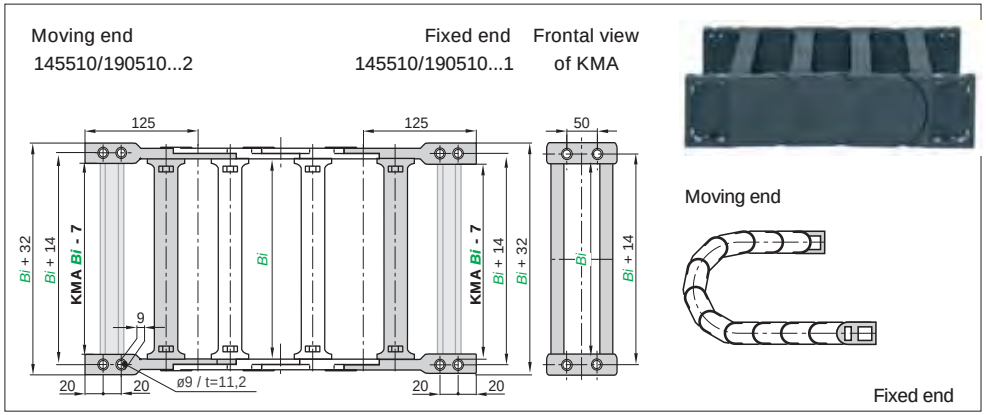
Part No. structure (pivoting)
145500.10.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
145500.10.2.C
Mounting bracket Fixed end
145500.10.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

14550·14650·19050 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05.	145510. – 05. 12.C	50	31.	145510. – 31. 12.C	312
06.	145510. – 06. 12.C	65	32.	145510. – 32. 12.C	325
07.	145510. 190510. 07. 12.C	75	33.	145510. – 33. 12.C	337
08.	145510. – 08. 12.C	87	35.	145510. 190510. 35. 12.C	350
10.	145510. 190510. 10. 12.C	100	36.	145510. – 36. 12.C	362
11.	145510. – 11. 12.C	112	37.	145510. – 37. 12.C	375
12.	145510. 190510. 12. 12.C	125	38.	145510. – 38. 12.C	387
13.	145510. – 13. 12.C	137	40.	145510. 190510. 40. 12.C	400
15.	145510. 190510. 15. 12.C	150	41.	145510. – 41. 12.C	412
16.	145510. – 16. 12.C	162	42.	145510. – 42. 12.C	425
17.	145510. 190510. 17. 12.C	175	43.	145510. – 43. 12.C	437
18.	145510. – 18. 12.C	187	45.	145510. – 45. 12.C	450
20.	145510. 190510. 20. 12.C	200	46.	145510. 190510. 46. 12.C	462
21	145510. – 21 12.C	212	47.	145510. – 47. 12.C	475
22.	145510. – 22. 12.C	225	48.	145510. – 48. 12.C	487
23.	145510. – 23. 12.C	237	50.	145510. – 50. 12.C	500
25.	145510. 190510. 25. 12.C	250	51.	145510. – 51. 12.C	512
26.	145510. – 26. 12.C	262	52.	145510. – 52. 12.C	525
27.	145510. 190510. 27. 12.C	275	53.	145510. – 53. 12.C	537
28.	145510. – 28. 12.C	287	55.	145510. – 55. 12.C	550
30.	145510. 190510. 30. 12.C	300	60.	145510. – 60. 12.C	600

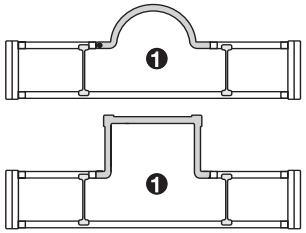
- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

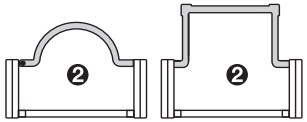
Part No. structure (locking)
145510.10.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
145510.10.2.C
Mounting bracket Fixed end
145510.10.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148







Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes

Order examples - extender crossbar

① Combination with snap-open crossbars

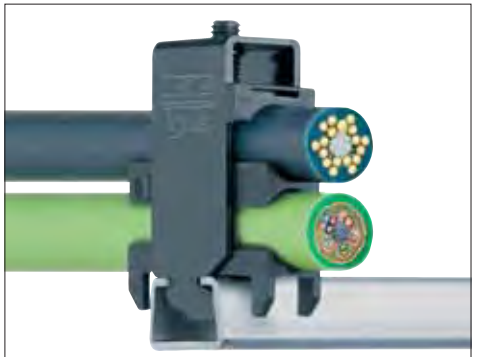
RHD115 for outer radius "E" incl. e-chain®:
14550.10/15RHDE115/10.*R*.0

RHD115 for inner radius "Z" incl. e-chain®:
14550.10/15RHDZ115/10.*R*.0

② Installation on side link

RD115 for outer radius "E" incl. e-chain®:
14550.17RDE115.*R*.0

RD115 for inner radius "Z" incl. e-chain®:
14550.17RDZ115.*R*.0



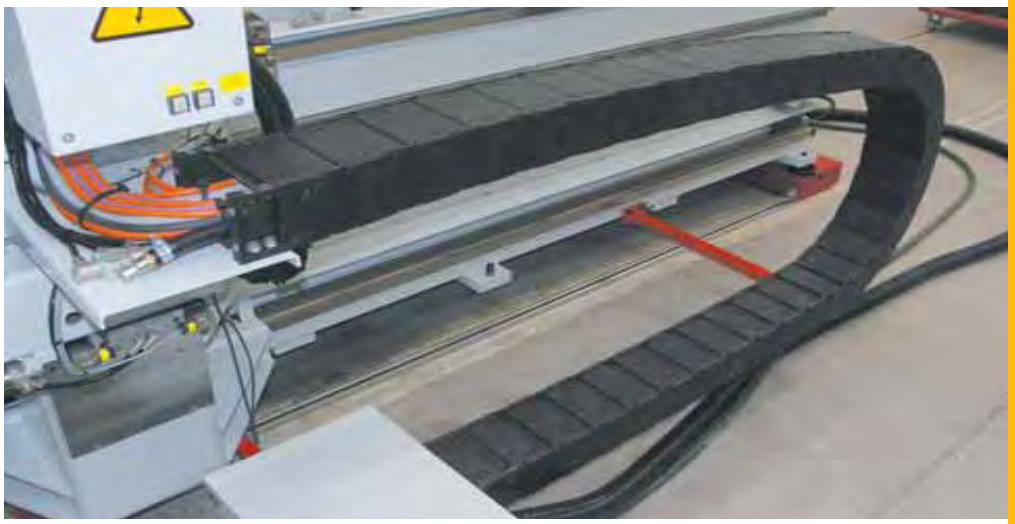
Strain relief system

Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit

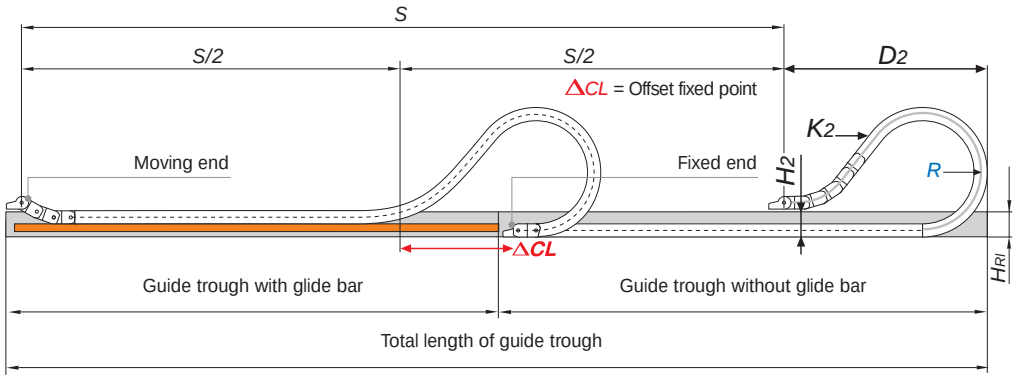
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258



E4/light e-tubes protect tubes and hoses safely against dirt and chips

Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 8 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K_2$

R	150*	175*	200	250	300	350	400	450	500	600 2)
H_2	266	266	266	266	266	266	266	266	266	–
D_2+25	450	530	710	920	1120	1340	1530	1)	1830	–
K_2	819	1001	1274	1638	1911	2184	2548	1)	3185	–
ΔCL	124	159	209	359	509	659	829	959	1159	–

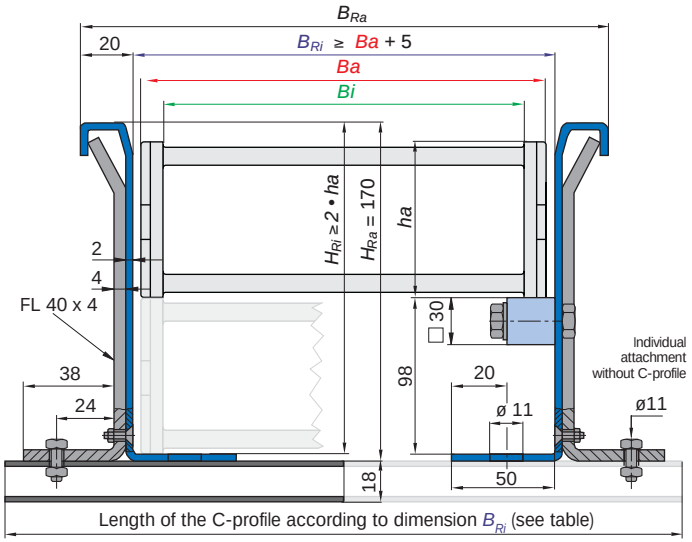
*Radius not available for e-tubes 1) Values upon request 2) R600 not suitable for long travel applications, please consult igus®

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height S/2 = Half length of travel

Steel Guide Troughs | Heavy-Duty | New in this catalog

Part No. 94.14550.30 | 94.14550.31| Trough height: 170 mm



- Guide trough without glide bars — Part No. 94.14550.30
- Guide trough with glide bars — Part No. 94.14550.31
- Installation sets as end connectors — Part No. 94.50.XXX

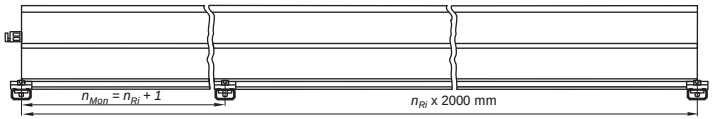
.XXX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Order example: Length of travel 30 m - Center mounted for Series 14550.10.300.0 with B_{Ri} = 132

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 94.14550.30

Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 94.14550.31

Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets Part No. 94.50.250



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Steel guide trough in detail ▶ page 1228

Trough set · Installation set · Glide bar · C-Profile · Ba = Outer width e-chains® · Bi = Inner width e-chains® · B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height · H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets

Installation set with C-profile for e-chains®

For Width Index	B_{Ri} [mm]	Part No. Installation set
.05	82	upon request
.06	97	upon request
.07	107	94.50 225
.08	119	94.50 250
.10	132	94.50 250
.11	144	94.50 275
.12	157	94.50 275
.13	169	94.50 300
.15	182	94.50 300
.16	194	94.50 325
.17	207	94.50 325
.18	219	94.50 350
.20	232	94.50 350
.21	244	94.50 375
.22	257	94.50 375
.23	269	94.50 400
.25	282	94.50 400
.26	294	94.50 425
.27	307	94.50 425
.28	319	94.50 450
.30	332	94.50 450
.31	344	94.50 475
.32	357	94.50 475
.33	369	94.50 500
.35	382	94.50 500
.36	394	94.50 525
.37	407	94.50 525
.38	419	94.50 550
.40	432	94.50 550
.41	444	94.50 575
.42	457	94.50 575
.43	469	94.50 600
.45	482	94.50 600
.46	494	94.50 625
.47	507	94.50 625
.48	519	94.50 650
.50	532	94.50 650
.51	544	94.50 675
.52	557	94.50 675
.53	569	94.50 700
.55	582	94.50 700
.60	632	94.50 750



"Light design", very large inner height

When to use Series 15050·15150·19850:

- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 80 mm is required
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,6 m and fill weights up to 54 kg/m
- For long travels up to 250 m
- Also suitable for side-mounted, vertical standing or hanging applications

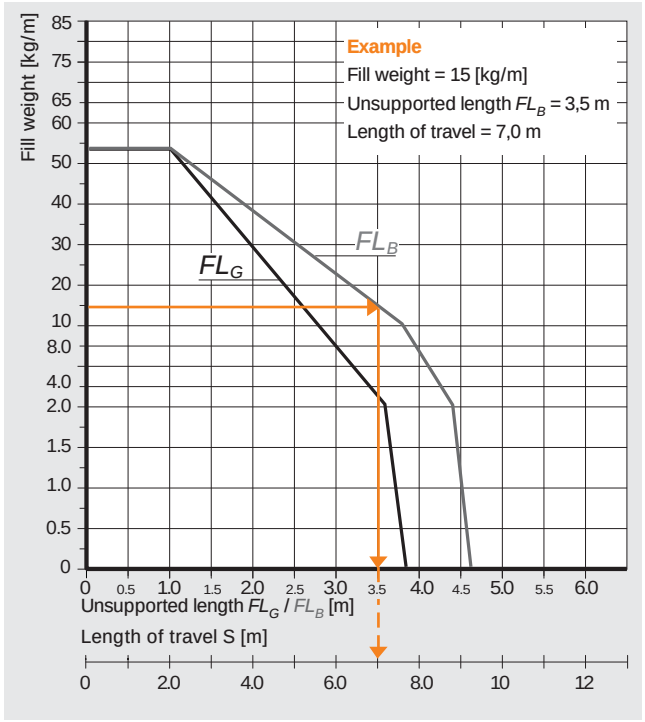
When to use a different igus® Series:

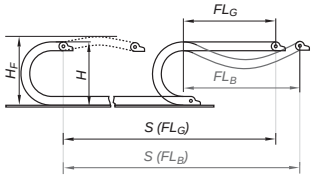
- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ▶ Series E6.80, page 984
- If larger unsupported lengths are required in side-mounted applications
  ▶ Series E4.80, page 694
- If increased unsupported lengths and longer travels are required
  ▶ Series E4.80, page 694

The igus® E4 **e-chain® opener** reduces assembly time ▶ page 779

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/15050



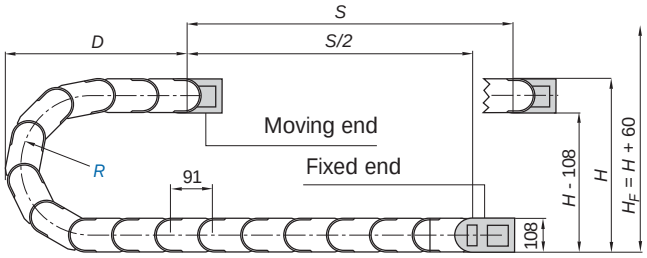


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

Gliding applications

Travels up to 250 m.
More information ▶ page 844



Technical Data

Speed, material, temperature and flammability class ▶ page 780

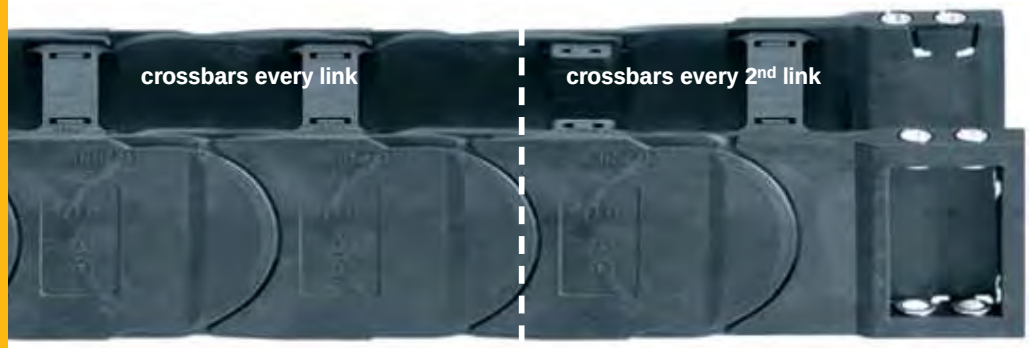
Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$

R	150*	200	250	300	350	400	500	600
$H\ ^{+25}_{0}$	408	508	608	708	808	908	1108	1308
D	341	391	441	491	541	591	691	791
K	655	815	970	1125	1285	1440	1755	2070

The required clearance height: $H_F = H + 60$ mm (with 3,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series 15050 crossbars every link | Series 15150 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link	Bi [mm]	Ba [mm]	15050 [kg/m]	15150 [kg/m]
15050.	15150. 05. R.0	50	80	≈ 3,85	≈ 3,84
15050.	15150. 06. R.0	65	95	≈ 3,95	≈ 3,88
15050.	15150. 07. R.0	75	105	≈ 4,00	≈ 3,92
15050.	15150. 08. R.0	87	117	≈ 4,05	≈ 3,96
15050.	15150. 10. R.0	100	130	≈ 4,18	≈ 4,00
15050.	15150. 11. R.0	112	143	≈ 4,31	≈ 4,07
15050.	15150. 12. R.0	125	155	≈ 4,38	≈ 4,10
15050.	15150. 13. R.0	137	168	≈ 4,51	≈ 4,17
15050.	15150. 15. R.0	150	180	≈ 4,58	≈ 4,20
15050.	15150. 16. R.0	162	193	≈ 4,69	≈ 4,26
15050.	15150. 17. R.0	175	205	≈ 4,80	≈ 4,31
15050.	15150. 18. R.0	187	218	≈ 4,91	≈ 4,37
15050.	15150. 20. R.0	200	230	≈ 4,93	≈ 4,38
15050.	15150. 21. R.0	212	243	≈ 5,04	≈ 4,43
15050.	15150. 22. R.0	225	255	≈ 5,10	≈ 4,47
15050.	15150. 23. R.0	237	268	≈ 5,24	≈ 4,53
15050.	15150. 25. R.0	250	280	≈ 5,32	≈ 4,58
15050.	15150. 26. R.0	262	293	≈ 5,41	≈ 4,62
15050.	15150. 27. R.0	275	305	≈ 5,52	≈ 4,68
15050.	15150. 28. R.0	287	318	≈ 5,54	≈ 4,69
15050.	15150. 30. R.0	300	330	≈ 5,76	≈ 4,80
15050.	15150. 31. R.0	312	343	≈ 5,80	≈ 4,82
15050.	15150. 32. R.0	325	355	≈ 5,85	≈ 4,84
15050.	15150. 33. R.0	337	368	≈ 6,03	≈ 4,93
15050.	15150. 35. R.0	350	380	≈ 6,18	≈ 5,01
15050.	15150. 36. R.0	362	393	≈ 6,19	≈ 5,02
15050.	15150. 37. R.0	375	405	≈ 6,20	≈ 5,02
15050.	15150. 38. R.0	387	418	≈ 6,29	≈ 5,06
15050.	15150. 40. R.0	400	430	≈ 6,49	≈ 5,16
15050.	15150. 41. R.0	412	443	≈ 6,64	≈ 5,24
15050.	15150. 42. R.0	425	455	≈ 6,80	≈ 5,31
15050.	15150. 43. R.0	437	468	≈ 6,86	≈ 5,35
15050.	15150. 45. R.0	450	480	≈ 6,93	≈ 5,38
15050.	15150. 46. R.0	462	493	≈ 6,95	≈ 5,39
15050.	15150. 47. R.0	475	505	≈ 7,08	≈ 5,46
15050.	15150. 48. R.0	487	518	≈ 7,16	≈ 5,49
15050.	15150. 50. R.0	500	530	≈ 7,22	≈ 5,52
15050.	15150. 51. R.0	512	543	≈ 7,24	≈ 5,53
15050.	15150. 52. R.0	525	555	≈ 7,28	≈ 5,56
15050.	15150. 53. R.0	537	568	≈ 7,44	≈ 5,63
15050.	15150. 55. R.0	550	580	≈ 7,92	≈ 5,87
15050.	15150. 60. R.0	600	630	≈ 8,12	≈ 5,97

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15050.30.300.0

e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series 19850 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	19850 [kg/m]
19850. 07. R.0	75	105	≈ 4,46
19850. 10. R.0	100	130	≈ 4,74
19850. 12. R.0	125	155	≈ 5,10
19850. 15. R.0	150	180	≈ 5,53
19850. 17. R.0	175	205	≈ 5,88
19850. 20. R.0	200	230	≈ 6,11
19850. 25. R.0	250	280	≈ 6,83
19850. 27. R.0	275	305	≈ 7,26
19850. 30. R.0	300	330	≈ 7,49
19850. 35. R.0	350	380	≈ 8,24
19850. 40. R.0	400	430	≈ 9,20
19850. 46. R.0	462	493	≈ 9,66

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 500 | 600

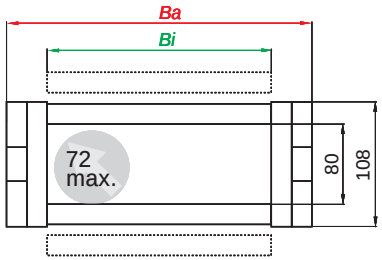
Supplement Part No. with required radius (*R*). Example: 19850.30.300.0

Order key for all types

15050. 30. 300. 0 e-chain®, crossbars every link)
15150. 30. 300. 0 e-chain®, crossbars every 2nd link)
19850. 30. 300. 0 e-tube, fully enclosed

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
15050.	15150.	15QZ.R.0	15QE.R.0	15Q.R.0	150
15050.	15150.	16QZ.R.0	16QE.R.0	16Q.R.0	162
15050.	15150.	17QZ.R.0	17QE.R.0	17Q.R.0	175
15050.	15150.	18QZ.R.0	18QE.R.0	18Q.R.0	187
15050.	15150.	20QZ.R.0	20QE.R.0	20Q.R.0	200
15050.	15150.	21QZ.R.0	21QE.R.0	21Q.R.0	212
15050.	15150.	22QZ.R.0	22QE.R.0	22Q.R.0	225
15050.	15150.	23QZ.R.0	23QE.R.0	23Q.R.0	237
15050.	15150.	25QZ.R.0	25QE.R.0	25Q.R.0	250
15050.	15150.	26QZ.R.0	26QE.R.0	26Q.R.0	262
15050.	15150.	27QZ.R.0	27QE.R.0	27Q.R.0	275
15050.	15150.	28QZ.R.0	28QE.R.0	28Q.R.0	287
15050.	15150.	30QZ.R.0	30QE.R.0	30Q.R.0	300
15050.	15150.	31QZ.R.0	31QE.R.0	31Q.R.0	312
15050.	15150.	32QZ.R.0	32QE.R.0	32Q.R.0	325
15050.	15150.	33QZ.R.0	33QE.R.0	33Q.R.0	337
15050.	15150.	35QZ.R.0	35QE.R.0	35Q.R.0	350
15050.	15150.	36QZ.R.0	36QE.R.0	36Q.R.0	362
15050.	15150.	37QZ.R.0	37QE.R.0	37Q.R.0	375
15050.	15150.	38QZ.R.0	38QE.R.0	38Q.R.0	387
15050.	15150.	40QZ.R.0	40QE.R.0	40Q.R.0	400

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
15050.	15150.	41QZ.R.0	41QE.R.0	41Q.R.0	412
15050.	15150.	42QZ.R.0	42QE.R.0	42Q.R.0	425
15050.	15150.	43QZ.R.0	43QE.R.0	43Q.R.0	437
15050.	15150.	45QZ.R.0	45QE.R.0	45Q.R.0	450
15050.	15150.	46QZ.R.0	46QE.R.0	46Q.R.0	462
15050.	15150.	47QZ.R.0	47QE.R.0	47Q.R.0	475
15050.	15150.	48QZ.R.0	48QE.R.0	48Q.R.0	487
15050.	15150.	50QZ.R.0	50QE.R.0	50Q.R.0	500
15050.	15150.	51QZ.R.0	51QE.R.0	51Q.R.0	512
15050.	15150.	52QZ.R.0	52QE.R.0	52Q.R.0	525
15050.	15150.	53QZ.R.0	53QE.R.0	53Q.R.0	537
15050.	15150.	55QZ.R.0	55QE.R.0	55Q.R.0	550
15050.	15150.	60QZ.R.0	60QE.R.0	60Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15050.30QZ.300.0

Configuration options and order keys, overview ▶ page 782

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≈ –10 dB(A)

With pads 15050.[1]	15150.[1]	19850.[1]	Bi [mm]
S15050.	S15150.	–	05.R.0	50
S15050.	S15150.	–	06.R.0	65
S15050.	S15150.	S19850.	07.R.0	75
S15050.	S15150.	–	08.R.0	87
S15050.	S15150.	S19850.	10.R.0	100
S15050.	S15150.	–	11.R.0	112
S15050.	S15150.	S19850.	12.R.0	125
S15050.	S15150.	–	13.R.0	137
S15050.	S15150.	S19850.	15.R.0	150
S15050.	S15150.	–	16.R.0	162
S15050.	S15150.	S19850.	17.R.0	175
S15050.	S15150.	–	18.R.0	187
S15050.	S15150.	S19850.	20.R.0	200
S15050.	S15150.	–	21.R.0	212
S15050.	S15150.	–	22.R.0	225
S15050.	S15150.	–	23.R.0	237
S15050.	S15150.	S19850.	25.R.0	250
S15050.	S15150.	–	26.R.0	262
S15050.	S15150.	S19850.	27.R.0	275
S15050.	S15150.	–	28.R.0	287
S15050.	S15150.	S19850.	30.R.0	300

With pads 15050.[1]	15150.[1]	19850.[1]	Bi [mm]
S15050.	S15150.	–	31.R.0	312
S15050.	S15150.	–	32.R.0	325
S15050.	S15150.	S19850.	33.R.0	337
S15050.	S15150.	–	35.R.0	350
S15050.	S15150.	S19850.	36.R.0	362
S15050.	S15150.	–	37.R.0	375
S15050.	S15150.	S19850.	38.R.0	387
S15050.	S15150.	–	40.R.0	400
S15050.	S15150.	S19850.	41.R.0	412
S15050.	S15150.	–	42.R.0	425
S15050.	S15150.	S19850.	43.R.0	437
S15050.	S15150.	–	45.R.0	450
S15050.	S15150.	S19850.	46.R.0	462
S15050.	S15150.	–	47.R.0	475
S15050.	S15150.	–	48.R.0	487
S15050.	S15150.	–	50.R.0	500
S15050.	S15150.	–	51.R.0	512
S15050.	S15150.	–	52.R.0	525
S15050.	S15150.	–	53.R.0	537
S15050.	S15150.	–	55.R.0	550
S15050.	S15150.	–	60.R.0	600

NC-Version | Without pretension

NC-Version 15050.[1]	15150.[1]	19850.[1]	Bi [mm]
15050.	15150.	–	05.R.0.NC	50
15050.	15150.	–	06.R.0.NC	65
15050.	15150.	19850.	07.R.0.NC	75
15050.	15150.	–	08.R.0.NC	87
15050.	15150.	19850.	10.R.0.NC	100
15050.	15150.	–	11.R.0.NC	112
15050.	15150.	19850.	12.R.0.NC	125
15050.	15150.	–	13.R.0.NC	137
15050.	15150.	19850.	15.R.0.NC	150
15050.	15150.	–	16.R.0.NC	162
15050.	15150.	19850.	17.R.0.NC	175
15050.	15150.	–	18.R.0.NC	187
15050.	15150.	19850.	20.R.0.NC	200
15050.	15150.	–	21.R.0.NC	212
15050.	15150.	–	22.R.0.NC	225
15050.	15150.	–	23.R.0.NC	237
15050.	15150.	19850.	25.R.0.NC	250
15050.	15150.	–	26.R.0.NC	262
15050.	15150.	19850.	27.R.0.NC	275
15050.	15150.	–	28.R.0.NC	287
15050.	15150.	19850.	30.R.0.NC	300

NC-Version 15050.[1]	15150.[1]	19850.[1]	Bi [mm]
15050.	15150.	–	31.R.0.NC	312
15050.	15150.	–	32.R.0.NC	325
15050.	15150.	19850.	33.R.0.NC	337
15050.	15150.	–	35.R.0.NC	350
15050.	15150.	19850.	36.R.0.NC	362
15050.	15150.	–	37.R.0.NC	375
15050.	15150.	19850.	38.R.0.NC	387
15050.	15150.	–	40.R.0.NC	400
15050.	15150.	19850.	41.R.0.NC	412
15050.	15150.	–	42.R.0.NC	425
15050.	15150.	19850.	43.R.0.NC	437
15050.	15150.	–	45.R.0.NC	450
15050.	15150.	19850.	46.R.0.NC	462
15050.	15150.	–	47.R.0.NC	475
15050.	15150.	–	48.R.0.NC	487
15050.	15150.	–	50.R.0.NC	500
15050.	15150.	–	51.R.0.NC	512
15050.	15150.	–	52.R.0.NC	525
15050.	15150.	–	53.R.0.NC	537
15050.	15150.	–	55.R.0.NC	550
15050.	15150.	–	60.R.0.NC	600

Available bending radii *R* [mm] 150* | 200 | 250 | 300 | 350 | 400 | 500 | 600 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: S15050.30.300.0 or 15050.30.300.0.NC

1) 15050 = e-chain® with crossbars every link 15150 = e-chain® with crossbars every 2nd link 19850 = e-tube fully enclosed

Configuration options and order keys, overview ▶ page 782

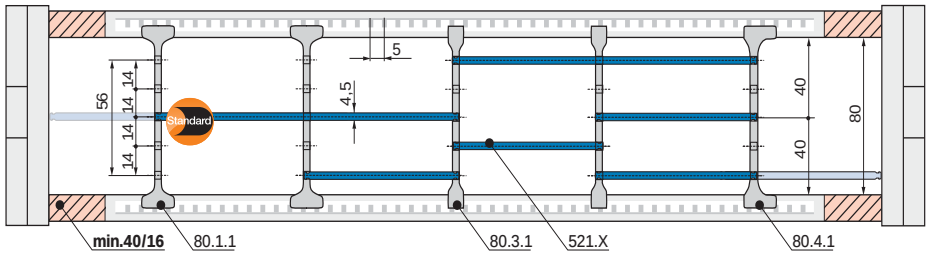
Noise dampening and NC-Version - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)

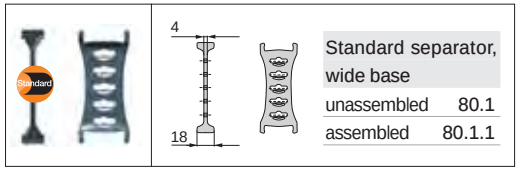
ESD/ATEX permanently conductive e-chains® - 15050 several widths with delivery from stock: Inner widths 75 - 300 mm, radii *R* 150 - 250 mm. Full ESD product range ► www.igus.eu/ESD

E4/light | 15050·15150·19850 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes



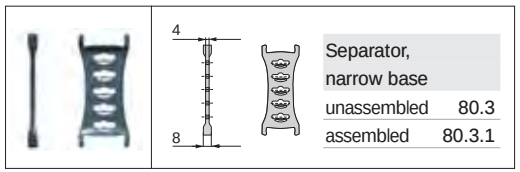
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	80.1
assembled	80.1.1

Standard - for all applications

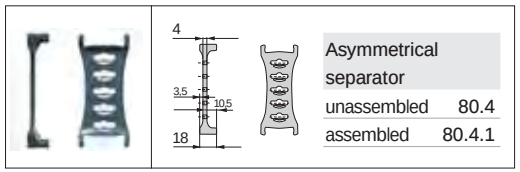
Separator with a wide base for maximum locking strength and safe standing in e-chains® and e-tubes.



Separator, narrow base	
unassembled	80.3
assembled	80.3.1

For many thin cables

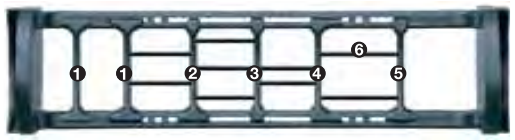
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains® and e-tubes. Also available for QuickLock crossbars.



Asymmetrical separator	
unassembled	80.4
assembled	80.4.1

For side-mounted applications

Asymmetrical separator, for defined distance. No additional spacers necessary for e-chains® and e-tubes.





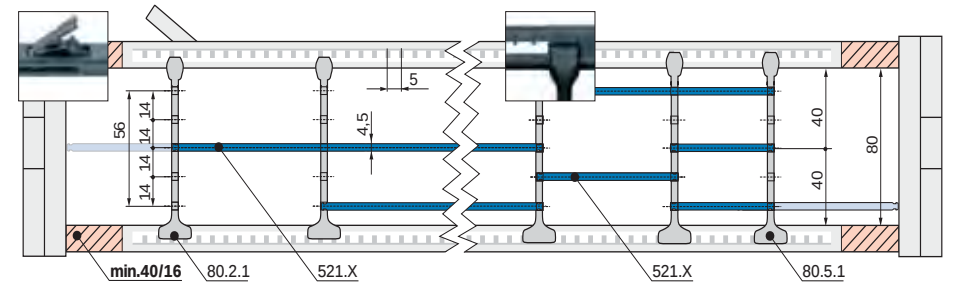
① Standard separator, wide base - Part No. 80.1 ③ Separator, narrow base - Part No. 80.3 ⑤ Notch separator - Part No. 80.5
② Separator for QuickLock crossbar - Part No. 80.2 ④ Separator, asymmetrical - Part No. 80.4 ⑥ Full-width self, lockable - Part No. 520.X

Interior separation single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

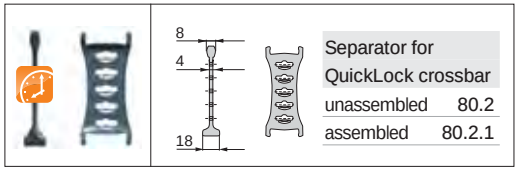
E4/light | 15050·15150·19850 | Interior separation | Standard

New generation interior separation - for e-chains® and e-tubes

15050
15150
19850



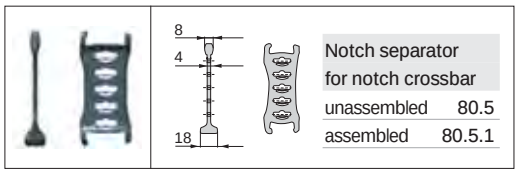
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	80.2
assembled	80.2.1

For even faster installation

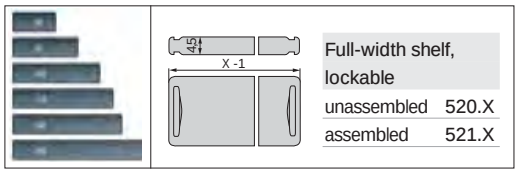
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip). For e-tubes also.



Notch separator for notch crossbar	
unassembled	80.5
assembled	80.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains® and e-tubes. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

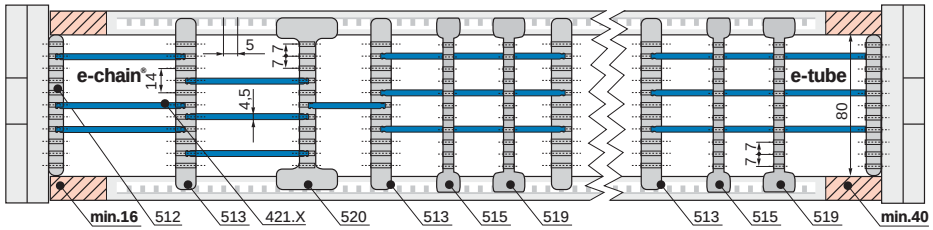
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.



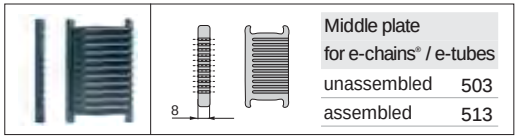
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	175	520.175	521.175	362	520.362	520.362
065	520.065	521.065	200	520.200	521.200	375	520.375	520.375
075	520.075	521.075	225	520.225	521.225	387	520.387	520.387
100	520.100	521.100	250	520.250	521.250	450	520.450	521.450
125	520.125	521.125	300	520.300	521.300			
150	520.150	521.150	350	520.350	521.350			

Option | Shelves for e-chains® and e-tubes



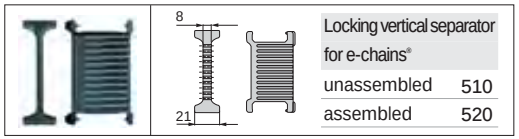
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains® / e-tubes	
unassembled	503
assembled	513

Middle plate 503

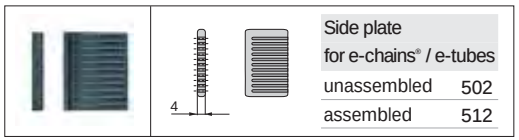
Middle plates form the basic pattern of a shelf system. Shelves 420.X (table left page) can be arranged at 11 different heights (in 7 mm increments).



Locking vertical separator for e-chains®	
unassembled	510
assembled	520

Locking vertical separator 510 (e-chains® only)

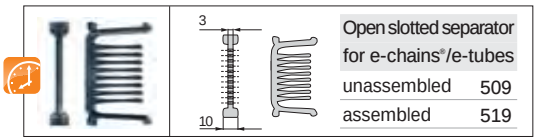
Works like middle plate, for applications exposed to very high humidity (> 85%).



Side plate for e-chains® / e-tubes	
unassembled	502
assembled	512

Side plate 502

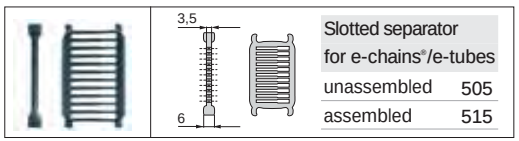
Works like middle plate.
Allows modular shelving close to the side links.



Open slotted separator for e-chains®/e-tubes	
unassembled	509
assembled	519

Open, slotted separator 509 (unilateral open)

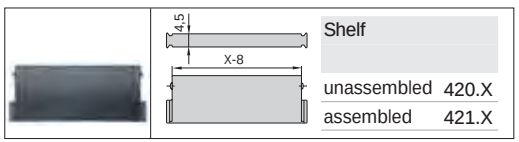
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.



Slotted separator for e-chains®/e-tubes	
unassembled	505
assembled	515

Slotted separator 505

For very fine subdivisions. However, they cannot be retrofitted into an existing separation system without dismantling the interior separators first.



Shelf	
unassembled	420.X
assembled	421.X

Shelf 420.X

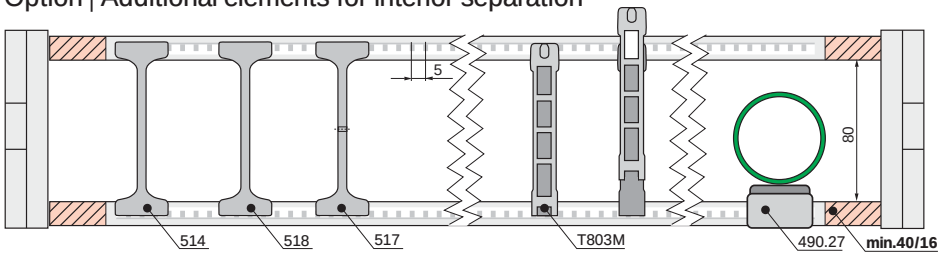
For horizontal separation. Shelves of various widths can be arranged at 11 different heights (in 7 mm increments). (not in combination with 504, 508).

E4/light | 15050·15150·19850 | Interior separation | Options

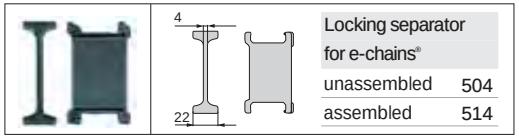
Previous interior separation All elements can still be ordered ► www.igus.eu/eu/15050

15050
15150
19850

Option | Additional elements for interior separation



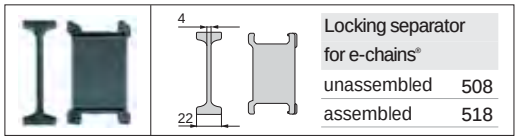
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Locking separator for e-chains®	
unassembled	504
assembled	514

Locking separator 504 (e-chains® only)

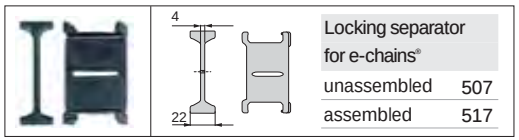
For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Locking separator for e-chains®	
unassembled	508
assembled	518

Locking separator 508 (e-chains® only)

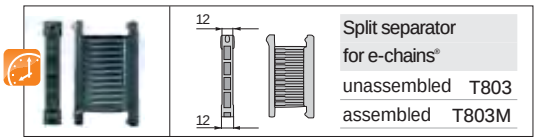
For applications exposed to very high humidity (> 85%). Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Locking separator for e-chains®	
unassembled	507
assembled	517

Locking separator 507 (e-chains® only)

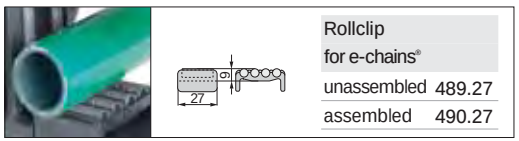
For applications exposed to very high humidity (> 85%). Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Split separator for e-chains®	
unassembled	T803
assembled	T803M

Split separator T803 (e-chains® only)

Ideal for subsequent shelving or for the initial assembly of the e-chain® without a need for dismantling the interior separators.



Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

Rollclip (e-chains® only)

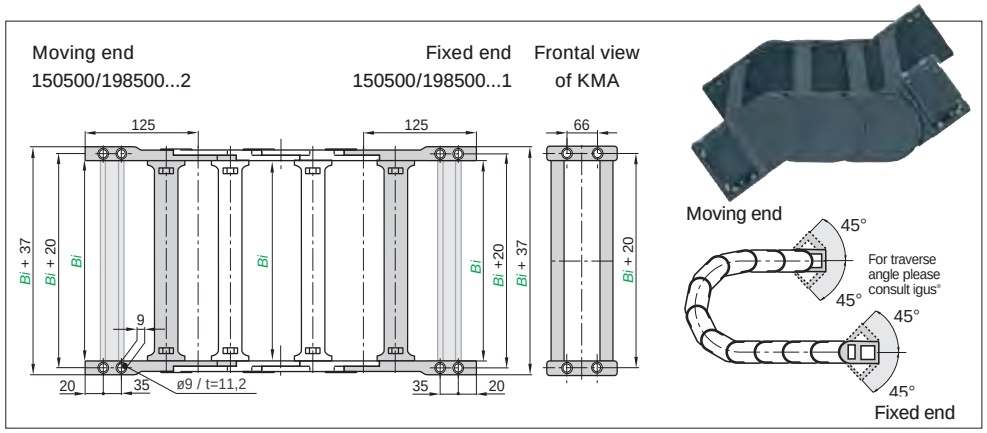
Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

Shelves - interior separation options

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	420.18	421.18	050	420.50	421.50	150	420.150	421.150
023	420.23	421.23	062	420.62	421.62	175	420.175	421.175
025	420.25	421.25	075	420.75	421.75	187	420.187	421.187
028	420.28	421.28	088	420.88	421.88	200	420.200	421.200
033	420.33	421.33	100	420.100	421.100			
043	420.43	421.43	125	420.125	421.125			

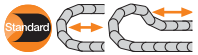
15050·15150·19850 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



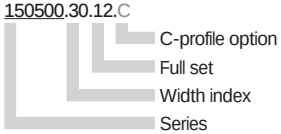
KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
05.	150500. – 05. 12.C	50	31.	150500. – 31. 12.C	312
06.	150500. – 06. 12.C	65	32.	150500. – 32. 12.C	325
07.	150500. 198500. 07. 12.C	75	33.	150500. – 33. 12.C	337
08.	150500. – 08. 12.C	87	35.	150500. 198500. 35. 12.C	350
10.	150500. 198500. 10. 12.C	100	36.	150500. – 36. 12.C	362
11.	150500. – 11. 12.C	112	37.	150500. – 37. 12.C	375
12.	150500. 198500. 12. 12.C	125	38.	150500. – 38. 12.C	387
13.	150500. – 13. 12.C	137	40.	150500. 198500. 40. 12.C	400
15.	150500. 198500. 15. 12.C	150	41.	150500. – 41. 12.C	412
16.	150500. – 16. 12.C	162	42.	150500. – 42. 12.C	425
17.	150500. 198500. 17. 12.C	175	43.	150500. – 43. 12.C	437
18.	150500. – 18. 12.C	187	45.	150500. – 45. 12.C	450
20.	150500. 198500. 20. 12.C	200	46.	150500. 198500. 46. 12.C	462
21.	150500. – 21. 12.C	212	47.	150500. – 47. 12.C	475
22.	150500. – 22. 12.C	225	48.	150500. – 48. 12.C	487
23.	150500. – 23. 12.C	237	50.	150500. – 50. 12.C	500
25.	150500. 198500. 25. 12.C	250	51.	150500. – 51. 12.C	512
26.	150500. – 26. 12.C	262	52.	150500. – 52. 12.C	525
27.	150500. 198500. 27. 12.C	275	53.	150500. – 53. 12.C	537
28.	150500. – 28. 12.C	287	55.	150500. – 55. 12.C	550
30.	150500. 198500. 30. 12.C	300	60.	150500. – 60. 12.C	600



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure (pivoting)
150500.30.12.C

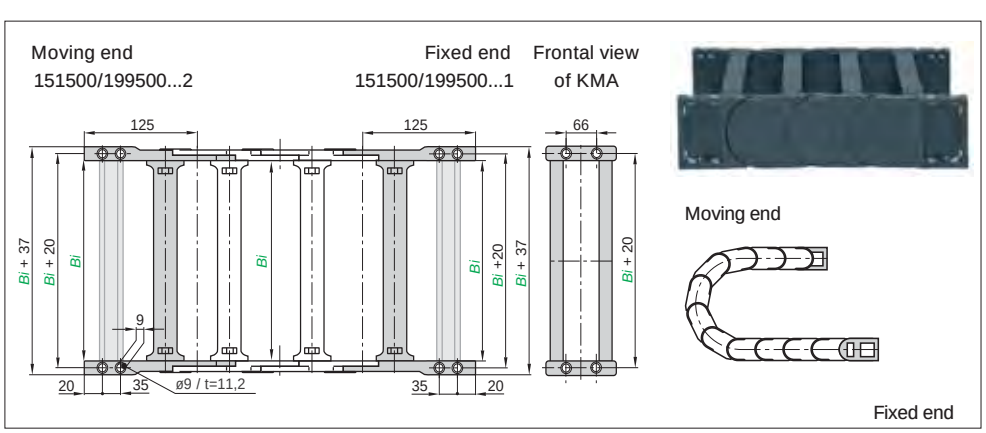


Single-part order:
Mounting bracket Moving end
150500.30.2.C
Mounting bracket Fixed end
150500.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

15050·15150·19850 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



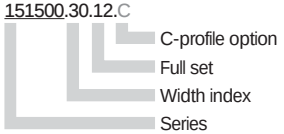
KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
05.	151500. – 05. 12.C	50	31.	151500. – 31. 12.C	312
06.	151500. – 06. 12.C	65	32.	151500. – 32. 12.C	325
07.	151500. 199500. 07. 12.C	75	33.	151500. – 33. 12.C	337
08.	151500. – 08. 12.C	87	35.	151500. 199500. 35. 12.C	350
10.	151500. 199500. 10. 12.C	100	36.	151500. – 36. 12.C	362
11.	151500. – 11. 12.C	112	37.	151500. – 37. 12.C	375
12.	151500. 199500. 12. 12.C	125	38.	151500. – 38. 12.C	387
13.	151500. – 13. 12.C	137	40.	151500. 199500. 40. 12.C	400
15.	151500. 199500. 15. 12.C	150	41.	151500. – 41. 12.C	412
16.	151500. – 16. 12.C	162	42.	151500. – 42. 12.C	425
17.	151500. 199500. 17. 12.C	175	43.	151500. – 43. 12.C	437
18.	151500. – 18. 12.C	187	45.	151500. – 45. 12.C	450
20.	151500. 199500. 20. 12.C	200	46.	151500. 199500. 46. 12.C	462
21.	151500. – 21. 12.C	212	47.	151500. – 47. 12.C	475
22.	151500. – 22. 12.C	225	48.	151500. – 48. 12.C	487
23.	151500. – 23. 12.C	237	50.	151500. – 50. 12.C	500
25.	151500. 199500. 25. 12.C	250	51.	151500. – 51. 12.C	512
26.	151500. – 26. 12.C	262	52.	151500. – 52. 12.C	525
27.	151500. 199500. 27. 12.C	275	53.	151500. – 53. 12.C	537
28.	151500. – 28. 12.C	287	55.	151500. – 55. 12.C	550
30.	151500. 199500. 30. 12.C	300	60.	151500. – 60. 12.C	600



- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

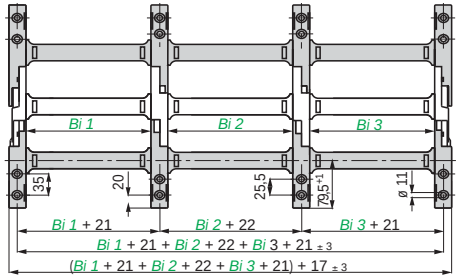
Part No. structure (locking)
151500.30.12.C



Single-part order:
Mounting bracket Moving end
151500.30.2.C
Mounting bracket Fixed end
151500.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



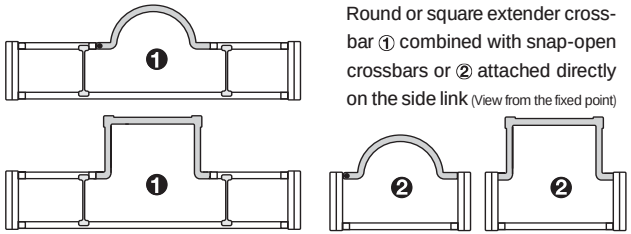


Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
15050.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
15050.10 / 20 / 10.200.0
Extension links: single-part order:
522.*R*. (please indicate radius)





Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 270 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	220	□ square	yes	no
450.40.D300	270	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	220	□ square	no	yes

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
15050.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
15050.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
15050.17RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
15050.17RDZ115.*R*.0



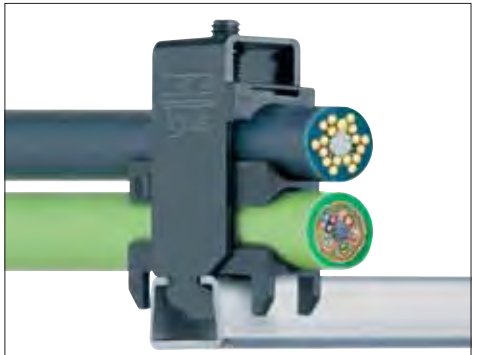


E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 150)
Locking clip, openable
along inner radius "Z":
15050.15.B12.200Z.*R*.0
Locking clip, openable
along outer radius "E":
15050.15.B12.200E.*R*.0



Strain relief system

Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



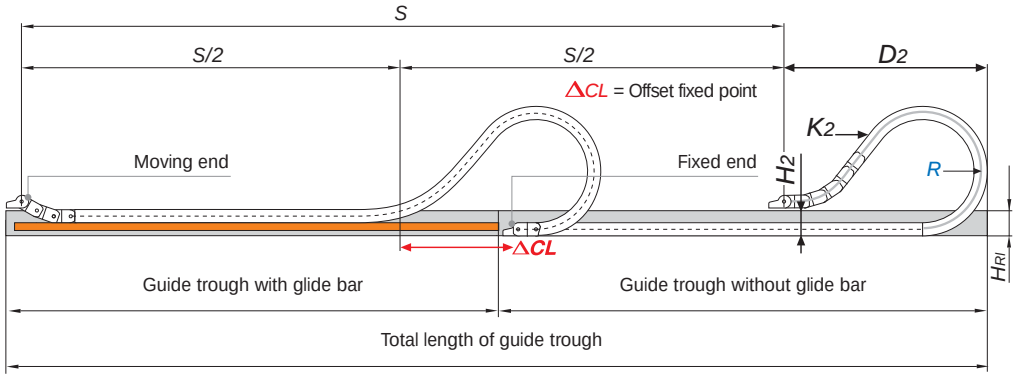
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

15050·15150·19850 | Dimensions | Long travels

Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 9 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K_2$

R	150*	200	250	300	350	400	500	600[1)]
H_2	242	242	242	242	242	242	242	–
D_2 +25	550	800	950	1200	1550	1700	2175	–
K_2	910	1274	1638	2002	2457	2730	3458	–
ΔCL	209	409	509	709	1009	1109	1484	–

*Radius not available for e-tubes [1)] R600 not suitable for long travel applications, please consult igus®

More solutions | For long travel applications

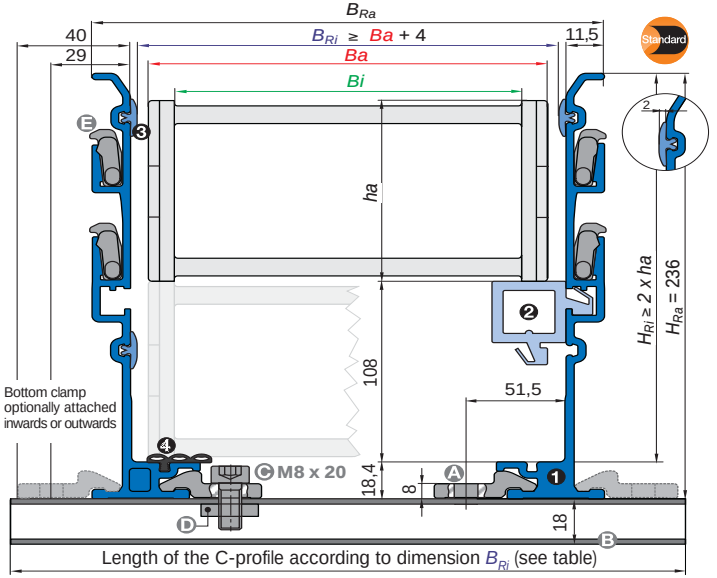
System P4.80 - profile-rol e-chain®, low-noise	Travels up to 800 m	v_{max} 10 m/s
Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life		
rol e-chain® 5050R - rolling instead of gliding	Travels up to 800 m	v_{max} 6,0 m/s
Major reduction in drive power to less than 25 % for moving the e-chain®		

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) · D_2 = Over length - long travels, gliding · K_2 = Further add-on (if the moving end is set lower) · R = Bending radius · ΔCL = Offset fixed point · H_{Ri} = Inner trough height · S = Length of travel · $S/2$ = Half length of travel

Aluminum SuperTrough | Basic Version

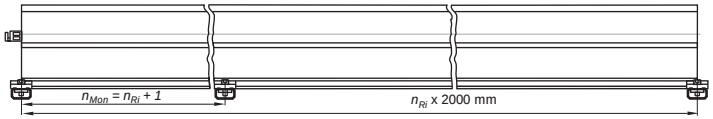
Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 15050.30.300.0 with B_{Ri} = 334

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 975.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 975.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.400
Module for the fixed end	
Order text: 1 set	Part No. 975.80
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Dutyn" version for heavy machinery ▶ from page 1206

● Trough set ● Installation set ● Glide bar · ● C-Profile · Ba = Outer width e-chains® · Bi = Inner width e-chains® · B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height · H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	84	upon request	960.50.200
.06	99	upon request	960.50.225
.07	109	upon request	960.50.225
.08	121	upon request	960.50.250
.10	134	upon request	960.50.250
.11	146	960.50.200	960.50.275
.12	159	960.50.225	960.50.275
.13	171	960.50.225	960.50.300
.15	184	960.50.250	960.50.300
.16	196	960.50.250	960.50.325
.17	209	960.50.275	960.50.325
.18	221	960.50.275	960.50.350
.20	234	960.50.300	960.50.350
.21	246	960.50.300	960.50.375
.22	259	960.50.325	960.50.375
.23	271	960.50.325	960.50.400
.25	284	960.50.350	960.50.400
.26	296	960.50.350	960.50.425
.27	309	960.50.375	960.50.425
.28	321	960.50.375	960.50.450
.30	334	960.50.400	960.50.450
.31	346	960.50.400	960.50.475
.32	359	960.50.425	960.50.475
.33	371	960.50.425	960.50.500
.35	384	960.50.450	960.50.500
.36	396	960.50.450	960.50.525
.37	409	960.50.475	960.50.525
.38	421	960.50.475	960.50.550
.40	434	960.50.500	960.50.550
.41	446	960.50.500	960.50.575
.42	459	960.50.525	960.50.575
.43	471	960.50.525	960.50.600
.45	484	960.50.550	960.50.600
.46	496	960.50.550	960.50.625
.47	509	960.50.575	960.50.625
.48	521	960.50.575	960.50.650
.50	534	960.50.600	960.50.650
.51	546	960.50.600	960.50.675
.52	559	960.50.625	960.50.675
.53	571	960.50.625	960.50.700
.55	584	960.50.650	960.50.700
.60	634	960.50.700	960.50.750

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



"Light design", very large, inner height

When to use Series 15250·15350:

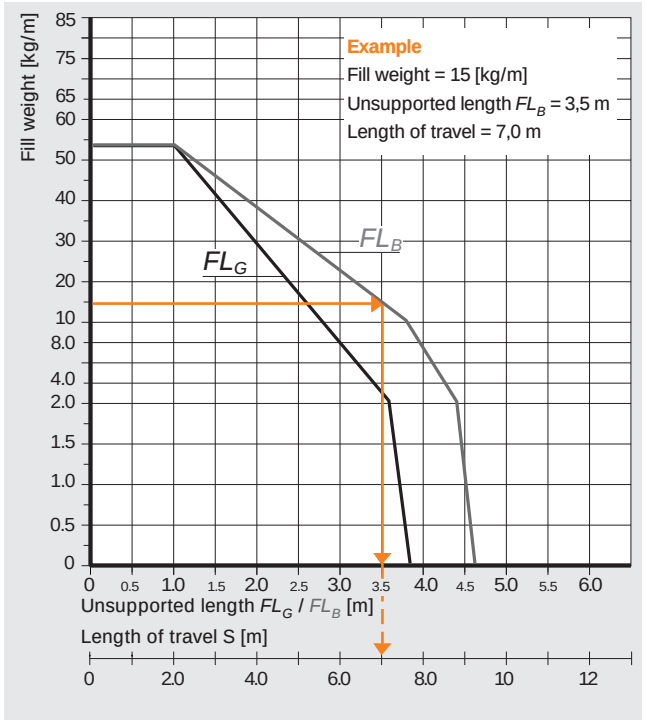
- If weight and price reduction as well as a compromise in strength is needed
- If an e-chain®/e-tube with an inner height of 86 mm is required
- If inner widths up to 400 mm are required
- For unsupported lengths up to 4,6 m and fill weights up to 54 kg/m
- For long travels up to 250 m
- Also suitable for side-mounted, vertical standing or hanging applications

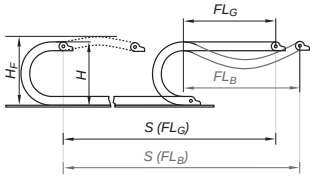
When to use a different igus® Series:

- If an extremely low-noise and low-vibration e-chain® is required (≤46 dB(A))
  ► Series E6.80, page 984
- If larger unsupported lengths are required in side-mounted applications
  ► Series E4.80, page 694
- If increased unsupported lengths and longer travels are required
  ► Series E4.80, page 694
- If high fill weights and/or stiff cables and hoses are used
  ► Series 15050, page 830
- If chip protection is necessary
  ► Series 19850, page 830

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/15250



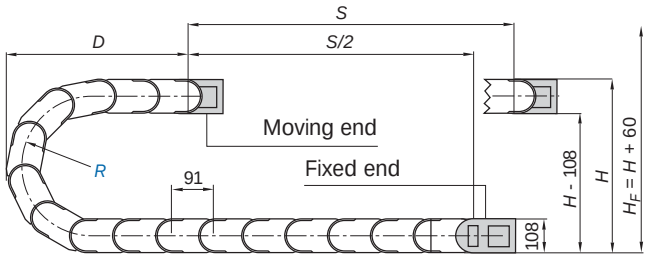


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ► Design, page 95

Gliding applications

Travels up to 250 m.
More information ► page 858



Technical Data

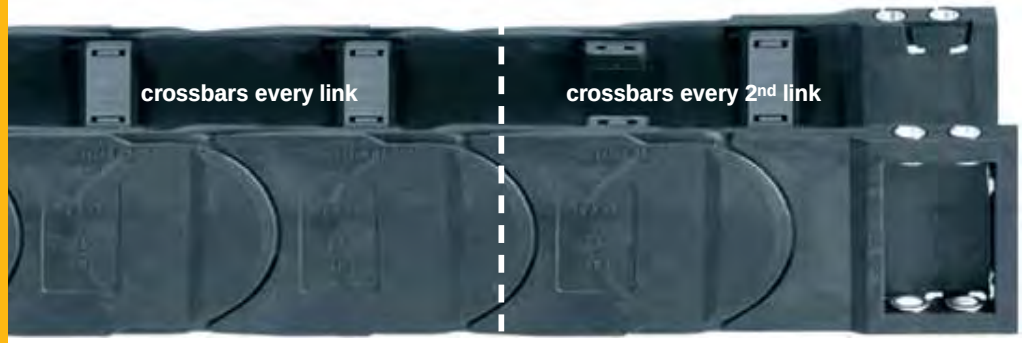
Speed, material, temperature and flammability class ► page 780

Pitch = 91 mm/link
Links/m = 11 (1001 mm)
Chain length = $S/2 + K$

R	150	200	250	300	350	400	500	600
$H\ ^{0}_{+25}$	408	508	608	708	808	908	1108	1308
D	341	391	441	491	541	591	691	791
K	655	815	970	1125	1285	1440	1755	2070

The required clearance height: $H_F = H + 60$ mm (with 3,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series 15250 crossbars every link | Series 15350 crossbars every 2nd link

Part No. crossbars every link	Part No. crossbars every 2nd link		Bi [mm]	Ba [mm]	15250 [kg/m]	15350 [kg/m]
15250.	15350. 05.	R.0	50	80	≈ 3,64	≈ 3,56
15250.	15350. 06.	R.0	68	98	≈ 3,72	≈ 3,60
15250.	15350. 07.	R.0	75	105	≈ 3,74	≈ 3,61
15250.	15350. 087.	R.0	87	117	≈ 3,79	≈ 3,63
15250.	15350. 097.	R.0	97	127	≈ 3,83	≈ 3,65
15250.	15350. 10.	R.0	100	130	≈ 3,85	≈ 3,66
15250.	15350. 11.	R.0	108	138	≈ 3,87	≈ 3,67
15250.	15350. 112.	R.0	112	143	≈ 3,88	≈ 3,68
15250.	15350. 12.	R.0	125	155	≈ 3,95	≈ 3,71
15250.	15350. 137.	R.0	137	167	≈ 3,98	≈ 3,73
15250.	15350. 15.	R.0	150	180	≈ 4,04	≈ 3,75
15250.	15350. 162.	R.0	162	193	≈ 4,06	≈ 3,76
15250.	15350. 17.	R.0	168	198	≈ 4,11	≈ 3,79
15250.	15350. 18.	R.0	175	205	≈ 4,12	≈ 3,80
15250.	15350. 187.	R.0	187	218	≈ 4,15	≈ 3,81
15250.	15350. 20.	R.0	200	230	≈ 4,23	≈ 3,85
15250.	15350. 212.	R.0	212	243	≈ 4,26	≈ 3,86
15250.	15350. 23.	R.0	225	255	≈ 4,32	≈ 3,89
15250.	15350. 237.	R.0	237	268	≈ 4,34	≈ 3,90
15250.	15350. 25.	R.0	250	280	≈ 4,42	≈ 3,94
15250.	15350. 262.	R.0	262	293	≈ 4,47	≈ 3,97
15250.	15350. 28.	R.0	275	305	≈ 4,51	≈ 3,99
15250.	15350. 29.	R.0	287	318	≈ 4,53	≈ 4,00
15250.	15350. 30.	R.0	300	330	≈ 4,61	≈ 4,04
15250.	15350. 312.	R.0	312	343	≈ 4,63	≈ 4,05
15250.	15350. 325.	R.0	325	355	≈ 4,69	≈ 4,08
15250.	15350. 337.	R.0	337	368	≈ 4,73	≈ 4,10
15250.	15350. 350.	R.0	350	380	≈ 4,87	≈ 4,17
15250.	15350. 362.	R.0	362	393	≈ 4,92	≈ 4,20
15250.	15350. 375.	R.0	375	405	≈ 4,97	≈ 4,22
15250.	15350. 387.	R.0	387	418	≈ 5,01	≈ 4,24
15250.	15350. 400.	R.0	400	430	≈ 5,05	≈ 4,26

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15250.30.300.0

e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



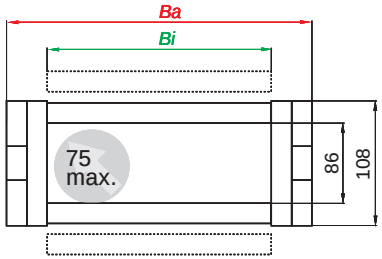
Circular movements (also with reverse bending radius "RBR") possible

Order key for all types

15250. 30. 300. 0 e-chain®, crossbars every link)
15350. 30. 300. 0 e-chain®, crossbars every 2nd link)

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning





QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
15250.	15350. 10.	QZ.R.0	10. QE.R.0	10. Q.R.0	100
15250.	15350. 11.	QZ.R.0	11. QE.R.0	11. Q.R.0	108
15250.	15350. 112.	QZ.R.0	112. QE.R.0	112. Q.R.0	112
15250.	15350. 12.	QZ.R.0	12. QE.R.0	12. Q.R.0	125
15250.	15350. 137.	QZ.R.0	137. QE.R.0	137. Q.R.0	137
15250.	15350. 15.	QZ.R.0	15. QE.R.0	15. Q.R.0	150
15250.	15350. 162.	QZ.R.0	162. QE.R.0	162. Q.R.0	162
15250.	15350. 17.	QZ.R.0	17. QE.R.0	17. Q.R.0	168
15250.	15350. 18.	QZ.R.0	18. QE.R.0	18. Q.R.0	175
15250.	15350. 187.	QZ.R.0	187. QE.R.0	187. Q.R.0	187
15250.	15350. 20.	QZ.R.0	20. QE.R.0	20. Q.R.0	200
15250.	15350. 212.	QZ.R.0	212. QE.R.0	212. Q.R.0	212
15250.	15350. 23.	QZ.R.0	23. QE.R.0	23. Q.R.0	225
15250.	15350. 237.	QZ.R.0	237. QE.R.0	237. Q.R.0	237
15250.	15350. 25.	QZ.R.0	25. QE.R.0	25. Q.R.0	250
15250.	15350. 262.	QZ.R.0	262. QE.R.0	262. Q.R.0	262

Part No. crossbars every link	Part No. crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
15250.	15350. 28.	QZ.R.0	28. QE.R.0	28. Q.R.0	275
15250.	15350. 29.	QZ.R.0	29. QE.R.0	29. Q.R.0	287
15250.	15350. 30.	QZ.R.0	30. QE.R.0	30. Q.R.0	300
15250.	15350. 312.	QZ.R.0	312. QE.R.0	312. Q.R.0	312
15250.	15350. 325.	QZ.R.0	325. QE.R.0	325. Q.R.0	325
15250.	15350. 337.	QZ.R.0	337. QE.R.0	337. Q.R.0	337
15250.	15350. 350.	QZ.R.0	350. QE.R.0	350. Q.R.0	350
15250.	15350. 362.	QZ.R.0	362. QE.R.0	362. Q.R.0	362
15250.	15350. 375.	QZ.R.0	375. QE.R.0	375. Q.R.0	375
15250.	15350. 387.	QZ.R.0	387. QE.R.0	387. Q.R.0	387
15250.	15350. 400	QZ.R.0	400 QE.R.0	400 Q.R.0	400

QuickLock crossbars: inner widths from 100 mm possible!

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: 15250.30QZ.300.0

Configuration options and order keys, overview ▶ page 782

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≈ –10 dB(A)

With pads 15250[1]	15350[1]	Bi [mm]
S15250.	S15350. 05. R.0	50
S15250.	S15350. 06. R.0	68
S15250.	S15350. 07. R.0	75
S15250.	S15350. 087.R.0	87
S15250.	S15350. 097.R.0	97
S15250.	S15350. 10. R.0	100
S15250.	S15350. 11. R.0	108
S15250.	S15350. 112.R.0	112
S15250.	S15350. 12. R.0	125
S15250.	S15350. 137.R.0	137
S15250.	S15350. 15. R.0	150
S15250.	S15350. 162.R.0	162
S15250.	S15350. 17. R.0	168
S15250.	S15350. 18. R.0	175
S15250.	S15350. 187.R.0	187
S15250.	S15350. 20. R.0	200

With pads 15250[1]	15350[1]	Bi [mm]
S15250.	S15350. 212.R.0	212
S15250.	S15350. 23. R.0	225
S15250.	S15350. 237.R.0	237
S15250.	S15350. 25. R.0	250
S15250.	S15350. 262.R.0	262
S15250.	S15350. 28. R.0	275
S15250.	S15350. 29. R.0	287
S15250.	S15350. 30. R.0	300
S15250.	S15350. 312.R.0	312
S15250.	S15350. 325.R.0	325
S15250.	S15350. 337.R.0	337
S15250.	S15350. 350.R.0	350
S15250.	S15350. 362.R.0	362
S15250.	S15350. 375.R.0	375
S15250.	S15350. 387.R.0	387
S15250.	S15350. 400.R.0	400

NC-Version | Without pretension

NC-Version 15250[1]	15350[1]	Bi [mm]
15250.	15350.05. R.0.NC	50
15250.	15350.06. R.0.NC	68
15250.	15350.07. R.0.NC	75
15250.	15350.087.R.0.NC	87
15250.	15350.097.R.0.NC	97
15250.	15350.10. R.0.NC	100
15250.	15350.11. R.0.NC	108
15250.	15350.112.R.0.NC	112
15250.	15350.12. R.0.NC	125
15250.	15350.137.R.0.NC	137
15250.	15350.15. R.0.NC	150
15250.	15350.162.R.0.NC	162
15250.	15350.17. R.0.NC	168
15250.	15350.18. R.0.NC	175
15250.	15350.187.R.0.NC	187
15250.	15350.20. R.0.NC	200

NC-Version 15250[1]	15350[1]	Bi [mm]
15250.	15350.212.R.0.NC	212
15250.	15350.23. R.0.NC	225
15250.	15350.237.R.0.NC	237
15250.	15350.25. R.0.NC	250
15250.	15350.262.R.0.NC	262
15250.	15350.28. R.0.NC	275
15250.	15350.29. R.0.NC	287
15250.	15350.30. R.0.NC	300
15250.	15350.312.R.0.NC	312
15250.	15350.325.R.0.NC	325
15250.	15350.337.R.0.NC	337
15250.	15350.350.R.0.NC	350
15250.	15350.362.R.0.NC	362
15250.	15350.375.R.0.NC	375
15250.	15350.387.R.0.NC	387
15250.	15350.400.R.0.NC	400

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600

Supplement Part No. with required radius (*R*). Example: S15250.30.300.0 or 15250.30.300.0.NC

1) 15250 = e-chain® with crossbars every link 1350 = e-chain® with crossbars every 2nd link

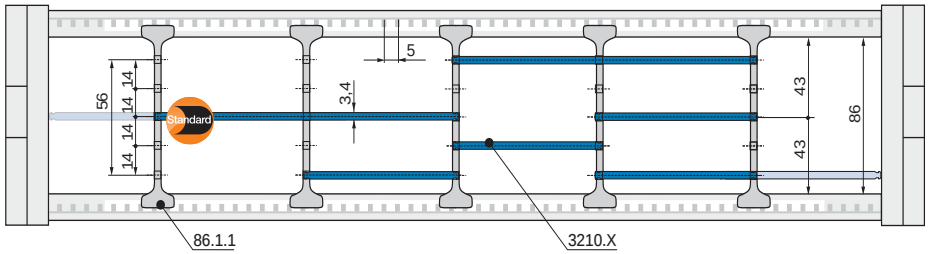
Configuration options and order keys, overview ▶ page 782

Noise dampening and NC-Version - Delivery time* 3-5 work days.

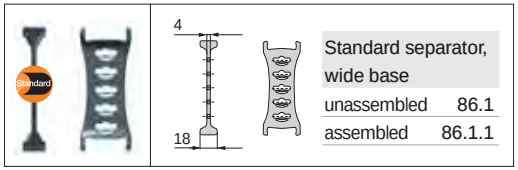
*Delivery time means time until shipping of goods (after technical release)

E4/light | Series 15250·15350 | Interior separation | Standard

New generation interior separation - for e-chains®



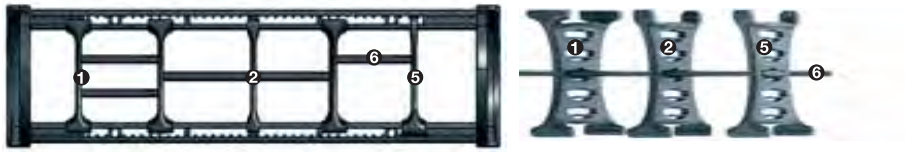
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	86.1
assembled	86.1.1

Standard - for all applications

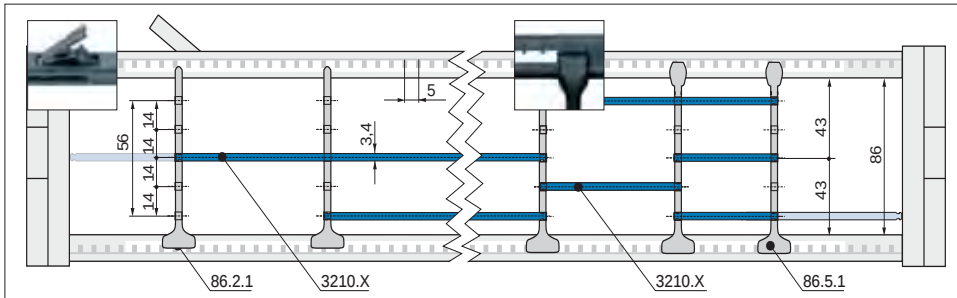
Separator with a wide base for maximum locking strength and safe standing in e-chains®.



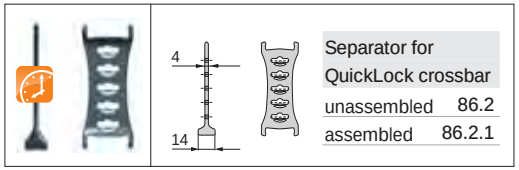
① Standard separator, wide base - Part No. 86.1 ⑤ Notch separator - Part No. 86.5
② Separator for QuickLock crossbar - Part No. 86.2 ⑥ Full-width self, lockable - Part No. 3200.X

E4/light | Series 15250·15350 | Interior separation | Standard

New generation interior separation - for e-chains®



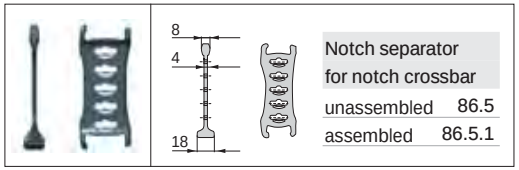
Note: No lateral spacing to side links necessary!
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for QuickLock crossbar	
unassembled	86.2
assembled	86.2.1

For even faster installation

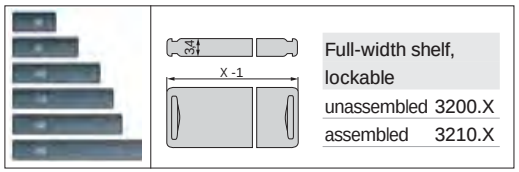
Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Notch separator for notch crossbar	
unassembled	86.5
assembled	86.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.

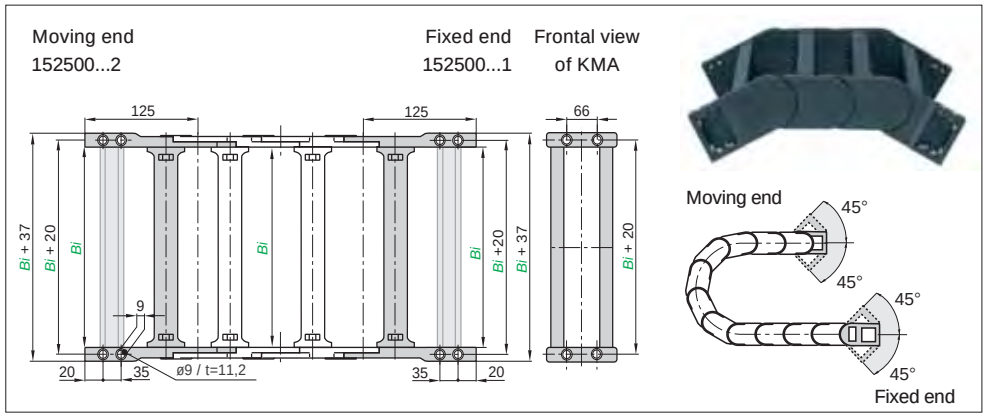


Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

E4/light | 15250·15350 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment.
Recommended for unsupported and gliding applications

Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **pivoting** (+ C-profile option)	Bi [mm]
.05	152500. 05. 12.C	50	.212	152500. 212. 12.C	212
.06	152500. 06. 12.C	68	.23	152500. 23. 12.C	225
.07	152500. 07. 12.C	75	.237	152500. 237. 12.C	237
.087	152500. 087. 12.C	87	.25	152500. 25. 12.C	250
.09	152500. 09. 12.C	97	.262	152500. 262. 12.C	262
.10	152500. 10. 12.C	100	.28	152500. 28. 12.C	275
.11	152500. 11. 12.C	108	.29	152500. 29. 12.C	287
.112	152500. 112. 12.C	112	.30	152500. 30. 12.C	300
.12	152500. 12. 12.C	125	.312	152500. 312. 12.C	312
.137	152500. 137. 12.C	137	.325	152500. 325. 12.C	325
.15	152500. 15. 12.C	150	.337	152500. 337. 12.C	337
.162	152500. 162. 12.C	162	.350	152500. 350. 12.C	350
.17	152500. 17. 12.C	168	.362	152500. 362. 12.C	362
.18	152500. 18. 12.C	175	.375	152500. 375. 12.C	375
.187	152500. 187. 12.C	187	.387	152500. 387. 12.C	387
.20	152500. 20. 12.C	200	.400	152500. 400. 12.C	400

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

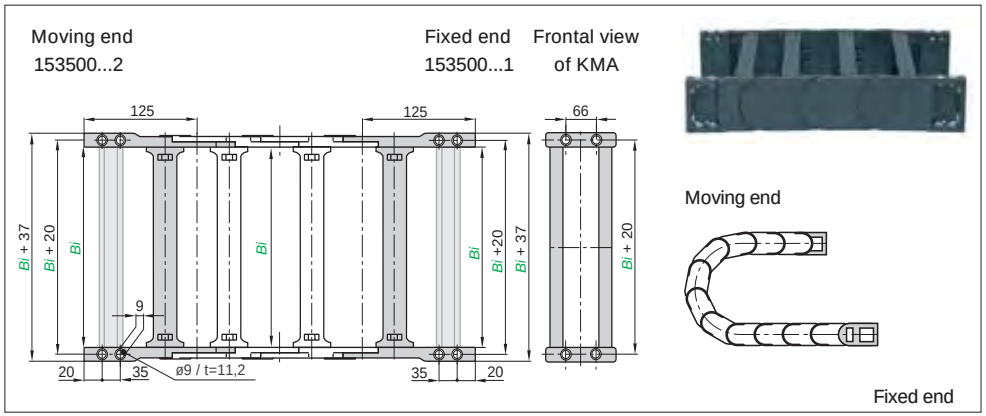
Part No. structure (pivoting)
152500.30.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
152500.30.2.C
Mounting bracket Fixed end
152500.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

E4/light | 15250·15350 | KMA mounting brackets locking

For very high speed and acceleration, all-sides attachment



KMA locking | All-sides attachment.
Recommended for vertical hanging and standing applications

Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]	Width index	Part No. full set **locking** (+ C-profile option)	Bi [mm]
.05	153500. 05. 12.C	50	.212	153500. 212. 12.C	212
.06	153500. 06. 12.C	68	.23	153500. 23. 12.C	225
.07	153500. 07. 12.C	75	.237	153500. 237. 12.C	237
.087	153500. 087. 12.C	87	.25	153500. 25. 12.C	250
.09	153500. 09. 12.C	97	.262	153500. 262. 12.C	262
.10	153500. 10. 12.C	100	.28	153500. 28. 12.C	275
.11	153500. 11. 12.C	108	.29	153500. 29. 12.C	287
.112	153500. 112. 12.C	112	.30	153500. 30. 12.C	300
.12	153500. 12. 12.C	125	.312	153500. 312. 12.C	312
.137	153500. 137. 12.C	137	.325	153500. 325. 12.C	325
.15	153500. 15. 12.C	150	.337	153500. 337. 12.C	337
.162	153500. 162. 12.C	162	.350	153500. 350. 12.C	350
.17	153500. 17. 12.C	168	.362	153500. 362. 12.C	362
.18	153500. 18. 12.C	175	.375	153500. 375. 12.C	375
.187	153500. 187. 12.C	187	.387	153500. 387. 12.C	387
.20	153500. 20. 12.C	200	.400	153500. 400. 12.C	400

- Locked connections
- At high acceleration
- Universally mountable
- C-profile option
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

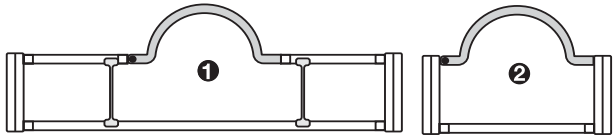
Part No. structure (locking)
153500.30.12.C
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
153500.30.2.C
Mounting bracket Fixed end
153500.30.1.C

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



Round extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)



Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 115 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
385.15.RHD115	115	○ round	no	yes
385.18.RD115	115	○ round	yes	no

Order examples - extender crossbar

① Combination with snap-open crossbars

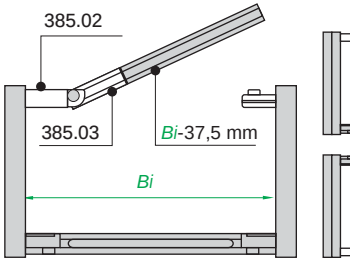
RHD115 for outer radius "E" incl. e-chain®:
15250.10/15RHDE115/10.*R*.0

RHD115 for inner radius "Z" incl. e-chain®:
15250.10/15RHDZ115/10.*R*.0

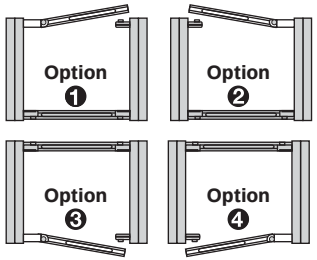
② Installation on side link

RD115 for outer radius "E" incl. e-chain®:
15250.18RDE115.*R*.0

RD115 for inner radius "Z" incl. e-chain®:
15250.18RDZ115.*R*.0



(View from the fixed point)





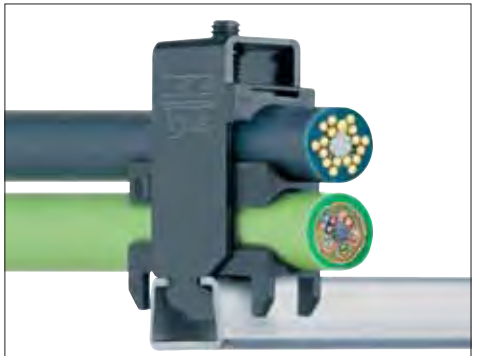
Hinged crossbars

- Typically e-chain® crossbars are completely removable. For cases where the snap-open crossbars have to remain at the open link of the e-chain®, a hinged design has been developed
- Please consult igus® for design assistance
- Hinged crossbar: Part No. **385.02**
  Snap-open crossbar (shortened): *Bi*-37,5 mm Part No. **385.03**
  (smallest inner width *Bi* = 87,5)

Order example (here: inner width *Bi* 150)

15250.15.Z.*R*.0 =
15250.15.1.*R*.0

Supplement Index "Z" with required option number ①, ②, ③ or ④



Strain relief system

Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



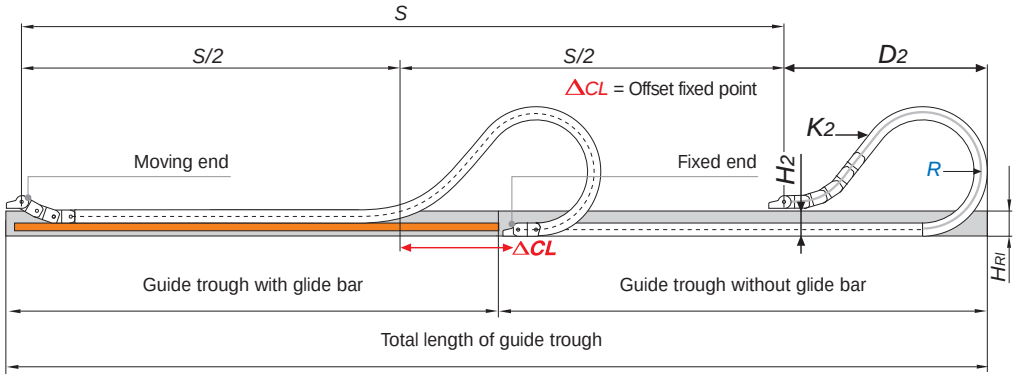
Support tray tool kit

For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Series 15250·15350 | Dimensions | Long travels

Gliding applications | For long travels from 12 m to max. 250 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 9 and 12 m we recommend a longer unsupported length. More information ▶ Design, from page 106



Pitch = 91 mm/link · Links/m = 11 (1001 mm) · Chain length = $S/2 + K_2$

R	150	200	250	300	350	400	500	600 [1]
H_2	242	242	242	242	242	242	242	–
D_2 +25	550	800	950	1200	1550	1700	2175	–
K_2	910	1274	1638	2002	2457	2730	3458	–
ΔCL	209	409	509	709	1009	1109	1339	–

[1] R600 not suitable for long travel applications, please consult igus®

More solutions | For long travel applications

System P4.80 - profile-rol e-chain®, low-noise — Travels up to 800 m — v_{max} 10 m/s

Safe, maintenance-free for outdoor cranes or conveyor systems. Low-noise operation, high service life

rol e-chain® 5050R - rolling instead of gliding — Travels up to 800 m — v_{max} 6,0 m/s

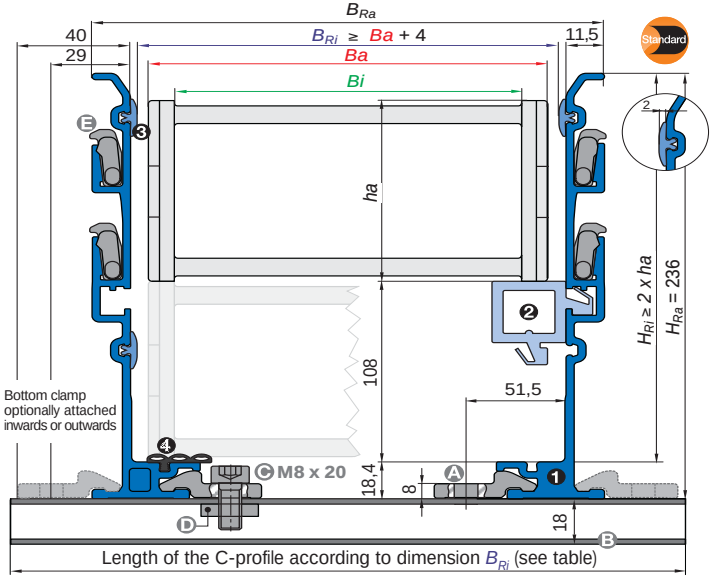
Major reduction in drive power to less than 25 % for moving the e-chain®

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) | K_2 = Further add-on (if the moving end is set lower) | ΔCL = Offset fixed point | S = Length of travel
D_2 = Over length - long travels, gliding | R = Bending radius | H_{Ri} = Inner trough height | S/2 = Half length of travel

Aluminum SuperTrough | Basic Version

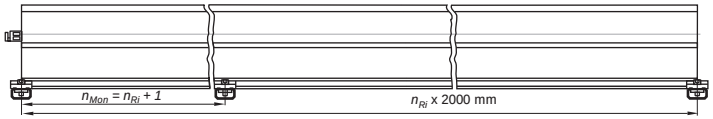
Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 15250.30.300.0 with B_{Ri} = 334

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 975.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 975.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.400
Module for the fixed end	
Order text: 1 set	Part No. 975.80
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Dutyn" version for heavy machinery ▶ from page 1206

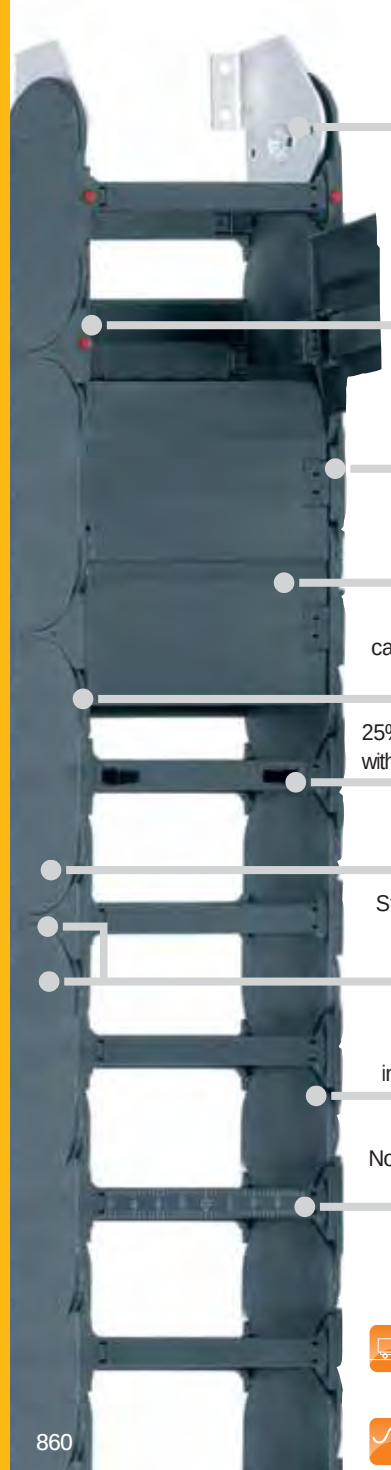
● Trough set ● Installation set ● Glide bar | ● C-Profile | Ba = Outer width e-chains® | Bi = Inner width e-chains® | B_{Ri} = Inner trough width | B_{Ra} = Outer trough width | H_{Ri} = Inner trough height | H_{Ra} = Outer trough height | n_{Mon} = Number of installation sets | n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	84	upon request	960.50.200
.06	102	upon request	960.50.225
.07	109	upon request	960.50.225
.087	121	upon request	960.50.250
.09	131	upon request	960.50.250
.10	134	upon request	960.50.250
.11	142	960.50.200	960.50.250
.112	147	960.50.200	960.50.275
.12	159	960.50.225	960.50.275
.137	171	960.50.225	960.50.300
.15	184	960.50.250	960.50.300
.162	197	960.50.250	960.50.325
.17	202	960.50.250	960.50.325
.18	209	960.50.275	960.50.325
.187	222	960.50.275	960.50.350
.20	234	960.50.300	960.50.350
.212	247	960.50.300	960.50.375
.23	259	960.50.325	960.50.375
.237	272	960.50.325	960.50.400
.25	284	960.50.350	960.50.400
.262	297	960.50.350	960.50.425
.28	309	960.50.375	960.50.425
.29	322	960.50.375	960.50.450
.30	334	960.50.400	960.50.450
.312	347	960.50.400	960.50.475
.325	359	960.50.425	960.50.475
.337	372	960.50.425	960.50.500
.350	384	960.50.450	960.50.500
.362	397	960.50.450	960.50.525
.375	409	960.50.475	960.50.525
.387	422	960.50.475	960.50.550
.400	434	960.50.500	960.50.550

Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



Stable due to undercut design, very large inner height

When to use Series 1640·1608:

- If a robust e-chain® with an inner height of 112 mm is required (108 mm on e-tube)
- If inner widths up to 600 mm are required
- For unsupported lengths up to 4,5 m and fill weights up to 50 kg/m
- For long travels up to 400 m
- Also suitable for side-mounted, vertical standing or hanging applications
- If many options and accessories are desired
- Optimized ratio of interior/exterior dimension

When to use a different igus® Series:

- If more stability is required

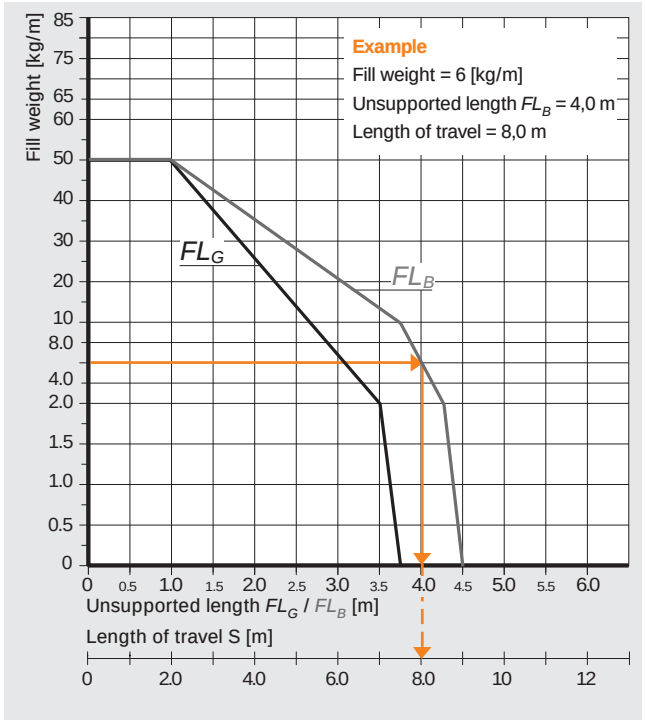
►Series E4.112, page 710

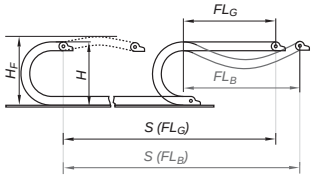
The igus® E4 **e-chain® opener** reduces assembly time ► page 779

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ► www.igus.eu/eu/1640



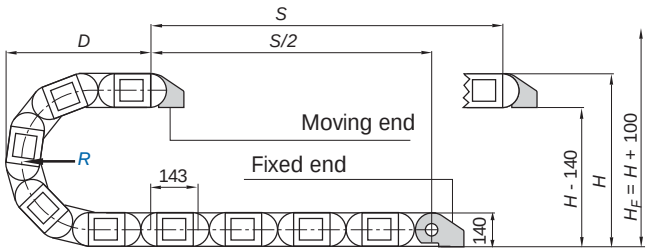


Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ►Design, page 95

Gliding applications

Travels up to 400 m.
More information ► page 872



Technical Data

Speed, material, temperature and flammability class ► page 780

Pitch = 143 mm/link
Links/m = 7 (1001 mm)
Chain length = $S/2 + K$

R	200*	250	300	350	400	450	500	550	600
H	540	640	740	840	940	1040	1140	1240	1340
D	485	535	585	635	685	735	785	835	885
K	915	1075	1230	1390	1545	1700	1860	2015	2175

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

*Radius not available for e-tubes

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series 1640 with crossbars every link

Part No. crossbars every link	Bi [mm]	Ba [mm]	1640 [kg/m]
1640. 05. R.0	50	84	≈ 5,10
1640. 06. R.0	65	99	≈ 5,18
1640. 07. R.0	75	109	≈ 5,27
1640. 08. R.0	87	121	≈ 5,31
1640. 10. R.0	100	134	≈ 5,36
1640. 11. R.0	112	146	≈ 5,45
1640. 12. R.0	125	159	≈ 5,54
1640. 13. R.0	137	171	≈ 5,63
1640. 15. R.0	150	184	≈ 5,67
1640. 16. R.0	162	196	≈ 5,74
1640. 17. R.0	175	209	≈ 5,81
1640. 18. R.0	187	221	≈ 5,88
1640. 20. R.0	200	234	≈ 5,89
1640. 21. R.0	212	246	≈ 5,96
1640. 22. R.0	225	259	≈ 6,01
1640. 23. R.0	237	271	≈ 6,09
1640. 25. R.0	250	284	≈ 6,15
1640. 26. R.0	262	296	≈ 6,20
1640. 27. R.0	275	309	≈ 6,27
1640. 28. R.0	287	321	≈ 6,29
1640. 30. R.0	300	334	≈ 6,34

Part No. crossbars every link	Bi [mm]	Ba [mm]	1640 [kg/m]
1640. 31. R.0	312	346	≈ 6,41
1640. 32. R.0	325	359	≈ 6,48
1640. 33. R.0	337	371	≈ 6,59
1640. 35. R.0	350	384	≈ 6,61
1640. 36. R.0	362	396	≈ 6,67
1640. 37. R.0	375	409	≈ 6,71
1640. 38. R.0	387	421	≈ 6,76
1640. 40. R.0	400	434	≈ 6,89
1640. 41. R.0	412	446	≈ 6,99
1640. 42. R.0	425	459	≈ 7,08
1640. 43. R.0	437	471	≈ 7,13
1640. 45. R.0	450	484	≈ 7,17
1640. 46. R.0	462	496	≈ 7,18
1640. 47. R.0	475	509	≈ 7,22
1640. 48. R.0	487	521	≈ 7,27
1640. 50. R.0	500	534	≈ 7,35
1640. 51. R.0	512	546	≈ 7,36
1640. 52. R.0	525	559	≈ 7,39
1640. 53. R.0	537	571	≈ 7,49
1640. 55. R.0	550	584	≈ 7,80
1640. 60. R.0	600	634	≈ 7,92

Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600

Supplement Part No. with required radius (*R*). Example: 1640.30.300.0

e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series 1608 - fully enclosed

Part No. fully enclosed	Bi [mm]	Ba [mm]	1608 [kg/m]
1608. 20. R.0	200	234	7,690
1608. 25. R.0	250	284	8,390
1608. 30. R.0	300	334	9,090

Part No. fully enclosed	Bi [mm]	Ba [mm]	1608 [kg/m]
1608. 35. R.0	350	384	9,790
1608. 40. R.0	400	434	10,490

Available bending radii *R* [mm] 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600

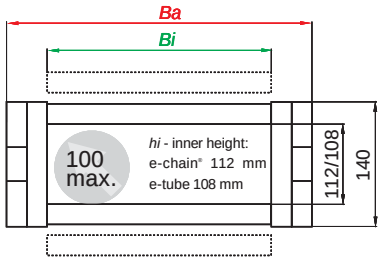
Supplement Part No. with required radius (*R*). Example: 1608.30.300.0

Order key for all types

1640. 30. 300. 0 e-chain®, crossbars every link)
1608. 30. 300. 0 e-tube, fully enclosed

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 781

Configuration options and order keys, overview ▶ page 782

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



QuickLock crossbars | Quick opening - up to 25% faster assembly

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
1640.	15	QZ.R.0	QE.R.0	Q.R.0	150
1640.	16	QZ.R.0	QE.R.0	Q.R.0	162
1640.	17	QZ.R.0	QE.R.0	Q.R.0	175
1640.	18	QZ.R.0	QE.R.0	Q.R.0	187
1640.	20	QZ.R.0	QE.R.0	Q.R.0	200
1640.	21	QZ.R.0	QE.R.0	Q.R.0	212
1640.	22	QZ.R.0	QE.R.0	Q.R.0	225
1640.	23	QZ.R.0	QE.R.0	Q.R.0	237
1640.	25	QZ.R.0	QE.R.0	Q.R.0	250
1640.	26	QZ.R.0	QE.R.0	Q.R.0	262
1640.	27	QZ.R.0	QE.R.0	Q.R.0	275
1640.	28	QZ.R.0	QE.R.0	Q.R.0	287
1640.	30	QZ.R.0	QE.R.0	Q.R.0	300
1640.	31	QZ.R.0	QE.R.0	Q.R.0	312
1640.	32	QZ.R.0	QE.R.0	Q.R.0	325
1640.	33	QZ.R.0	QE.R.0	Q.R.0	337
1640.	35	QZ.R.0	QE.R.0	Q.R.0	350
1640.	36	QZ.R.0	QE.R.0	Q.R.0	362
1640.	37	QZ.R.0	QE.R.0	Q.R.0	375
1640.	38	QZ.R.0	QE.R.0	Q.R.0	387
1640.	40	QZ.R.0	QE.R.0	Q.R.0	400

Part No. crossbars every link	crossbars every 2nd link	QuickLock crossbar for Inner radius	Outer radius	Both radii	Bi [mm]
1640.	41	QZ.R.0	QE.R.0	Q.R.0	412
1640.	42	QZ.R.0	QE.R.0	Q.R.0	425
1640.	43	QZ.R.0	QE.R.0	Q.R.0	437
1640.	45	QZ.R.0	QE.R.0	Q.R.0	450
1640.	46	QZ.R.0	QE.R.0	Q.R.0	462
1640.	47	QZ.R.0	QE.R.0	Q.R.0	475
1640.	48	QZ.R.0	QE.R.0	Q.R.0	487
1640.	50	QZ.R.0	QE.R.0	Q.R.0	500
1640.	51	QZ.R.0	QE.R.0	Q.R.0	512
1640.	52	QZ.R.0	QE.R.0	Q.R.0	525
1640.	53	QZ.R.0	QE.R.0	Q.R.0	537
1640.	55	QZ.R.0	QE.R.0	Q.R.0	550
1640.	60	QZ.R.0	QE.R.0	Q.R.0	600

QuickLock crossbars: inner widths from 150 mm possible!

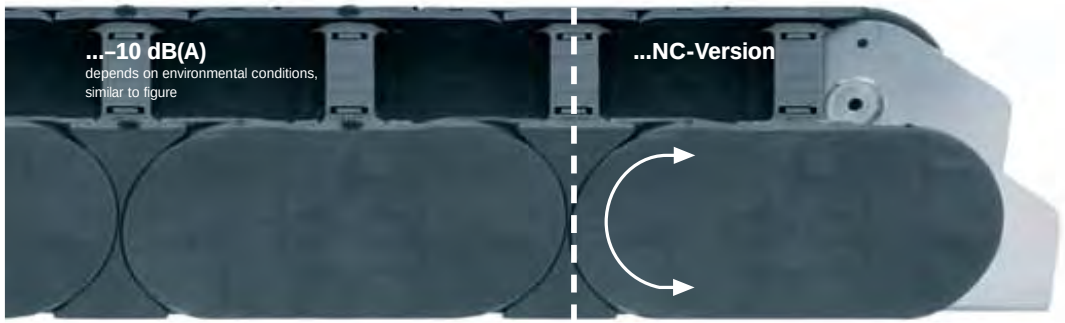
Available bending radii *R* [mm] 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600

Supplement Part No. with required radius (*R*). Example: 1640.30QZ.300.0

Configuration options and order keys, overview ▶ page 782

e-chain® with QuickLock crossbars - Delivery time* 3-5 work days.

*Delivery time means time until shipping of goods (after technical release)



Noise dampening | ≈ –10 dB(A)

With pads 1640[1]	1608[1]			Bi [mm]
S1640	–	.05.	R.0	50
S1640	–	.06.	R.0	65
S1640	–	.07.	R.0	75
S1640	–	.08.	R.0	87
S1640	–	.10.	R.0	100
S1640	–	.11.	R.0	112
S1640	–	.12.	R.0	125
S1640	–	.13.	R.0	137
S1640	–	.15.	R.0	150
S1640	–	.16.	R.0	162
S1640	–	.17.	R.0	175
S1640	–	.18.	R.0	187
S1640	S1608	.20.	R.0	200
S1640	–	.21.	R.0	212
S1640	–	.22.	R.0	225
S1640	–	.23.	R.0	237
S1640	S1608	.25.	R.0	250
S1640	–	.26.	R.0	262
S1640	–	.27.	R.0	275
S1640	–	.28.	R.0	287
S1640	S1608	.30.	R.0	300

With pads 1640[1]	1608[1]			Bi [mm]
S1640	–	.31.	R.0	312
S1640	–	.32.	R.0	325
S1640	–	.33.	R.0	337
S1640	S1608	.35.	R.0	350
S1640	–	.36.	R.0	362
S1640	–	.37.	R.0	375
S1640	–	.38.	R.0	387
S1640	S1608	.40.	R.0	400
S1640	–	.41.	R.0	412
S1640	–	.42.	R.0	425
S1640	–	.43.	R.0	437
S1640	–	.45.	R.0	450
S1640	–	.46.	R.0	462
S1640	–	.47.	R.0	475
S1640	–	.48.	R.0	487
S1640	–	.50.	R.0	500
S1640	–	.51.	R.0	512
S1640	–	.52.	R.0	525
S1640	–	.53.	R.0	537
S1640	–	.55.	R.0	550
S1640	–	.60.	R.0	600

NC-Version | Without pretension

NC-Version 1640[1]	1608[1]				Bi [mm]
1640	–	.05.	R.0.	NC	50
1640	–	.06.	R.0.	NC	65
1640	–	.07.	R.0.	NC	75
1640	–	.08.	R.0.	NC	87
1640	–	.10.	R.0.	NC	100
1640	–	.11.	R.0.	NC	112
1640	–	.12.	R.0.	NC	125
1640	–	.13.	R.0.	NC	137
1640	–	.15.	R.0.	NC	150
1640	–	.16.	R.0.	NC	162
1640	–	.17.	R.0.	NC	175
1640	–	.18.	R.0.	NC	187
1640	1608	.20.	R.0.	NC	200
1640	–	.21.	R.0.	NC	212
1640	–	.22.	R.0.	NC	225
1640	–	.23.	R.0.	NC	237
1640	–	.25.	R.0.	NC	250
1640	–	.26.	R.0.	NC	262
1640	–	.27.	R.0.	NC	275
1640	–	.28.	R.0.	NC	287
1640	1608	.30.	R.0.	NC	300

NC-Version 1640[1]	1608[1]				Bi [mm]
1640	–	.31.	R.0.	NC	312
1640	–	.32.	R.0.	NC	325
1640	–	.33.	R.0.	NC	337
1640	1608	.35.	R.0.	NC	350
1640	–	.36.	R.0.	NC	362
1640	–	.37.	R.0.	NC	375
1640	–	.38.	R.0.	NC	387
1640	1608	.40.	R.0.	NC	400
1640	–	.41.	R.0.	NC	412
1640	–	.42.	R.0.	NC	425
1640	–	.43.	R.0.	NC	437
1640	–	.45.	R.0.	NC	450
1640	–	.46.	R.0.	NC	462
1640	–	.47.	R.0.	NC	475
1640	–	.48.	R.0.	NC	487
1640	–	.50.	R.0.	NC	500
1640	–	.51.	R.0.	NC	512
1640	–	.52.	R.0.	NC	525
1640	–	.53.	R.0.	NC	537
1640	–	.55.	R.0.	NC	550
1640	–	.60.	R.0.	NC	600

Available bending radii *R* [mm] 200* | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 *Radius not available for e-tubes

Supplement Part No. with required radius (*R*). Example: S1640.30.300.0 or 1640.30.300.0.NC

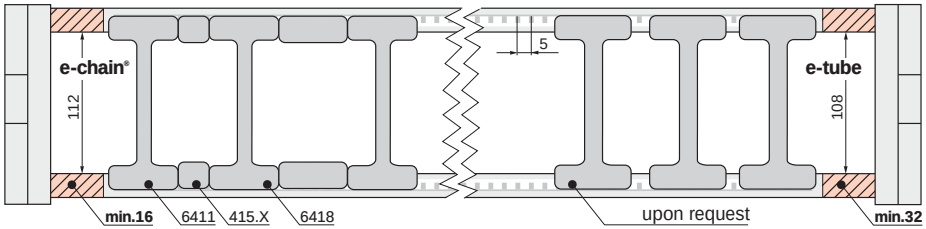
1) 1640 = e-chain® with crossbars every link 1608 = e-tube fully enclosed

Configuration options and order keys, overview ▶ page 782

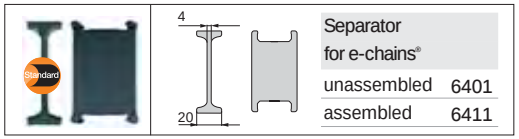
Noise dampening - Delivery time* 3-5 work days. NC-Version - Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Option 1 | Separators and spacers* (*side-mounted applications)



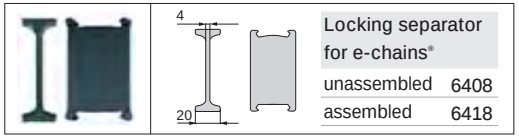
Note: Please observe a lateral spacing to the side links! **e-tube: 32 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-chains®	
unassembled	6401
assembled	6411

Separator 6401 (e-chains® only)

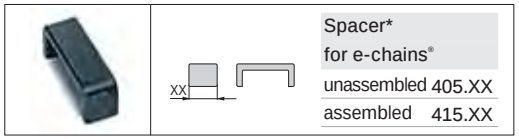
For a vertical subdivision. Offers safe stability due to its wide base design, also when used with thick cables or hoses (Separator for e-tubes 1608 upon request).



Locking separator for e-chains®	
unassembled	6408
assembled	6418

Locking separator 6408 (e-chains® only)

For applications exposed to very high humidity (> 85%). Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.

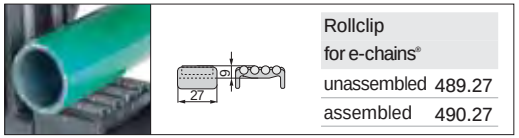


Spacer* for e-chains®	
unassembled	405.XX
assembled	415.XX

Spacer* 405.XX (e-chains® only)

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20, 30, 40 mm).

Additional elements for interior separation

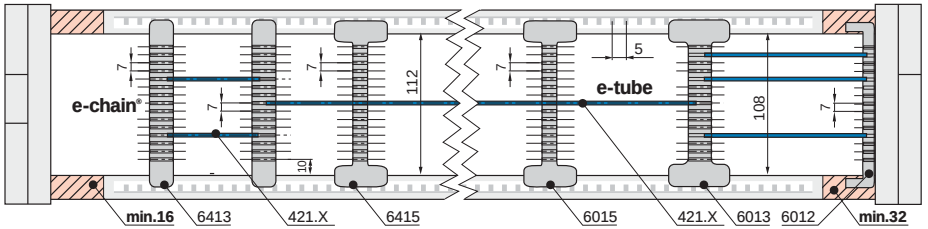


Rollclip for e-chains®	
unassembled	489.27
assembled	490.27

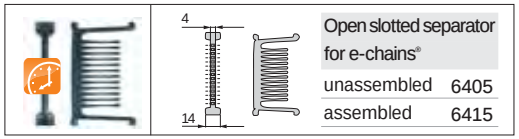
Rollclip

Minimizes abrasion of particularly sensitive hoses - simply clamped onto the opening crossbar. The movable rollers compensate for relative movement between the e-chain® and hose.

Option 2 | Shelves



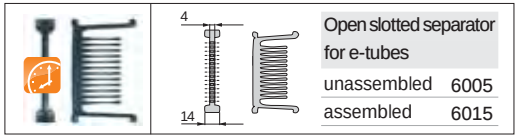
Note: Please observe a lateral spacing to the side links! **e-tube: 32 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Open slotted separator for e-chains®	
unassembled	6405
assembled	6415

Open, slotted separator 6405 (unilateral open)

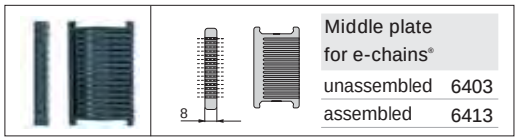
Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves. e-chains® only!



Open slotted separator for e-tubes	
unassembled	6005
assembled	6015

Open, slotted separator 6005 (e-tubes only, unilateral open)

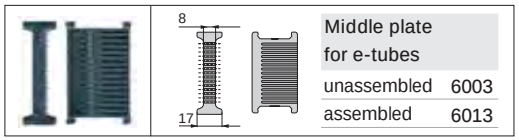
Works like open, slotted separator 6405 on e-tube 1608



Middle plate for e-chains®	
unassembled	6403
assembled	6413

Middle plate 6403 (e-chains® only)

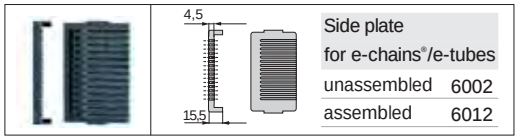
To achieve a modular shelving shelf 420.X can be arranged at 15 different heights (in 7 mm increments).



Middle plate for e-tubes	
unassembled	6003
assembled	6013

Middle plate 6003 (e-tubes only)

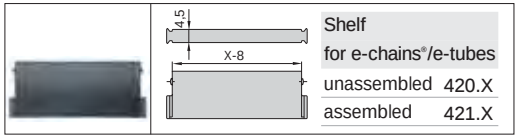
Works like middle plate 6403 on e-tube 1608



Side plate for e-chains®/e-tubes	
unassembled	6002
assembled	6012

Side plate 6002 (e-chains®/e-tubes)

Works like middle plate.
Allows modular shelving close to the side links.



Shelf for e-chains®/e-tubes	
unassembled	420.X
assembled	421.X

Shelf 420.X

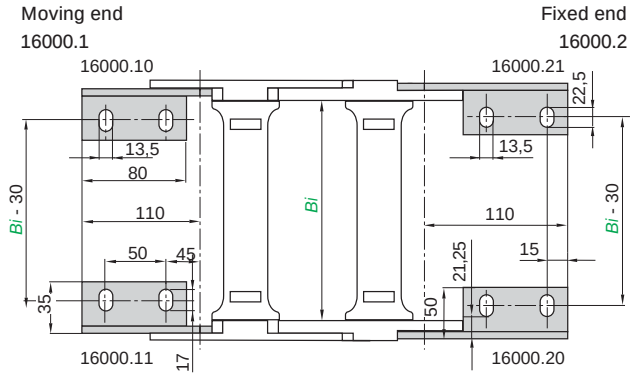
For horizontal separation. Shelves of various widths can be arranged at 15 different heights (in 7 mm increments). - see table below.

Width X [mm]	unassembled	assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28

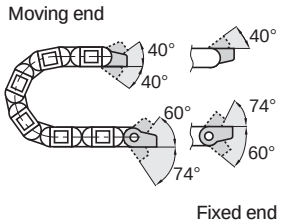
Width X [mm]	unassembled	assembled
033	420.33	421.33
043	420.43	421.43
050	420.50	421.50
062	420.62	421.62

Width X [mm]	unassembled	assembled
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125

Width X [mm]	unassembled	assembled
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

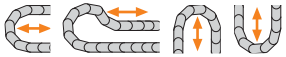






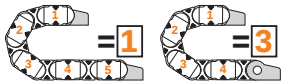
Steel pivoting | Recommended for unsupported, gliding, vertical hanging and standing applications

Part No.	Mounting bracket pivoting
16000.1.12.VS.E	Full set (both sides), ending with outer side link, screwed - Standard
16000.3.12.VS.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), screwed - Standard
16000.1.12.E	Full set (both sides), ending with outer side link, not screwed - Standard
16000.3.12.E	Full set (both sides), beginning with outer side link (moving end), ending with inner side link (fixed end), not screwed - Standard



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

Note: Depending on the e-chain® length, the carrier will end with 1 outer or 3 inner side links. For the best appearance, make sure the e-chain® ends with 1 outer side link whenever possible. (with odd number of links)

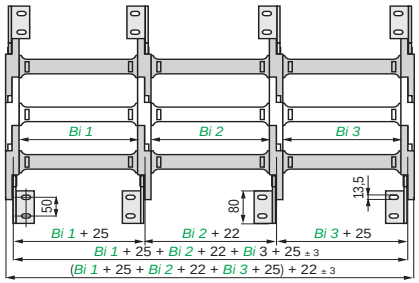


Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



Unsupported, harnessed Series 1640 in a stone machining application



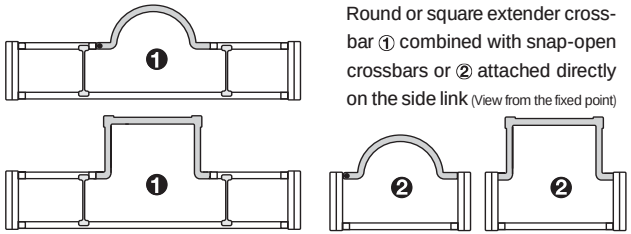


Extension links | for extremely wide e-chains® up to 3,0 m

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
1640.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
1640.10 / 20 / 10.200.0
Extension link - single-part order
6022.*R*. (please indicate radius)





Round or square extender crossbar ① combined with snap-open crossbars or ② attached directly on the side link (View from the fixed point)

Extender crossbars | careful guide of hosed applications

- Suitable for hoses with a maximum outer diameter of 300 mm
- Gliding with crossbars assembled along outer radius and a special guide trough
- Extender crossbar ① for snap-open crossbars or ② attached directly on the side link

Part No. single part	Max Ø [mm] hose	Form	② Installation on side link	① Combination with snap-open crossbars
450.15.RHD115	115	○ round	no	yes
450.17.RD115	115	○ round	yes	no
450.25.D150	150	□ square	yes	no
450.30.D200	200	□ square	yes	no
450.35.D250	250	□ square	yes	no
450.40.D300	300	□ square	yes	no
450.20.HD150	150	□ square	no	yes
450.25.HD200	200	□ square	no	yes
450.30.HD250	250	□ square	no	yes

Order examples - extender crossbar
① Combination with snap-open crossbars
RHD115 for outer radius "E" incl. e-chain®:
1640.10/15RHDE115/10.*R*.0
RHD115 for inner radius "Z" incl. e-chain®:
1640.10/15RHDZ115/10.*R*.0

② Installation on side link
RD115 for outer radius "E" incl. e-chain®:
1640.17RDE115.*R*.0
RD115 for inner radius "Z" incl. e-chain®:
1640.17RDZ115.*R*.0

E4/light | Series 1640·1608 | More options





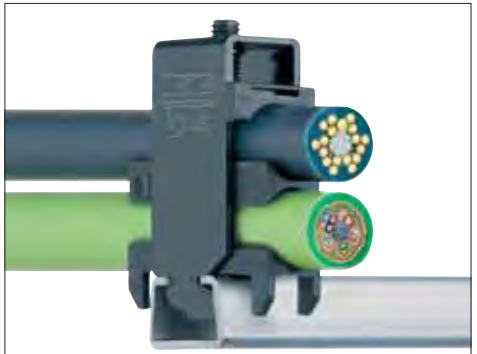
E4 snapclip | clip-on cable binder

- For side-mounted applications
- Serves as a clip-on, lateral guide for hoses and cables on e-chains®
- The loops can be adjusted as required
- Compatible with many E4 e-chains® ● Stylish and economical
- One clip and one locking band are needed for each e-chain® link

Part No.	Form
450.B12	Locking clip, comprising a locking element
450.B12.200	Locking band, comprising a locking element and band; 12 x 1,5 x 200 mm

Order example (here: inner width *Bi* 150)
Locking clip, openable
along inner radius "Z":
1640.15.B12.200Z.*R*.0
Locking clip, openable
along outer radius "E":
1640.15.B12.200E.*R*.0

E4/light | Series 1640·1608 | e-chain® accessories



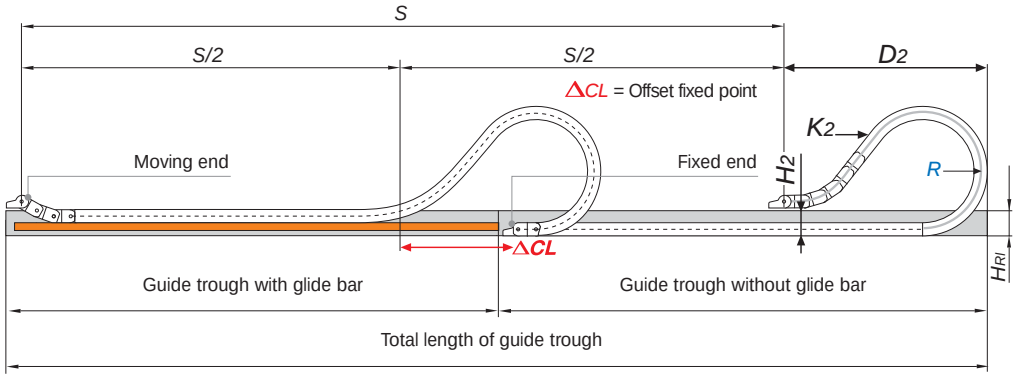
Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ► from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ► from page 1258

Gliding applications | For long travels from 14 m to max. 400 m

Solution for long travel applications - In this case the e-chain® upper run will be introduced in a guide trough on the lower run. For travels more than 100 m we recommend to realize the engineering of such a plant by our technicians. In case of travels between 9 and 14 m we recommend a longer unsupported length. More information ▶ Design, from page 106



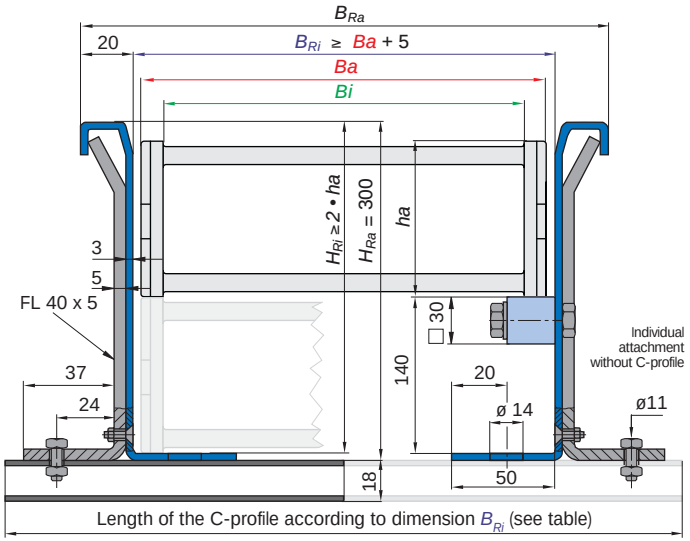
Pitch = 143 mm/link · Links/m = 7 (1001 mm) · Chain length = $S/2 + K_2$

R	200*	250	300	350	400	450	500	550	600
H_2	325	325	325	325	325	325	325	325	325
D_2^{+25}	900	1000	1100	1250	1450	1600	1700	1900	2050
K_2	1573	1716	1859	2288	2574	2860	3146	3432	3861
ΔCL	450	500	550	650	800	900	950	1100	1200

*Radius not available for e-tubes

e-chains® for long travels: E4/4HD, P4, autoglide, rol e-chain® ▶ from page 1264
Special solutions for long travel applications ▶ from page 1348

H_2 = Mounting height (if the moving end is set lower) K_2 = Further add-on (if the moving end is set lower) ΔCL = Offset fixed point S = Length of travel
D_2 = Over length - long travels, gliding R = Bending radius H_{Ri} = Inner trough height $S/2$ = Half length of travel



- Guide trough without glide bars — Part No. 98.30
- Guide trough with glide bars — Part No. 98.31
- Installation sets as end connectors — Part No. 98.50.XXX

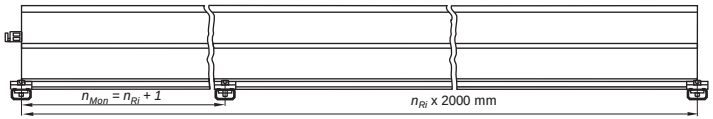
.XXX indicates the length of the C-profile on which the guide trough is mounted. (see table). The values and part numbers are specified in the table on the left. Standard length of the trough components and glide bars is 2 m.The required overall length of the guide trough directly correlates to the length of travel. Special dimensions are available for confined spaces.

Order example: Length of travel 30 m - Center mounted for Series 1640.12.300.0 with B_{Ri} = 164

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough without glide bar (8 x 2 m sections) Part No. 98.30

Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)
Order text: 16 m guide trough with glide bar (8 x 2 m sections) Part No. 98.31

Installation set "Basic" complete (guide trough-sets + 1)
Order text: 17 installation sets Part No. 98.50.300



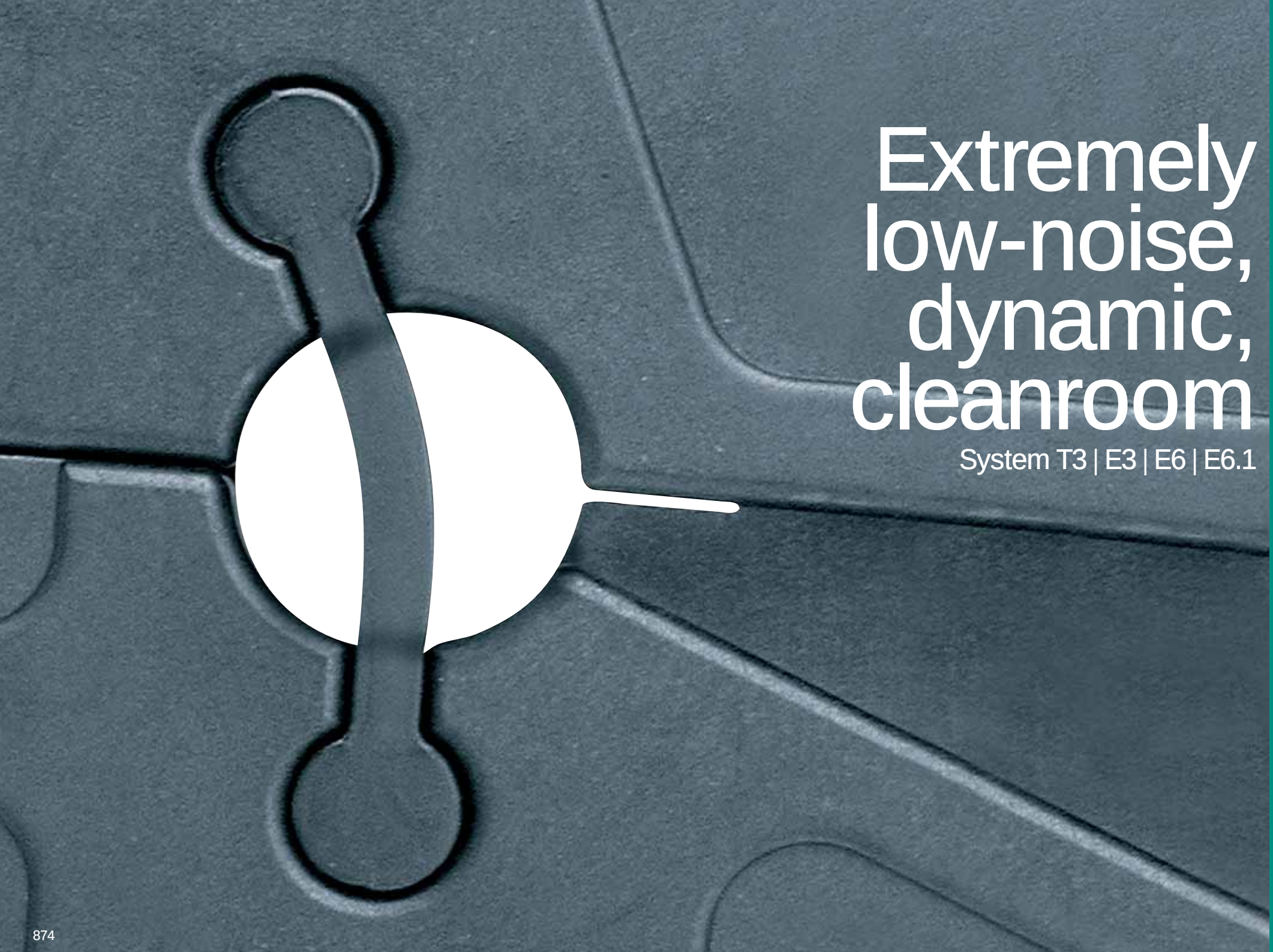
Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Steel guide trough in detail ▶ page 1232

Trough set · Installation set · Glide bar · C-Profile · Ba = Outer width e-chains® · Bi = Inner width e-chains® · B_{Ri} = Inner trough width · B_{Ra} = Outer trough width · H_{Ri} = Inner trough height · H_{Ra} = Outer trough height · n_{Mon} = Number of installation sets · n_{Ri} = Number of trough sets

Installation set with C-profile for e-chains®

For Width Index	B_{Ri} [mm]	Part No. Installation set
.05	89	
.06	104	98.50. 225
.07	114	98.50. 250
.08	124	98.50. 250
.10	139	98.50. 275
.11	151	98.50. 275
.12	164	98.50. 300
.13	176	98.50. 300
.15	189	98.50. 325
.16	201	98.50. 325
.17	214	98.50. 350
.18	226	98.50. 350
.20	239	98.50. 375
.21	251	98.50. 375
.22	264	98.50. 400
.23	276	98.50. 400
.25	289	98.50. 425
.26	301	98.50. 425
.27	314	98.50. 450
.28	326	98.50. 450
.30	339	98.50. 475
.31	351	98.50. 475
.32	364	98.50. 500
.33	376	98.50. 500
.35	389	98.50. 525
.36	401	98.50. 525
.37	414	98.50. 550
.38	426	98.50. 550
.40	439	98.50. 575
.41	451	98.50. 575
.42	464	98.50. 600
.43	476	98.50. 600
.45	489	98.50. 625
.46	501	98.50. 625
.47	514	98.50. 650
.48	526	98.50. 650
.50	539	98.50. 675
.51	551	98.50. 675
.52	564	98.50. 700
.53	576	98.50. 700
.55	589	98.50. 725
.60	639	98.50. 775



Extremely low-noise, dynamic, cleanroom

System T3 | E3 | E6 | E6.1



Highly flexible, low-vibration band e-chain® without pin and bore connection - T3

- For short strokes with extreme demands on low noise (33dB(A) - Figures determined in the igus® lab (according to DIN45635) and dynamics
- Cost-effective, modular 3-piece e-chain® for high speeds and accelerations
- Very low weight
- Virtually no wear or abrasion - IPA Class 2 tested (T3.29.050.038.0)
- Inner height: 29 mm

► **www.igus.eu/eu/T3**



Elastic, flexible connector strip, highly dynamic and suitable for cleanrooms - E3

- Extremely quiet 38dB (A) Figures determined in the igus® lab (according to DIN45635)
- e-chain® for minimum installation spaces with modular chain link in 3 parts
- Ideal for cables such as ribbon cables
- Virtually no wear or abrasion - IPA Class 1 tested (E3.15.040.075.0)
- For short strokes with extreme demands on low noise and dynamics
- Inner heights: 10, 15, 22 mm

► **www.igus.eu/eu/E3**



Especially vibration-free, quiet, low abrasion and cleanroom suitable - E6

- Rugged and modular. Connector replaces pin and hole
- Extremely quiet 37dB(A) - Figures determined in the igus® lab (according to DIN45635)
- e-chain® with high stability and tensile strength with very smooth running
- Virtually no wear or abrasion - IPA Class 1 tested (E6.29.060.150.0.CR)
- 5 sizes and 3 designs available (e-chain®, e-tube and light version)
- Inner heights: 29, 35, 40, 52, 62, 80 mm

► **www.igus.eu/eu/E6**



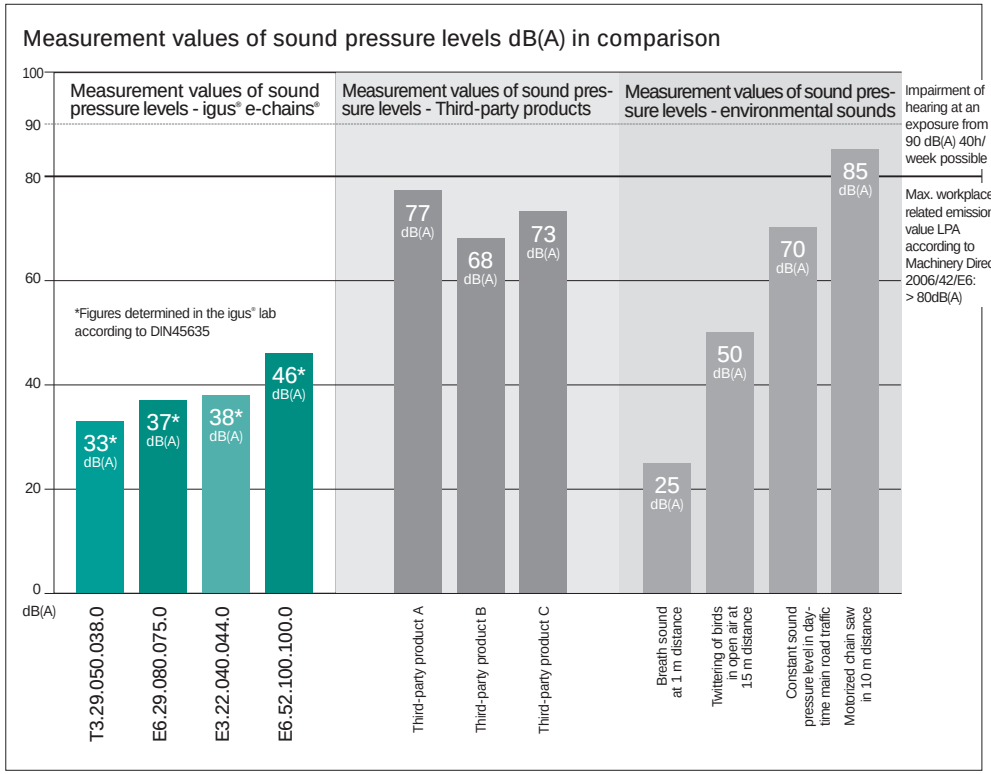
Quiet running, cleanroom-suitable and cost-effective - E6.1 2nd generation

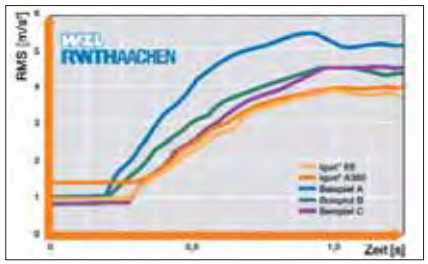
- Extremely low vibration, virtually no polygon effect, thereby "even" run
- Extremely quiet through small pitch and "brake" in the stop dog system
- Virtually no wear or abrasion - IPA Class 1 tested (E61.29.50.075.0)
- e-chain® with high stability and tensile strength with very smooth running
- E61.29: Crossbars swivel open on both sides and removable in the inner and outer radius
- Weight saving of approx. 30% compared to the E6 system
- Inner heights: 29, 52 mm

► **www.igus.eu/eu/E6.1**

The extremely low-noise igus® e-chains® - T3, E3, E6 and E6.1

The e-chain® of the E3, T3, E6 and E6.1 Series have extremely good low noise and vibration performance. The special, abrasion-resistant spring elements replace the conventional pin and bore connection of the chain links enabling the low noise and vibration operation of the e-chain®. Due to the special fastening system, the e-chainsystems® have low wear or abrasion and are therefore suitable for cleanroom applications. The e-chain® Series E3, T3, E6 and E6.1 offer an extensive accessories package and are available in many dimensions off the shelf.





System E6 - extremely smooth running

Chart: Study of the Laboratory of Machine Tools and Production Engineering (WZL) of the RWTH Aachen on "Vibration tests in energy supply chains". Result: The "E6" energy supply system of the company igus® GmbH, Cologne, is characterized by extreme low vibration and smooth running



By eliminating the pin-hole connection, the unsupported E6 has very low abrasion and is suitable for cleanrooms

Cleanroom qualification of igus® e-chains®

In many applications where cumbersome special solutions are used, a simple standard e-chain® can be used instead. A comprehensive test program was devised and performed for both gliding use and unsupported use. For many applications, the e-chains® in special materials are practically abrasion-free. Detailed test results are available upon request. IPA tests confirm that standard igus® e-chains® meet cleanroom requirements. "Tested and certified as very good!" e-chains® for cleanroom applications in the test stand cleanroom environments demand very high wear resistance of moving parts. e-chains®, for example, must be very wear resistant, in order to meet normal requirements for such a sensitive environment.

IPA Fraunhofer Institute has tested the following igus® Series according to DIN EN ISO 14644-1

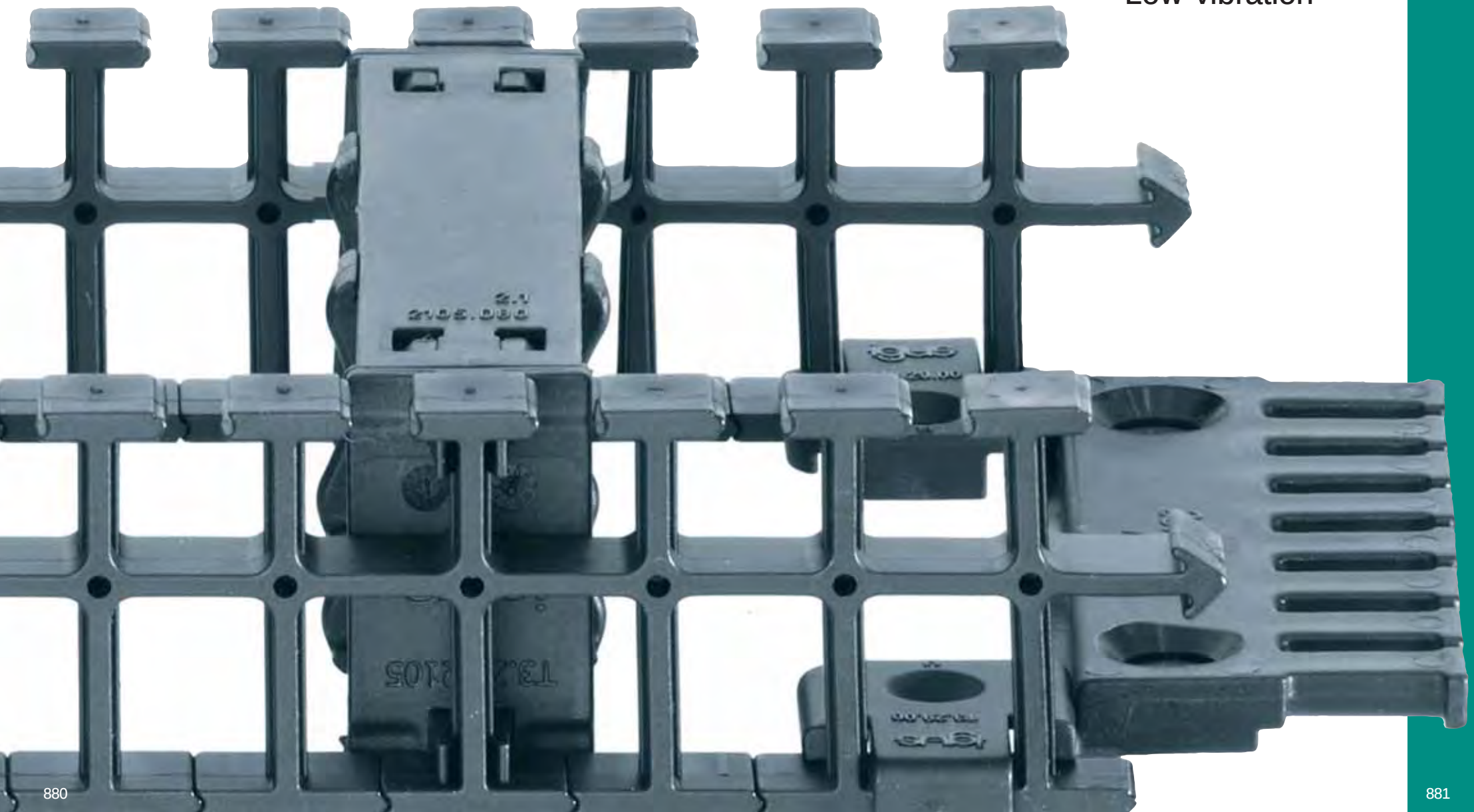
Class per DIN EN ISO 14644-1	Equivalent to VDI 2083	Classification Series	Report Number	Speed [m/s]
ISO Class 1	no comparable classification	E61.29.50.075.0	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 1	no comparable classification	E3.15.040.075.0	IG 0704-400	0,5 / 1,0 / 2,0
ISO Class 1	no comparable classification	E6.29.060.150.0.CR*	IG 0704-400	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	1500.050.038.0	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	E4.32.10.063.0.CR*	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	T3.29.050.038.0	IG 1303-640-1	0,5 / 1,0 / 2,0
ISO Class 2	no comparable classification	E14.3.038.0	IG 0308-295	1,0
ISO Class 3	Class 1	2500.05.055.0	IG 0308-295	2,0
ISO Class 3	Class 1	E6.29.060.150.0	IG 0704-400	0,5 / 1,0 / 2,0
ISO Class 5	Class 3	E4.32.10.063.0	IG 1303-640-1	0,5 / 1,0 / 2,0

*special material "cleanroom"

Since 1997 igus® is testing e-chains® for cleanroom suitability. Since then many igus® e-chains® have been certified by the IPA cleanroom institute and the program of cleanroom suitable e-chains® is continuously growing.

igus® T3

Highly flexible & Low-vibration



Highly flexible, low-vibration T-band e-chain®-System T3

The T3-System combines low-noise operation, low sound level, simple installation and economy. The side plates, which can be snapped together, replace the conventional pin and bore connection and prevent relative movements between the joints, giving an almost complete freedom from wear. By the novel geometrical shape of the T-band, hardly any polygon effect is generated in operation. The T-band operates in a very smooth arc, giving extremely low vibration and noise. In order to reduce the manufacturing and installation costs, the T-band is mounted in a length of 8 chain links. Due to its low mass, the igus® T-band, combined with high speeds and accelerations, is suitable for applications with low fill weights and short strokes.

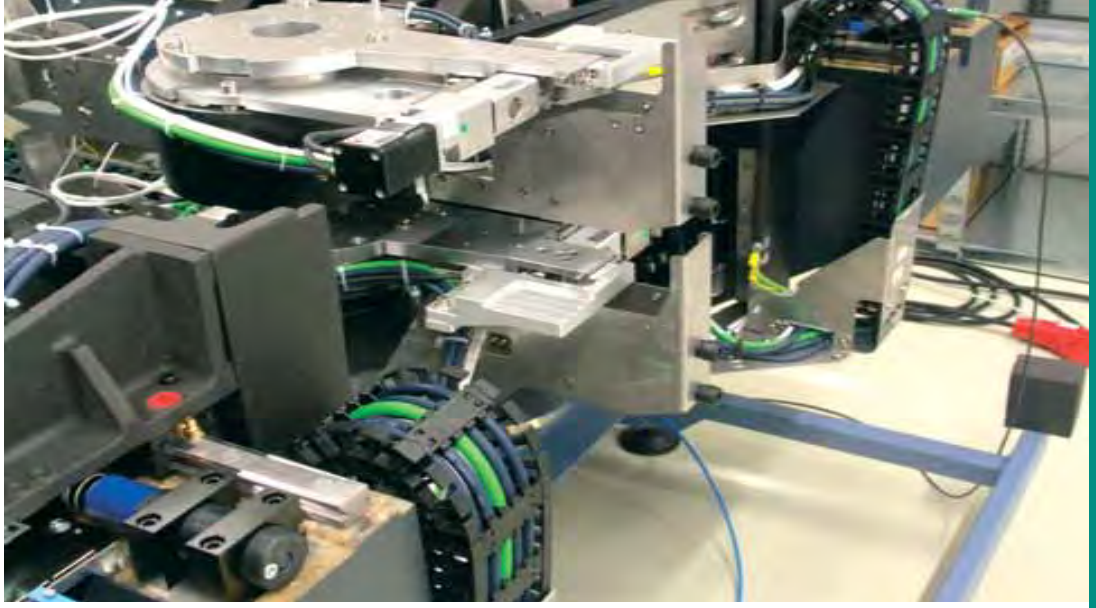
Typical industries and applications

- Printer and plotter
- Cleanroom applications
- Production and processing of semiconductors
- Optics
- Automatic insertion machines
- Measuring technology

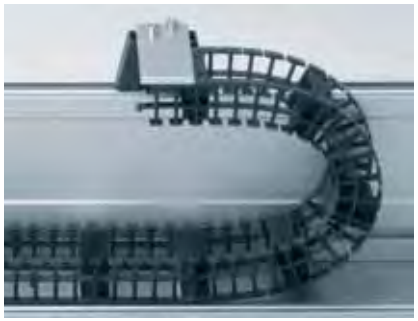
IPA Qualification Certificate - Report IG 1303-640-1:
ISO Class 2, according to DIN EN ISO 14644-1
for System T3, Series T3.29.050.038.0
at v = 0,5 m/s, 1 m/s, 2 m/s

igus® tests at 1 m measuring distance:
= 33 dB(A) for T3.29.050.038.0 at v = 1 m/s
and 26.5 dB(A) basic sound level





T3 system on the Z-axis in the positioning system. It has very low vibration and is quiet



Extremely low noise - System T3 tests in the igus® lab at 1 m measuring distance showed a value of ≈ 33 dB(A) at 26.5 dB(A) basic sound level for Series T3.29.050.038



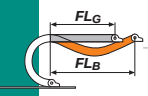
Standardised modules for rotational movements with the T3 system. Various sizes available in a short time

Content overview, selection table and assembly instructions ► next page

T3 | Contents | Selection Table

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
 **System T3 - 3-piece e-chains®** T-shaped band e-chains®							
T3.29.	29	30 - 140	55 - 165	35	038	≈ 1,45	888

T3 | Technical Data | Overview



Speed / acceleration FL_G *max.*	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B *max.*	max. 3 [m/s] / max. 6 [m/s²]
Material of lid - permitted temperature °C	-40° up to +70° C
Flammability class	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

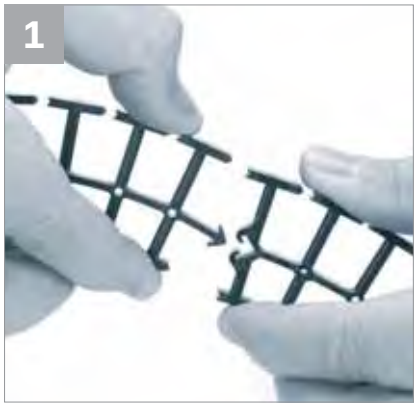
T3 e-chains® and modules for circular movement

T3 e-chains® for reverse bending radii (RBR) ● Several reverse bending radii ● Quiet ● Low wear ● Several mounting positions ● Complete program of interior separation of Series T3.29 ● RBR: 55, 75, 100, 150. Part No. T3.29.050.38/55, T3.29.050.38/75, T3.29.050.38/100, T3.29.050.38/150. Delivery time upon request.
More information ▶www.igus.eu/eu/circularmovement



Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

T3 | Assembly Instructions



Side plates to be plugged into each other



Clip-on "interior separation clips"



System T3 enables quick installation times. The side plates can be simply plugged in



Can be shortened or lengthened easily

T3 RBR-module for reverse bending radii

Consits of 4 elements: T3 RBR e-chain®, guiding system, chainflex®-cables, iglidur® PRT slewing ring bearing. ● Compact guiding module ● Turnable in inner and outer radius ● For high speeds, quiet ● Compact dimensions ● Several mounting positions. Part No. T3.29.070.038/055. Delivery time upon request.
More information ▶www.igus.eu/eu/circularmovement



Assembly video available online at ▶www.igus.eu/eu/T3_assembly

T3 | Configuration options and order key

Standard	*NC-Version - (no camber) without pretension*	*Reverse bending radius for circular movements*	*ATEX/ESD classified e-chains® - Ex II 2 GD*
Part No. **Standard**	Part No. **NC-Version**	Part No. **RBR**	Part No. **ESD-Material**
T3.29.100.*R*.0	T3.29.100.*R*.0.NC	T3.29.100.*R1/R2*.0	T3.29.100.*R*.0.ESD
		*RBR possible with igus® T3 RBR e-chains® or T3 RBR module ▶ www.igus.eu/eu/circularmovement	
Delivery time* 24h or today!	Delivery time* 5-5 work days	Delivery time* 5-10 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, mounting brackets and interior separation

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 67 links	T3.10.100.038.0
+ Mounting brackets	1 set (+ tiewrap plates)	T3.100.12
+ Interior separation	with 2 separators assembled every 2nd link	2 x 29.1.1

Order text: 1,0 m T3.29.100.038.0 + T3.100.12 + 2 x 29.1.1

Order key
T3.29.100.038.0
- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

T3 | Application



Perfect match. Cleanroom-suitable igus® chainflex® cables are safely guided in the T3 e-chain®



Universal:
Mounting angles and strain relief option

Low-noise 33dB(A)[1]:
Extremely low noise and low vibration due small pitch

Modular design:
T-band in one piece of 8 chain links

Flexible:
Easy shortening and lengthening

Cleanroom ISO Class 2[2]:
Virtually no wear or abrasion

Easy to use:
Clip-on "interior separation clips"

Dynamic:
For high speed and high accelerations

Efficient:
Very low weight

Highly flexible, low-vibration, T-shaped band e-chain®

When to use Series T3.29:

- If a particularly low weight, cost-effective e-chain® with an inner height of 29 mm is required
- Inner widths up to 140 mm
- For unsupported lengths up to 1,45 m and fill weights up to 1,0 kg/m
- At very high speeds and/or accelerations
- Hardly any polygon effect
- For small bending radii and small spaces
- If easy filling and assembly is required
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

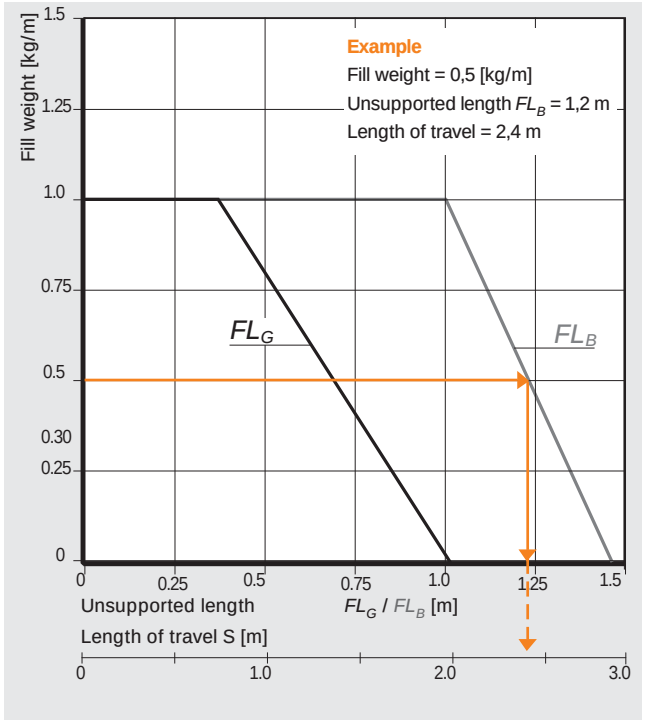
2) Cleanroom - Series T3.29.050.038.0, more details ▶ page 879

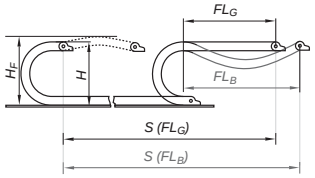
When to use a different igus® Series:

- If an e-chain® for more fill weight is required
- ▶ Series E61.29, page 1002
- If an enclosed e-chain® for low noise operation is required
- ▶ Series R6.29, page 928

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

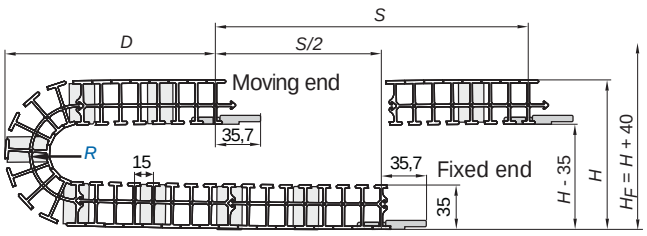
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/T3.29





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 884

Pitch = 15 mm/link
Links/m = 67 (1005 mm)
Chain length = $S/2 + K$

R (min.)	038
H (min.)	216
D	111
K	210

The required clearance height: $H_F = H + 40$ mm (with 1,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



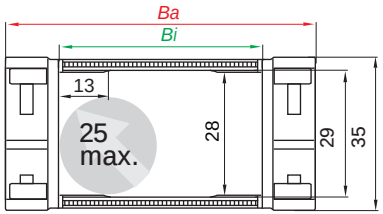
Series T3.29 | T-shaped band e-chain® | Openable along inner and outer radius

e-chain® openable along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
T3.29.030.*R*.0	30	55	| 038 |	≈ 0,40
T3.29.040.*R*.0	40	65	| 038 |	≈ 0,42
T3.29.050.*R*.0	50	75	| 038 |	≈ 0,44
T3.29.060.*R*.0	60	85	| 038 |	≈ 0,46
T3.29.070.*R*.0	70	95	| 038 |	≈ 0,48
T3.29.080.*R*.0	80	105	| 038 |	≈ 0,50
T3.29.090.*R*.0	90	115	| 038 |	≈ 0,51
T3.29.100.*R*.0	100	125	| 038 |	≈ 0,53
T3.29.110.*R*.0	110	135	| 038 |	≈ 0,55
T3.29.120.*R*.0	120	145	| 038 |	≈ 0,57
T3.29.140.*R*.0	140	165	| 038 |	≈ 0,59

Supplement Part No. with required radius (*R*), example: T3.29.100.038.0

Order key
T3.29. 100. 038. 0 e-chain®

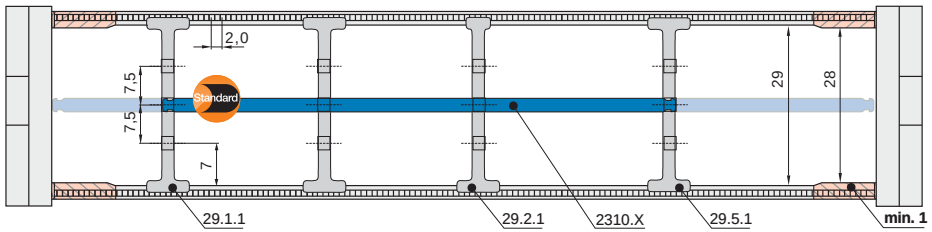
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



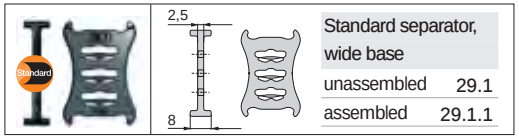
Configuration options and order keys, overview ▶ page 886

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

New generation interior separation



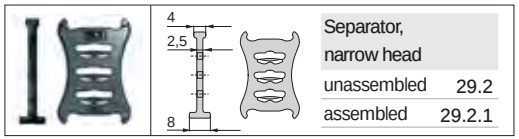
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	29.1
assembled	29.1.1

Standard - for all applications

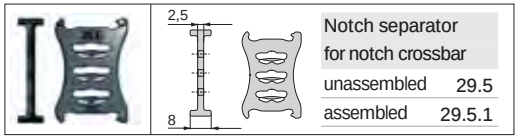
Separator with a wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	29.2
assembled	29.2.1

For even faster installation

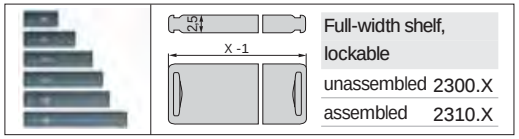
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Notch separator for notch crossbar	
unassembled	29.5
assembled	29.5.1

Locks safely in 2 mm increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



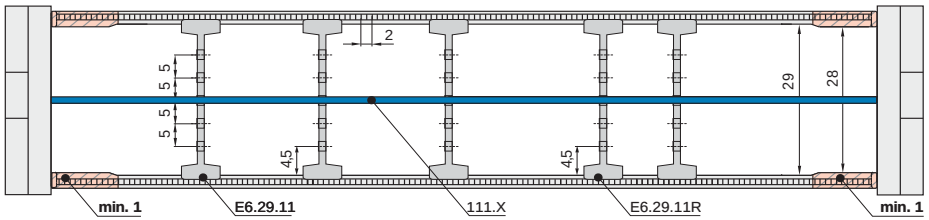
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

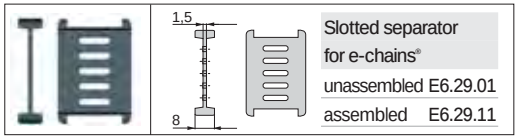
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Previous interior separation

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/T3.29



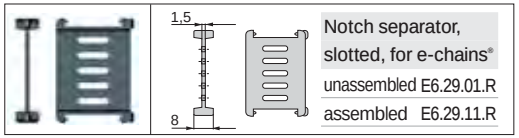
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	E6.29.01
assembled	E6.29.11

Slotted separator E6.29.01

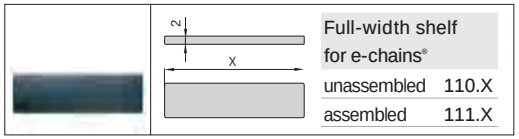
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Notch separator, slotted, for e-chains®	
unassembled	E6.29.01.R
assembled	E6.29.11.R

Notch separator, slotted E6.29.01.R

Locks safely in 2 mm increments. Notch separator for exact positioning in e-chains®. Slipping of the separator during operation is therefore impossible.



Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
030	110.30	111.30	070	110.70	111.70	110	110.110	111.110
040	110.40	111.40	080	110.80	111.80	120	110.120	111.120
050	110.50	111.50	090	110.90	111.90			
060	110.60	111.60	100	110.10	111.100			

Separator with integrated strain relief

Strain relief separator Part No. E6.29.02.Z can be integrated into the mounting bracket and can be placed there at any point of the e-chain®. It combines strain relief and interior separation ● For the use in the first or last chain link ● Easy to assemble without any screws. More information ► from page 1170

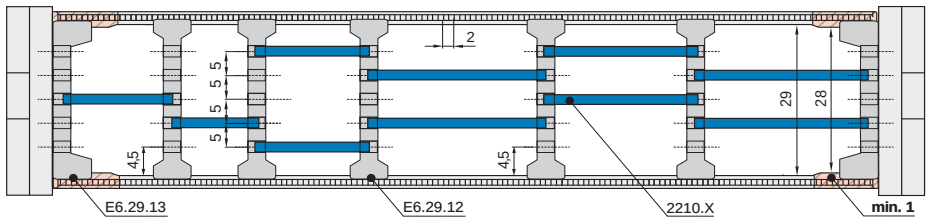


Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

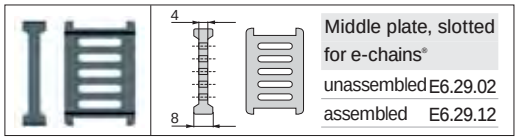
T3 | Series T3.29 | Interior separation | Options

Previous interior separation

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/T3.29



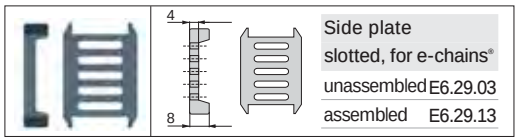
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate, slotted for e-chains®	
unassembled	E6.29.02
assembled	E6.29.12

Middle plate E6.29.12

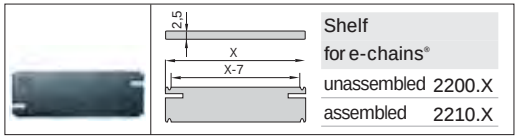
To achieve a modular shelving the shelf 2200.X can be arranged at 5 different heights (in 5 mm increments).



Side plate slotted, for e-chains®	
unassembled	E6.29.03
assembled	E6.29.13

Side plate E6.29.03

Works like middle plate. Allows modular shelving close to the side links. No lateral spacing necessary!



Shelf for e-chains®	
unassembled	2200.X
assembled	2210.X

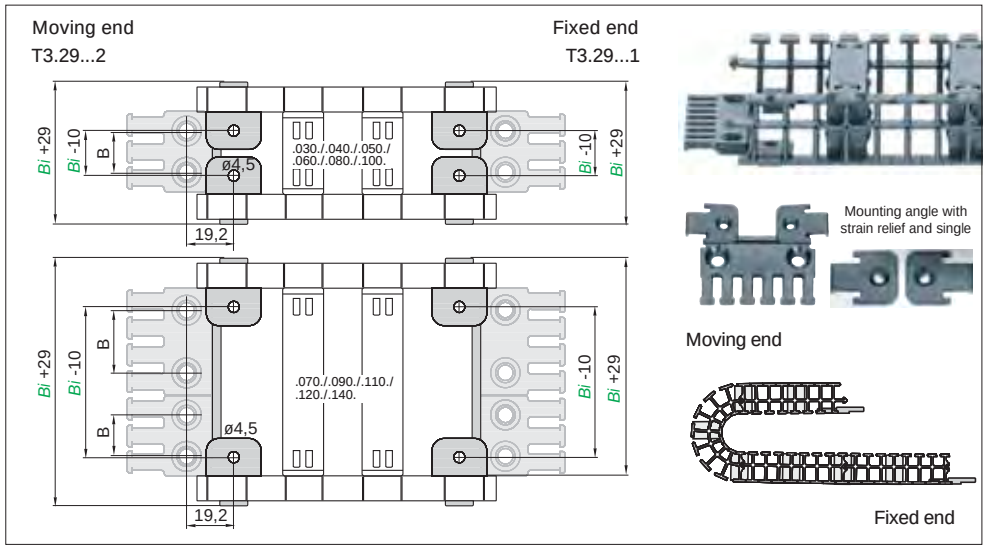
Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 5 different heights (in 5 mm increments).

Shelves

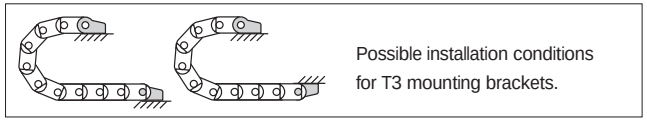
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	076	2200.76	2210.76
023	2200.23	2210.23	048	2200.48	2210.48	088	2200.88	2210.88
028	2200.28	2210.28	058	2200.58	2210.58	099	2200.99	2210.99
033	2200.33	2210.33	068	2200.68	2210.68			
038	2200.38	2210.38	073	2200.73	2210.73			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Plastic fastener | Mounting angle

For width index	Part No. full set **with** tiewrap plate	Part No. full set **without** tiewrap plate	*Bi* [mm]	Dim. B [mm]	Number of teeth
030. ▶	T3.29.030.12PZ	T3.29.030.12	30	15	3
040. ▶	T3.29.040.12PZ	T3.29.040.12	40	20	4
050. ▶	T3.29.050.12PZ	T3.29.050.12	50	30	5
060. ▶	T3.29.060.12PZ	T3.29.060.12	60	40	6
070. ▶	T3.29.070.12PZ	T3.29.070.12	70	15+20	7
080. ▶	T3.29.080.12PZ	T3.29.080.12	80	60	8
090. ▶	T3.29.090.12PZ	T3.29.090.12	90	20+30	9
100. ▶	T3.29.100.12PZ	T3.29.100.12	100	80	10
110. ▶	T3.29.110.12PZ	T3.29.110.12	110	30+40	11
120. ▶	T3.29.120.12PZ	T3.29.120.12	120	40+40	12
140. ▶	T3.29.140.12PZ	T3.29.140.12	140	60+40	14



Possible installation conditions for T3 mounting brackets.

Standard

- Housing potential for strain relief tiewrap plate
- Minimized outer width
- Fastening of the e-chain® possible on subsurface

Part No. structure

T3.29.100.12

Full set
Width index
Series

Single-part order:

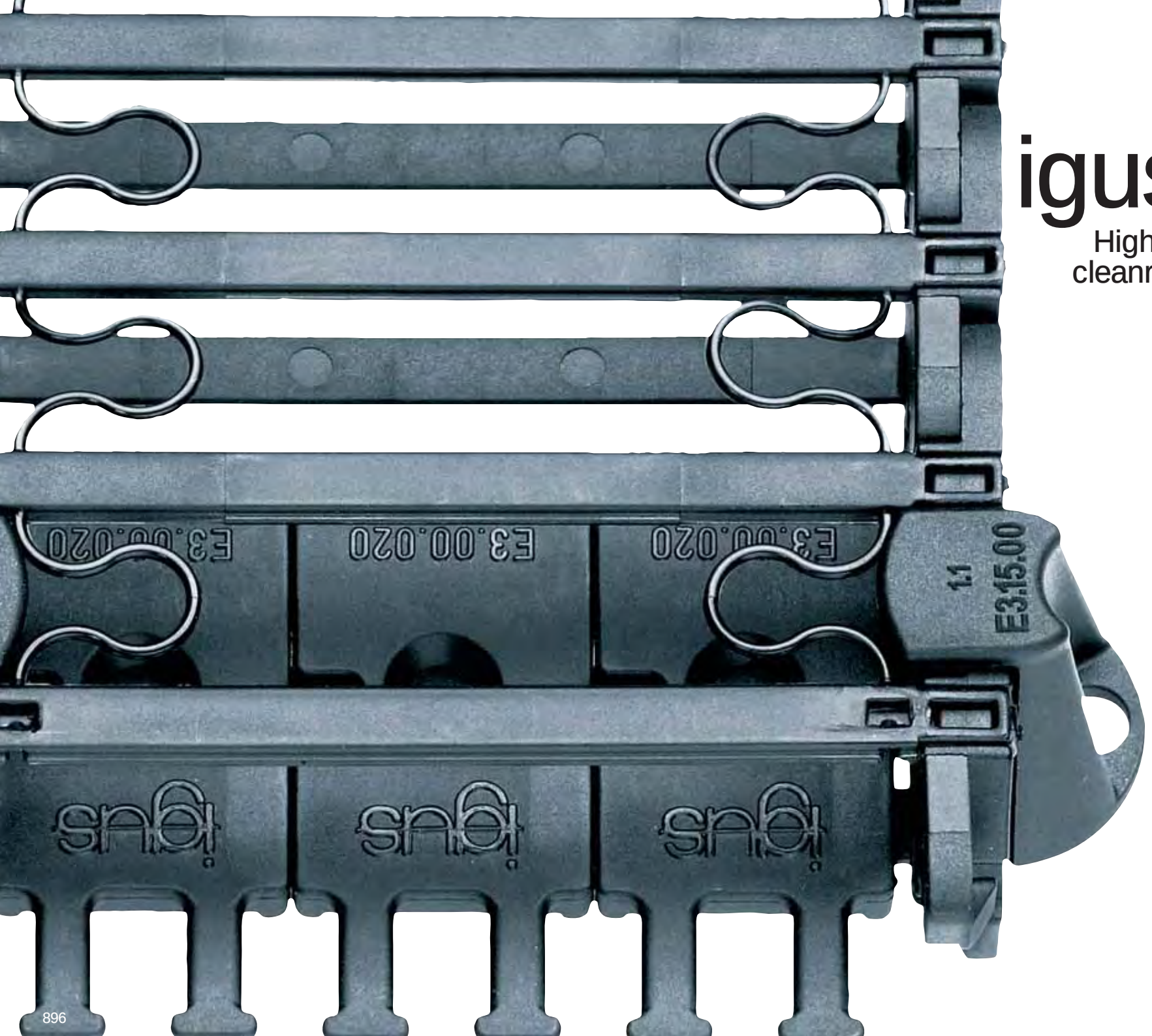
Mounting bracket Moving end

T3.29.100.2

Mounting bracket Fixed end

T3.29.100.1

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148



igus® E3

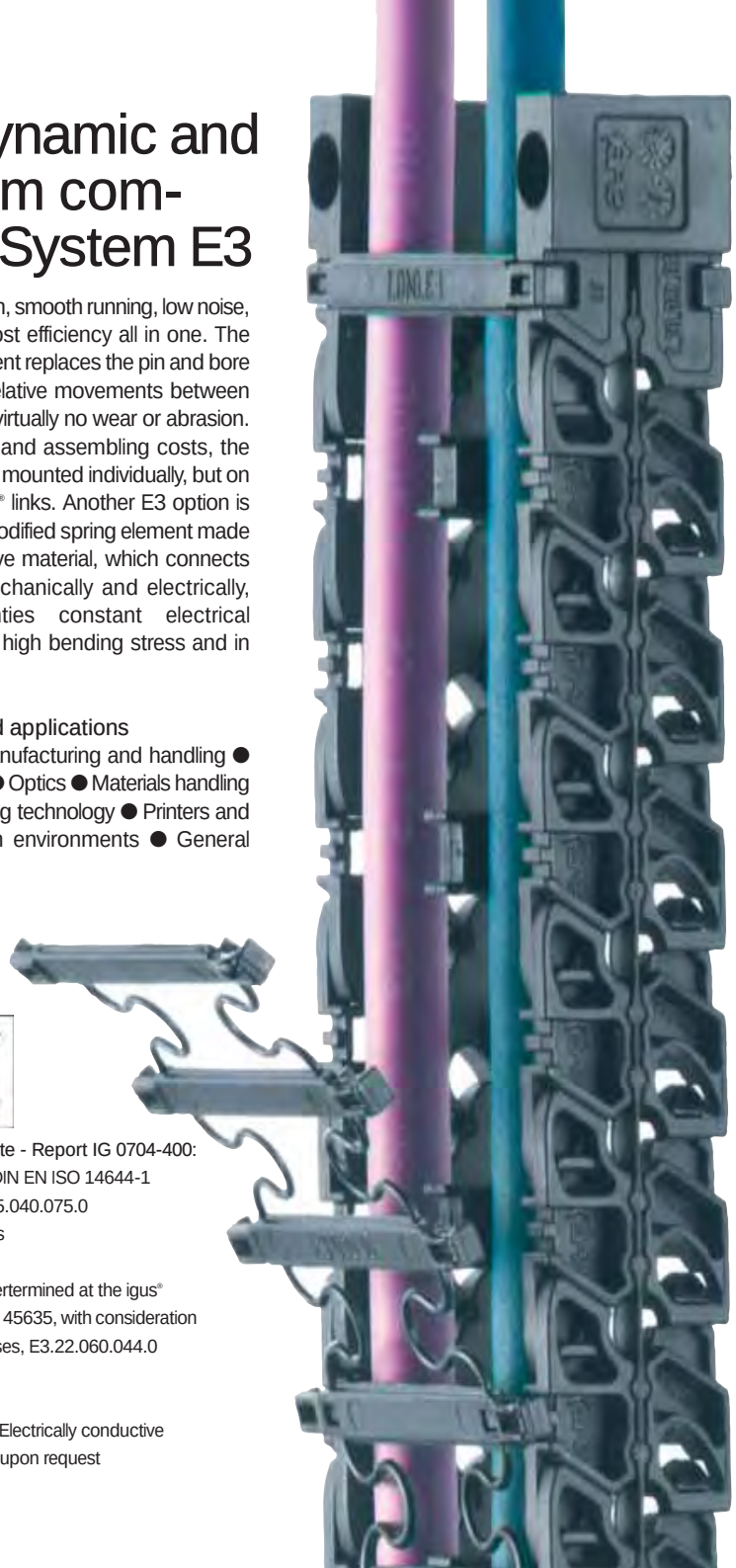
Highly dynamic & cleanroom suitable

Highly dynamic and cleanroom compatible - System E3

E3 combines small pitch, smooth running, low noise, easy assembly and cost efficiency all in one. The spring connector element replaces the pin and bore principle and avoids relative movements between the joints. This means virtually no wear or abrasion. To reduce production and assembling costs, the spring connector is not mounted individually, but on a length of ten e-chain® links. Another E3 option is safe performance. A modified spring element made of electrically conductive material, which connects the e-chain® links mechanically and electrically, permanently guaranties constant electrical conductance, even at high bending stress and in any position.

Typical industries and applications

● Semi-conductor manufacturing and handling ● Pick and place robots ● Optics ● Materials handling technology ● Measuring technology ● Printers and plotters ● Cleanroom environments ● General mechanical engineering





Long-term tests in our acoustics laboratory at a speed of 1.8 m/s and an acceleration of 3 m/s² showed reductions of 19-20 dB(A) compared to conventional e-chains®.



igus® System E3 - Light-weight and super-silent in small spaces



During long-term tests the System E3 with the spring band connector easily passes 15 million cycles at a bending radius of 44 mm and an acceleration of 4 g

Fraunhofer IPA TESTED® DEVICE

IPA Qualification Certificate - Report IG 0704-400:
ISO Class 1, according to DIN EN ISO 14644-1
for System E3, Series E3.15.040.075.0
at v = 0,5 m/s, 1 m/s, 2 m/s

38 dB(A) - Value dertermined at the igus® test-lab acc. to DIN 45635, with consideration of background noises, E3.22.060.044.0 at v = 1,8 m/s

EX ESD classification: Electrically conductive
ESD/ATEX version upon request

iF product design award
2005 igus® Series E3.15

Content overview, selection table and assembly instructions ► next page

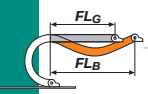
E3 | Contents | Selection Table

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
E3.10	10	20 - 60	32 - 72	15	15 - 48	≈ 0,70	904
E3.15	15	20 - 60	32 - 72	20	32 - 75	≈ 0,90	908
E3.22	22	20 - 60	32 - 72	27	44 - 75	≈ 1,20	912



System E3 - 3-piece e-chains®
Zip-open along outer radius

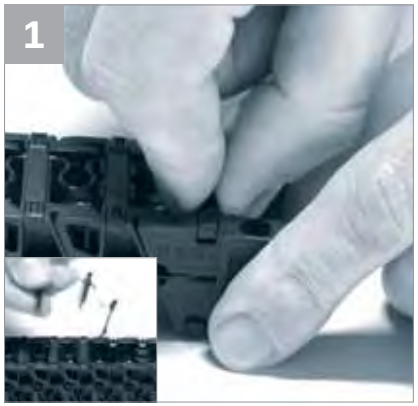
E3 | Technical Data | Overview



Speed / acceleration FL_G *max.*	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B *max.*	max. 3 [m/s] / max. 6 [m/s²]
Material lidl - permitted temperature °C	-40° up to +70° C
Flammability class	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

E3 | Assembly Instructions



Rip open the opening strip



Separate connector strip at any point or separate at the parting of the strip (approximately every 10th link) of the e-chain®



Turn the e-chain® apart, so that the interlocking of the chain links detaches



Separated e-chain® can be shortened or lengthened

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Assembly video available online at ►www.igus.eu/eu/E3_assembly

E3 | Configuration options and order key (based on Series E3.15)

Standard	*NC-Version - (no camber) without pretension*	*ATEX/ESD classified e-chains® - Ex II 2 GD*
Part No. **Standard**	Part No. **NC-Version**	Part No. **ESD-Material**
E3.15.060.*R*.0	E3.15.060.*R*.0.**NC**	E3.15.060.*R*.0.**ESD**
Delivery time* 24h or today!	Delivery time* 2-5 work days	Delivery time* 10 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® Series E3.15 (1,0 m), color black, mounting brackets and interior separation

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 60 links	E3.15.060.032.0
+ Mounting brackets	1 set (+ tiewrap plates)	E3.060.12
+ Interior separation	with 2 separators assembled every 2nd link	2 x E3.15.11

Order text: 1,0 m E3.15.060.038.0 + E3.060.12 + 2 x E3.15.11

Order key
E3.15.060.038.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E3 | Application



igus® Series E3.15 side-mounted in a flat-bed scanner



Universal:
KMA all-sides attachment or mounting angle

Low-noise 38dB(A)[1]:
Small pitch for smooth running

Flexible:
Easy shortening and lengthening

Fast opening:
zip-open mechanism along outer radius

Modular design:
Crossbars, interior separation and links all in one band

Dynamic:
For high speeds and high accelerations

Cleanroom[2]:
Virtually no wear or abrasion

Highly dynamic and cleanroom suitable

When to use Series E3.10:

- If an e-chain® with an inner height of 10 mm is required
- Inner widths up to 60 mm
- For unsupported lengths up to 0,70 m and fill weights up to 0,3 kg/m
- At very high speeds and/or accelerations
- Small pitch for smooth running
- If easy filling and assembly is required
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

2) Cleanroom - testetd series, more details ▶ page 879

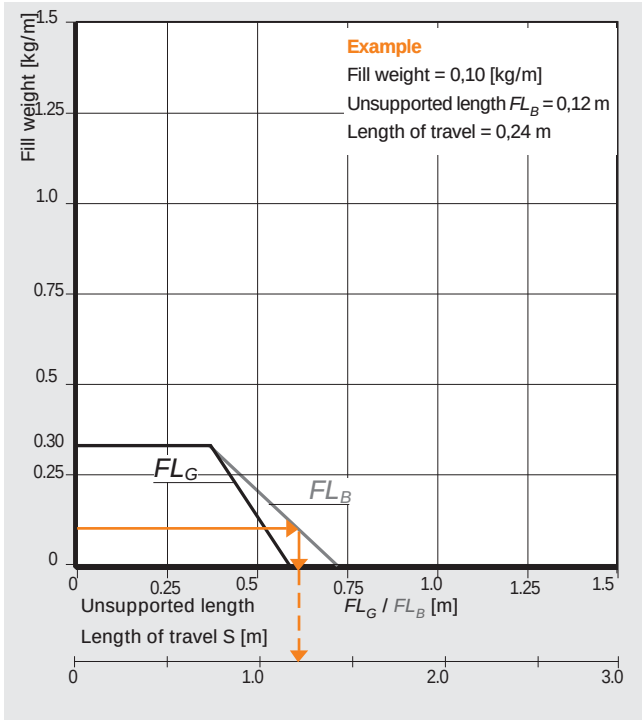
When to use a different igus® Series:

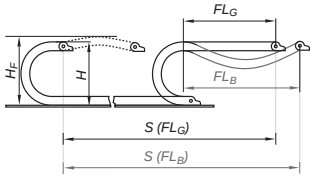
- If a particularly cost-effective, snap-open solution is required
- ▶ Series E/Z06 easy chain®, page 168
- If a simple, non snap-open e-chain® is required
- ▶ Series 05 E2 micro, page 314

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

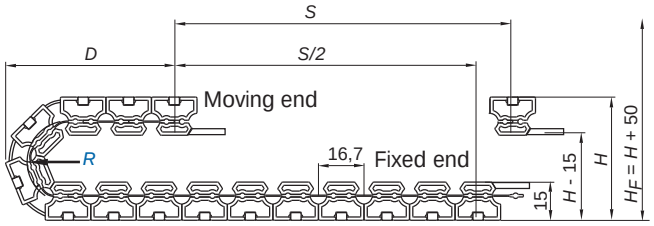
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E3.10





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 900

Pitch = 16,7 mm/link
Links/m = 60 (1002 mm)
Chain length = $S/2 + K$

R	015	028	038	048
H	60	86	106	126
D	50	63	73	83
K	85	125	155	185

The required clearance height: $H_F = H + 50$ mm (with 0,1 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



e-chain® | Series E3.10 | Zip-open along outer radius

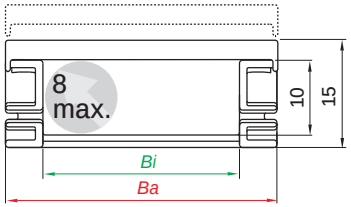
e-chain® zip-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
E3.10.020.*R*.0	20	32	| 015 | 028 | – | 048*|	≈ 0,12
E3.10.040.*R*.0	40	52	| 015 | 028*| 038 | 048 |	≈ 0,15
E3.10.060.*R*.0	60	72	| 015 | 028*| 038 | 048*|	≈ 0,20

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*), example: E3.10.060.015.0

Order key
E3.10. 060. 015. 0 e-chain®

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



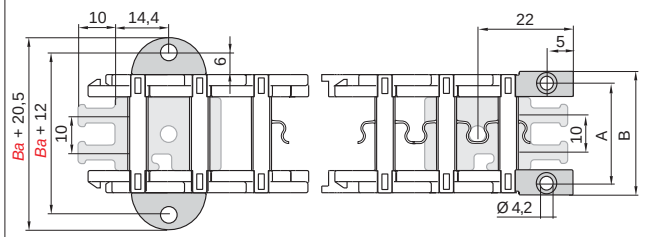
Configuration options and order keys, overview ▶ page 902

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

KMA mounting bracket or mounting angle

Fixed end
E3.10.....2

Moving end
E3.10...1



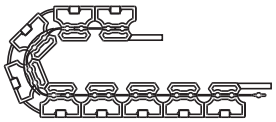
View mounting angle

View KMA mounting bracket



E3.100.XXX.12 - Space-saving allround KMA mounting bracket

Moving end



Fixed end

KMA mounting bracket | Optional: Polymer mounting angle
For unsupported applications

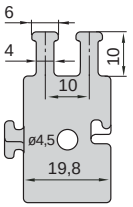
Width index	Part No. New in this catalog Full set KMA mounting bracket	Dim. A [mm]	Dim. B [mm]	Part No. mounting angle (single part)	Part No. strain relief for both sides	Part No. full set strain relief for both sides + 2 mounting angles
.020.	▶ E3.100.020.12	28	36	E3.10.00	E3.020.12	E3.10.020.12
.040.	▶ E3.100.040.12	48	56	E3.10.00	E3.040.12	E3.10.040.12
.060.	▶ E3.100.060.12	68	76	E3.10.00	E3.060.12	E3.10.060.12

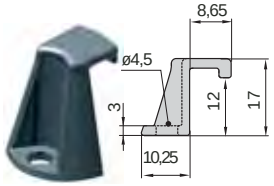


E3.10.XXX.12 - E3 with strain relief for both sides and mounting angles



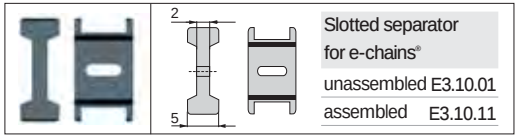
E3.00.020 - Strain relief for both sides as single parts





E3.10.00 - Mounting angle

Interior separation



Slotted separator for e-chains®	
unassembled	E3.10.01
assembled	E3.10.11

Slotted separator E3.10.01

Vertical separators are used if a vertical subdivision of the e-chain® interior is required.



Universal:
KMA all-sides attachment or mounting angle

Low-noise 38dB(A)[1]:
Small pitch for smooth running

Flexible:
Easy shortening and lengthening

Fast opening:
zip-open mechanism along outer radius

Modular design:
Crossbars, interior separation and links all in one band

Dynamic:
For high speeds and high accelerations

Cleanroom ISO Class 1[2]:
Virtually no wear or abrasion

Highly dynamic and cleanroom suitable

When to use Series E3.15:

- If an e-chain® with an inner height of 10 mm is required
- Inner widths up to 60 mm
- For unsupported lengths up to 0,90 m and fill weights up to 0,7 kg/m
- At very high speeds and/or accelerations
- Small pitch for smooth running
- If easy filling and assembly is required
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

2) Cleanroom - Series E3.15.040.075.0, more details ▶ page 879

When to use a different igus® Series:

- If a particularly cost-effective, snap-open solution is required

▶ Series E/Z06 easy chain®, page 168

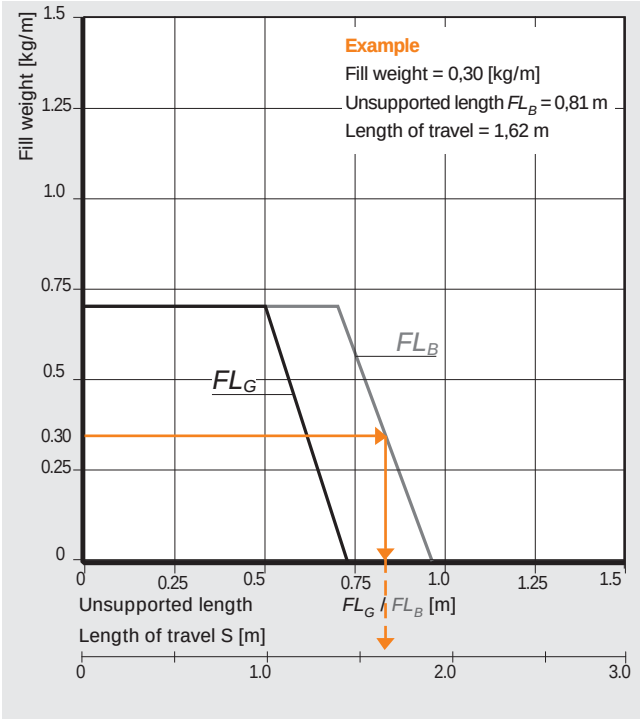
- If a simple, non snap-open e-chain® is required

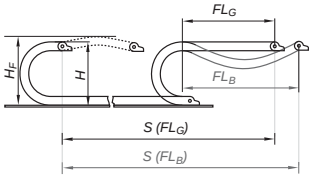
▶ Series 05 E2 micro, page 314

iF product design award
2005 igus® Series E3.15

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

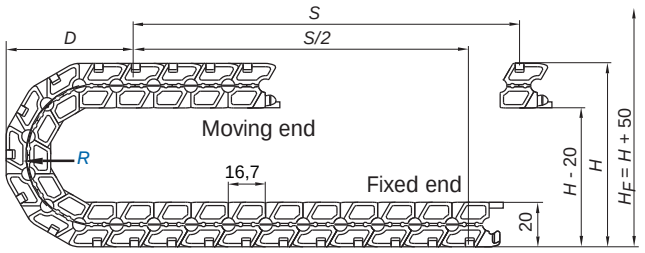
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E3.15





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 900

Pitch = 16,7 mm/link
Links/m = 60 (1002 mm)
Chain length = $S/2 + K$

R	032	038	048	075
H	99	111	131	185
D	67	73	83	110
K	135	155	185	270

The required clearance height: $H_F = H + 50$ mm (with 0,2 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chain® | Series E3.15 | Zip-open along outer radius

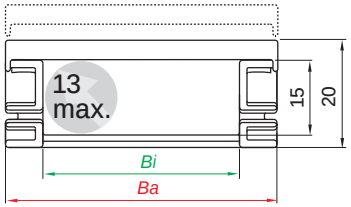
e-chain® zip-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
E3.15.020.*R*.0	20	32	| 032 | – | 048* | – |	≈ 0,22
E3.15.040.*R*.0	40	52	| 032 | 038 | 048 | 075 |	≈ 0,25
E3.15.060.*R*.0	60	72	| 032 | 038 | 048 | 075 |	≈ 0,32

*Radius available upon request, please consult igus® for delivery time

Supplement Part No. with required radius (*R*), example: E3.15.060.032.0

Order key
E3.15. 060. 032. 0 e-chain®

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ▶ page 902

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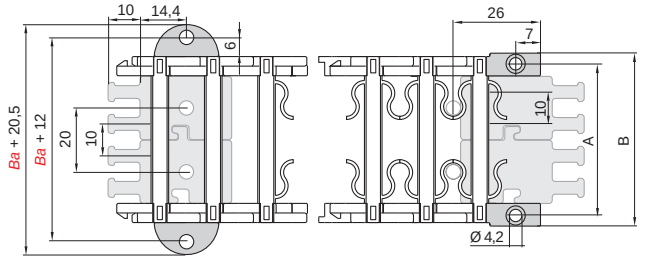
KMA mounting bracket or mounting angle

Fixed end
E3.15.....2

Moving end
E3.15...1



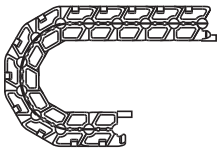
View mounting angle

View KMA mounting bracket



E3.150.XXX.12 - Space-saving allround KMA mounting bracket

Moving end



Fixed end

KMA mounting bracket | Optional: Polymer mounting angle
For unsupported applications

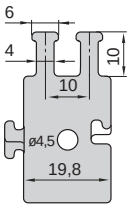
Width index	Part No. New in this catalog Full set KMA mounting bracket	Dim. A [mm]	Dim. B [mm]	Part No. mounting angle (single part)	Part No. strain relief for both sides	Part No. full set strain relief for both sides + 2 mounting angles
.020.	▶ E3.150.020.12	28	36	E3.15.00	E3.020.12	E3.15.020.12
.040.	▶ E3.150.040.12	48	56	E3.15.00	E3.040.12	E3.15.040.12
.060.	▶ E3.150.060.12	68	76	E3.15.00	E3.060.12	E3.15.060.12

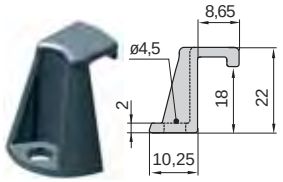


E3.15.XXX.12 - E3 with strain relief for both sides and mounting angles



E3.00.020 - Strain relief for both sides as single parts





E3.15.00 - Mounting angle

Interior separation



Slotted separator for e-chains®
unassembled E3.15.01
assembled E3.15.11

Slotted separator E3.15.01

Vertical separators are used if a vertical subdivision of the e-chain® interior is required.



Slotted separator on a strip
unassembled E3.15.01.10
assembled E3.15.11.10

Slotted separator on a strip E3.15.01.10

Five vertical separators altogether on one strip over ten e-chain® links are mounted on the opening crossbars. In this way separate chambers are formed, protecting the cables. Dimensions same as E3.15.01.



Universal:
KMA all-sides attachment or mounting angle

Low-noise 38dB(A)[1]:
Small pitch for smooth running

Flexible:
Easy shortening and lengthening

Fast opening:
zip-open mechanism along outer radius

Modular design:
Crossbars, interior separation and links all in one band

Dynamic:
For high speeds and high accelerations

Cleanroom[2]:
Virtually no wear or abrasion

Highly dynamic and cleanroom suitable

When to use Series E3.22:

- If an e-chain® with an inner height of 10 mm is required
- Inner widths up to 60 mm
- For unsupported lengths up to 1,20 m and fill weights up to 0,9 kg/m
- At very high speeds and/or accelerations
- Small pitch for smooth running
- If easy filling and assembly is required
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

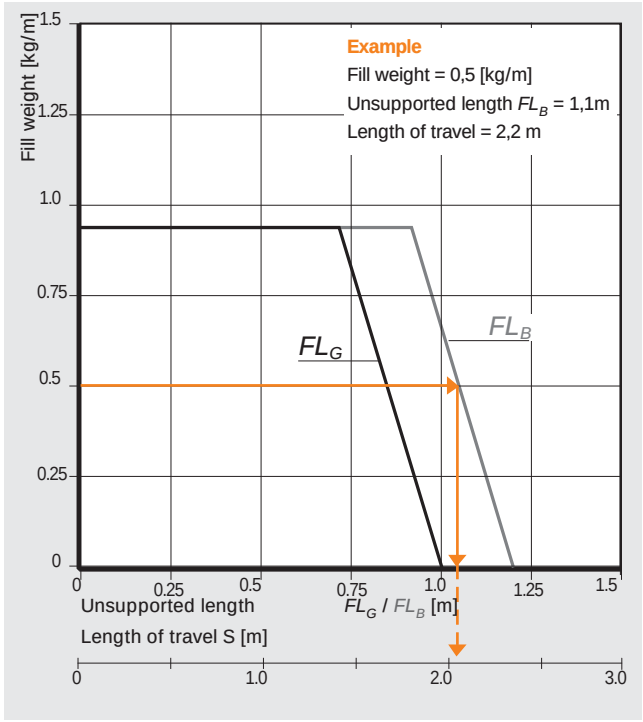
2) Cleanroom - testetd series, more details ▶ page 879

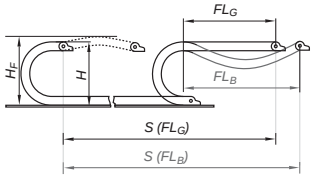
When to use a different igus® Series:

- If a particularly cost-effective, snap-open solution is required
- ▶ Series E/Z06 easy chain®, page 168
- If a simple, non snap-open e-chain® is required
- ▶ Series 05 E2 micro, page 314

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

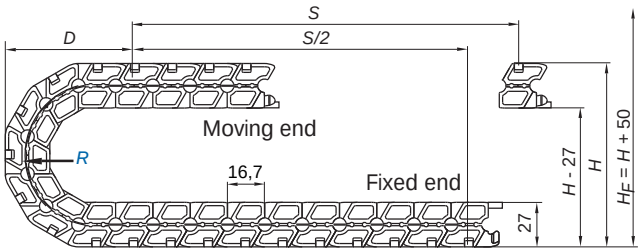
3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E3.22





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 900

Pitch = 16,7 mm/link
Links/m = 60 (1002 mm)
Chain length = $S/2 + K$

R	044	050	075
H	134	146	196
D	82	88	113
K	175	195	270

The required clearance height: $H_F = H + 50$ mm (with 0,3 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
$K = \pi \cdot R$ + "safety"



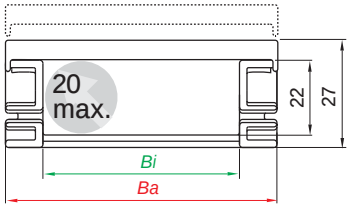
e-chain® | Series E3.22 | Zip-open along outer radius

e-chain® zip-open along outer radius	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Weight [kg/m]
E3.22.020.*R*.0	20	32	| 044 | 050 | 075 |	≈ 0,30
E3.22.040.*R*.0	40	52	| 044 | 050 | 075 |	≈ 0,32
E3.22.060.*R*.0	60	72	| 044 | – | 075 |	≈ 0,41

Supplement Part No. with required radius (*R*), example: E3.22.060.044.0

Order key
E3.22. 060. 044. 0 e-chain®

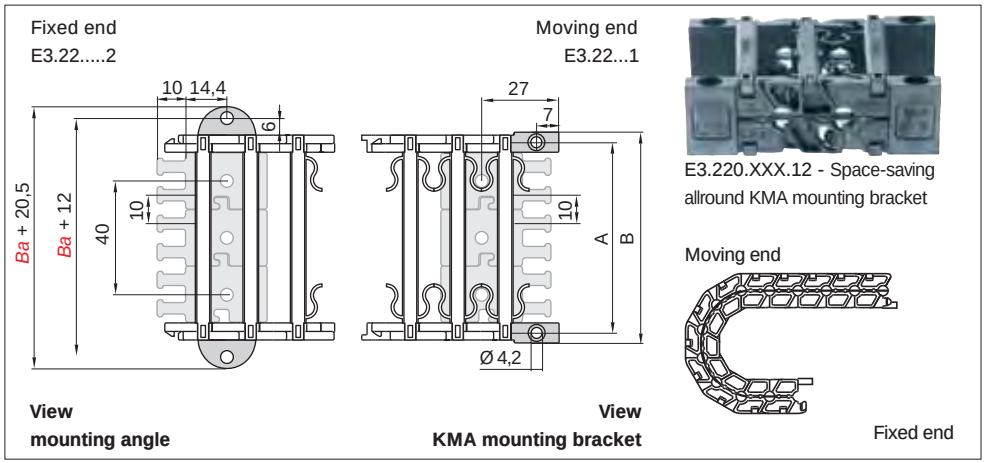
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Series / Type



Configuration options and order keys, overview ▶ page 902

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

KMA mounting bracket or mounting angle

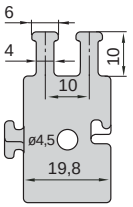


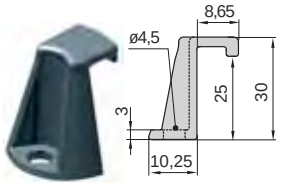
KMA mounting bracket | Optional: Polymer mounting angle
For unsupported applications

Width index	Part No. New in this catalog Full set KMA mounting bracket	Dim. A [mm]	Dim. B [mm]	Part No. mounting angle (single part)	Part No. strain relief for both sides	Part No. full set strain relief for both sides + 2 mounting angles
.020.	▶ E3.220.020.12	28	36	E3.22.00	E3.020.12	E3.22.020.12
.040.	▶ E3.220.040.12	48	56	E3.22.00	E3.040.12	E3.22.040.12
.060.	▶ E3.220.060.12	68	76	E3.22.00	E3.060.12	E3.22.060.12


E3.22.XXX.12 - E3 with strain relief for both sides and mounting angles

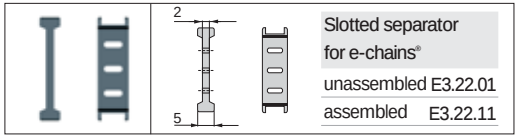

E3.00.020 - Strain relief for both sides as single parts





E3.22.00 - Mounting angle

Interior separation



Slotted separator for e-chains®	
unassembled	E3.22.01
assembled	E3.22.11

Slotted separator E3.22.01

Vertical separators are used if a vertical subdivision of the e-chain® interior is required.



igus®
System E6

extremely low-noise,
minimum vibration and abrasion,
cleanroom suitable

Extremely low-noise, minimum vibration and abrasion, clean room suitable - System E6

The E6 Series offers numerous advantages in addition to long life cycles. It provides extremely quiet, low-vibration operation. It minimizes the polygon effect which can occur during the rolling motion of an e-chain®. The ultra-low noise levels have been confirmed in a recent report by the Rheinland Technical Inspection Agency. Our extensive delivery program offers the right chain size for any application; a wide range of interior separators are also available. The same applies to the mounting brackets.

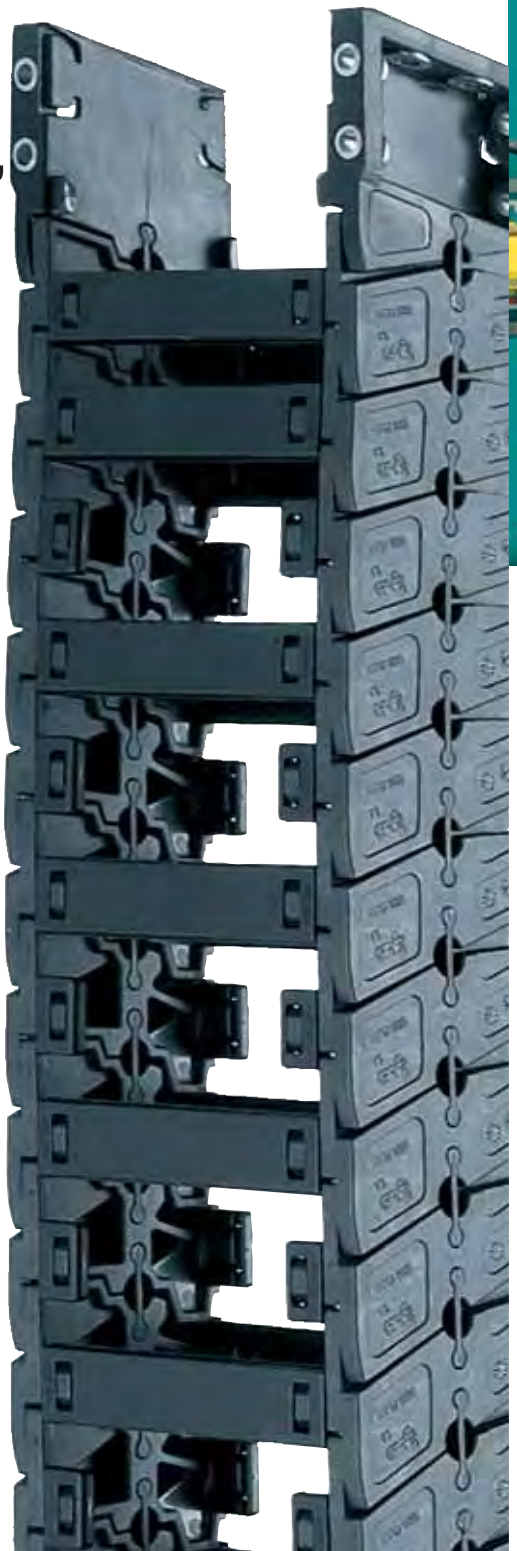
Typical industries and applications

● Cleanroom ● Printing machines ● Handling & robot ● Machine Tools ● Measuring machines ● Semiconductor industries ● Medical industries ● Electronic industries ● General machinery

37dB(A) - Values determined at the igus® test-lab, (v = 1,8 m/s), Series E6.29.080.075.0

System E6 - 6-piece e-chains®-links

LEVEL 1 absorption confirmed by IPA-Fraunhofer-Institut according to SEMI E78-0998 for the E6 standard material. Special material "igumid ESD" for ESD/ATEX applications available on request. Continuously constant conductance value as there are no pin-bore connection





A linear drive provides for highly dynamic feed of PCBs. This system is twice as fast as handling units with a toothed-belt drive; designed to withstand high dynamic loads, the E6 e-chains® ensure a supply of power, coolant and control data with ultra-low noise and vibration



Nested e-chains® reduce vibrations and improve milling accuracy Series E6.80



System E6 in a pick and place robot. Handles injection molded CD covers in a split second: Tool open gripper in....tool closed - all in 0.25 seconds, speed 8m/s, acceleration: 78,5 m/s²

Fraunhofer IPA TESTED® DEVICE

IPA Qualification Certificate - Report IG 0704-400:
ISO Class 1, according to DIN EN ISO 14644-1
for System E6, Series E6.29.060.150.0.CR
at v = 0,5 m/s, 2 m/s

Content overview, selection table and assembly instructions ► next page



By eliminating the pin-hole connection, the unsupported E6 has very low abrasion and is suitable for cleanrooms

Cleanroom qualification of E6 e-chains®

In many applications where cumbersome special solutions are used, a simple standard e-chain® can be used instead. A comprehensive test program was devised and performed for both gliding use and unsupported use. For many applications, the e-chains® in special materials are practically abrasion-free. Detailed test results are available upon request. IPA tests confirm that standard igus® e-chains® meet cleanroom requirements. "Tested and certified as very good!" e-chains® for cleanroom applications in the test stand cleanroom environments demand very high wear resistance of moving parts. e-chains®, for example, must be very wear resistant, in order to meet normal requirements for such a sensitive environment.

Fraunhofer IPA TESTED® DEVICE

IPA Qualification Certificate - Report IG 0704-400:

- Special material "cleanroom" - ISO Class 1, according to DIN EN ISO 14644-1

for Series E6.29.060.150.0.CR at v = 0,5 m/s, 2,0 m/s

- Standard material - ISO Class 3, according to DIN EN ISO 14644-1

for Series E6.29.060.150.0 at v = 0,5 m/s, 2,0 m/s and
Series E6.29.050.055.0 with inserted cables CF34.15.04, CF9.05.12, CF11.02.01.02.PBA.LC.D



Noise test in the igus® laboratory 40db(A) E6.29.100.100.0 series for long travel paths, v = 2 m/s

Selected noise tests - External noise corrected measurement values

e-chain® Series	Averaging of the corrected sound pressure levels	Test method
igus® Series E6.29*	≈ 37 dB(A)	unsupported v = 1,0 m/s
igus® Series E6.52*	≈ 41 dB(A)	unsupported, side mounted v = 0,5 m/s
igus® Series E6.52	≈ 46 dB(A)	unsupported v = 2,0 m/s
Chain 1 Third-party product	≈ 77 dB(A)	unsupported v = 2,0 m/s
Chain 2 Third-party product	≈ 68 dB(A)	unsupported v = 2,0 m/s
Chain 3 Third-party product	≈ 73 dB(A)	unsupported v = 2,0 m/s

Source: TÜV Rheinland *Source: igus® laboratory

Noise level ≤ 37 dB(A) - A measurement conducted by the Rhineland Technical Inspection Authority (TÜV Rheinland) in May 2002 indicates a value of ≤ 46 dB(A) at 2 m/s and with an unsupported length of 1.5 m with Series E6.52.100.100.0, and all this with at least 10 dB(A) sound pressure level generated by external noise. We have received an official noise certificate from the Rhineland Technical Inspection Authority (TÜV Rheinland Berlin Brandenburg) and we are happy to provide you with a copy upon request. A measurement in the igus® laboratory gave a value of 37dB(A) for series E6.29.080.075.0 at v = 1.0 m/s unsupported.



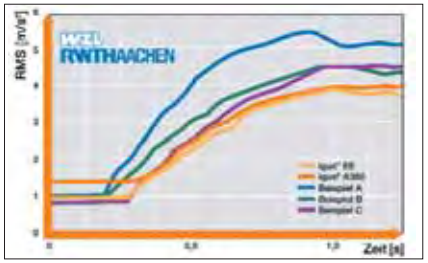
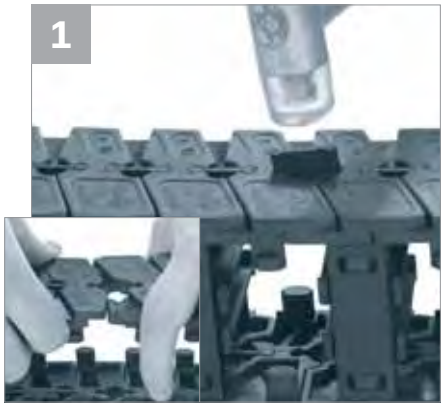


Chart: Study of the Laboratory of Machine Tools and Production Engineering (WZL) of the RWTH Aachen on "Vibration tests in energy supply chains". Result: The "E6" energy supply system of the company igus® GmbH, Cologne, is characterized by extreme low vibration and smooth running

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
							
Crossbars every 2nd link - the E6 e-chain® standard Crossbars removable along both radii							
E6.29	29	30 - 140	46 - 156	35	55 - 150	≈ 1,75	928
E6.35	35	30 - 140	50 - 160	42	55 - 100	≈ 1,90	938
E6.40	40	40 - 300	60 - 320	54	63 - 200	≈ 2,75	946
E6.52	52	40 - 300	64 - 324	65	75 - 250	≈ 3,00	956
E6.62	62	50 - 400	86 - 436	84	115 - 350	≈ 4,00	966
E6.80L	80	87 - 550	115 - 578	108	175	≈ 2,50	976
E6.80	80	50 - 600	100 - 650	108	150 - 450	≈ 5,25	984
							
Fully enclosed e-tubes Enclosed design protects from light debris, weld splatter and compromising environmental influences							
R6.29	28	30 - 120	46 - 136	35	55 - 150	≈ 1,75	928
R6.40	40	62	82	54	63 - 200	≈ 2,75	946
R6.52	52	50 - 175	74 - 199	65	75 - 250	≈ 3,00	956

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

1



Position side links, gently twist and snap in.
Gently reinsert connector by using hammer

2



Position crossbars, push down and snap in

3



Lever crossbars with screwdriver.
Tap gently to remove connectors...

4



...twist and separate side links

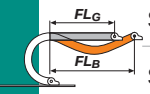
Technical Data, overview ▶ page 924

e-chain® links as single parts, overview ▶ page 925

Configuration options and order keys, overview ▶ page 926

Assembly video available online at ▶ www.igus.eu/eu/E6_assembly

Technical Data - E6



Gliding speed / acceleration (maximum)	upon request[1]
Speed / acceleration FL_G *max.*	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B *max.*	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C	-40° up to +70° C
Flammability class	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

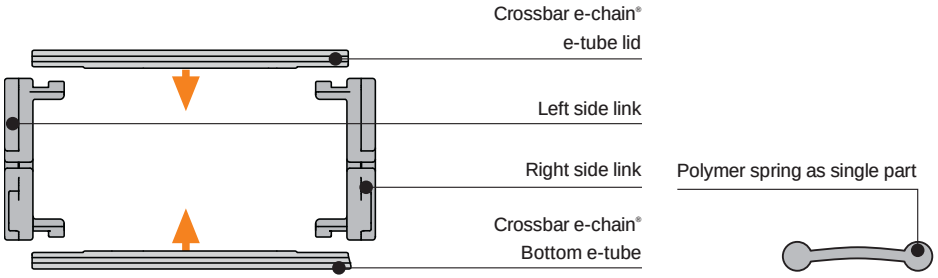
1) In special cases, gliding applications are also possible, please consult igus®.

Installation methods overview, maximum travels - E6

e-chain® Series	Unsupported application	Gliding application [1]	Vertical hanging	Vertical standing	Side mounted unsupported
E6.29 / R6.29	≤ 1,75 m	upon request	≤ 30 m	≤ 2,0 m	upon request
E6.35	≤ 1,90 m	upon request	≤ 30 m	≤ 2,0 m	upon request
E6.40 / R6.40	≤ 2,75 m	upon request	≤ 30 m	≤ 2,0 m	upon request
E6.52 / R6.52	≤ 3,00 m	upon request	≤ 50 m	≤ 2,0 m	upon request
E6.62	≤ 4,00m	upon request	≤ 60 m	≤ 3,0 m	upon request
E6.80L	≤ 2,50 m	upon request	≤ 60 m	≤ 4,0 m	upon request
E6.80	≤ 5,25 m	upon request	≤ 60 m	≤ 4,0 m	upon request

1) In special cases, gliding applications are also possible, please consult igus®.

Part No. 6-piece e-chain® links as single parts - E6



Series	Crossbar[1] e-chain®	Lid[1] e-tube	Bottom[1] e-tube	Side link left[2]	Side link right[2]	Polymer spring e-chain®/e-tube
E6.29 / R6.29	2105.*Bi*	E6.295.*Bi*	E6.296.*Bi*	E6.29.01.*R*	E6.29.02.*R*	E6.29.140
E6.35	2105.*Bi*	–	–	E6.35.01.*R*	E6.35.02.*R*	E6.35.150
E6.40 / R6.40	225.*Bi*	E6.405.*Bi*	E6.406.*Bi*	E6.40.01.*R*	E6.40.02.*R*	E6.40.177
E6.52 / R6.52	225.*Bi*	E6.525.*Bi*	E6.526.*Bi*	E6.52.01.*R*	E6.52.02.*R*	E6.52.195
E6.62	385.*Bi*	–	–	E6.62.01.*R*	E6.62.02.*R*	E6.62.340
E6.80L	450.*Bi*	–	–	E6.80L.01.*R*	E6.80L.02.*R*	E6.80.350
E6.80	450.*Bi*	–	–	E6.80.01.*R*	E6.80.02.*R*	E6.80.350

1) Crossbar / lid / bottom - supplement Part No. with required width index (*Bi*), example: 450.150

2) Side link- supplement Part No. with required radius (*R*), example: E6.50.150

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)

E6 | Configuration options and order key (based on Series E6.62)

Standard

Part No.
Standard

Standard

E6.62.100.*R*.0
Crossbar every 2nd link

Delivery time*
24h or today!

QuickLock crossbar [1] *- bis reduce assembly time up to 25%*

1) not for Series E6.29 / E6.35 / E6.40 / E6.52)

Part No.
QuickLock crossbar [1]
for inner radius

E6.62.100**QZ**.*R*.0
Crossbar every 2nd link

Delivery time*
3-5 work days

Part No.
QuickLock crossbar
[1] for outer radius

E6.62.100**QE**.*R*.0
Crossbar every 2nd link

Delivery time*
3-5 work days

Part No.
QuickLock crossbar
[1] for both radii

E6.62.100**Q**.*R*.0
Crossbar every 2nd link

Delivery time*
3-5 work days

QuickLock crossbars:
inner widths from *Bi* 10 (100 mm)

NC-Version - (no camber) without pretension

Part No.
NC-Version



E6.62.100.*R*.0.**NC**
Crossbar every 2nd link

Delivery time*
2-5 work days

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® Series E6.62 (1,0 m, with crossbars every 2nd link), color black, mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 20 links	E6.62.10.250.0
+ Mounting brackets	1 set (with odd number of links and integrated C-profiles)	E6.620.10.12.C
+ Interior separation	with 2 separators assembled every 2nd link	2 x 62.1.1

Order text: 1,0 m E6.62.10.250.0 + E6.620.10.12.C + 2 x Part No. 62.1.1

Order key
E6.62.10.250.0

- Standard color black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

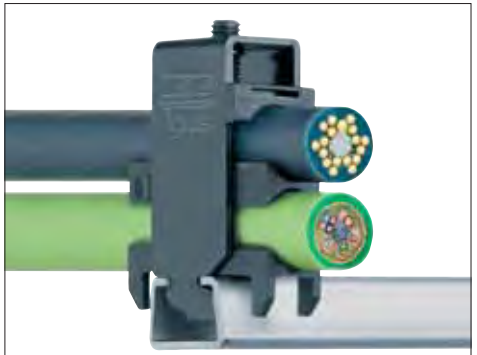
Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E6 | Application



e-chainsystem® E6 without classical pin-hole connection.
At present, the solution with the lowest noise and vibration in the igus® e-chains® range



Strain relief system
Clamps, tiewrap plates, nuggets and plug-in clips. The complete chainfix range with many order options ▶ from page 1148



Support tray tool kit
For support of the lower run. Simple one-piece support trays according to your requirements and specification ▶ from page 1258



Universal:
All-sides attachment

Low-noise 37dB(A)[1]:
Small pitch for smooth running

Long service life:
Minimum vibration, high stability and tensile strength

Dynamic:
For high speeds and high accelerations

Cleanroom ISO Class 1[2]:
Virtually no wear or abrasion

Fast assembly:
openable along inner and outer radius

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Chip protection:
e-tube with enclosed design available

Extremely low-noise, low vibration, high stability

When to use Series E6.29·R6.29:

- If a particularly low noise, low vibration e-chain® with an inner height of 29 mm (e-tube 28 mm) is required
- At very high speeds and/or accelerations
- Inner widths up to 140 mm
- For unsupported lengths up to 1,75 m and fill weights up to 3,6 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

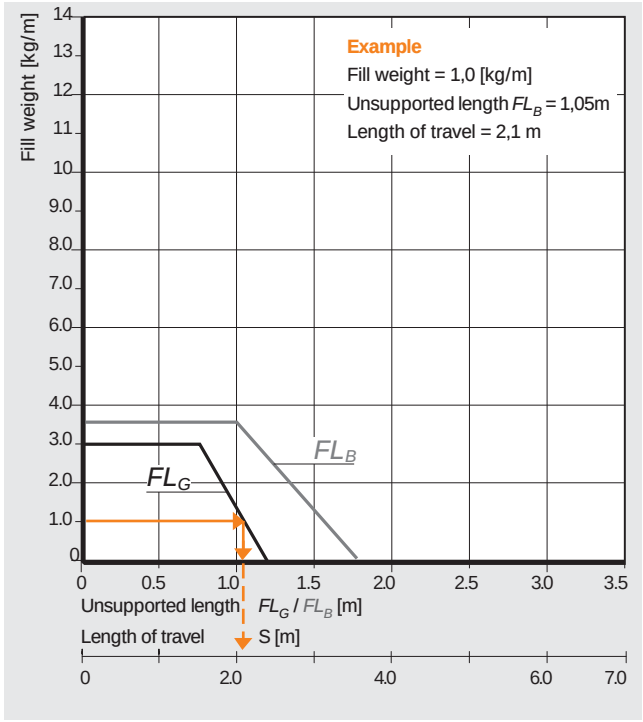
2) Cleanroom - Series E6.29.060.150.0.CR, more details ▶ page 879

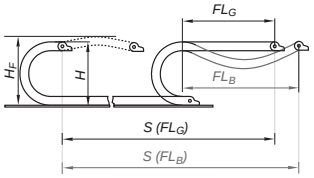
When to use a different igus® Series:

- Limited in side-mounted applications
- ▶ Series 2400/2500 E2/000, page 426
- No use with RBR (reverse bending radius)
- ▶ Series 2400/2500 E2/000, page 426
- No use with high additional fill weights
- ▶ Series 2400/2500 E2/000, page 426
- No use in dirty environments
- ▶ Series 2480 E2/000, page 426
- For still less vibration and noise generation or even higher dynamics
- ▶ Series E61.29 System E6.1, page 1002

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.29

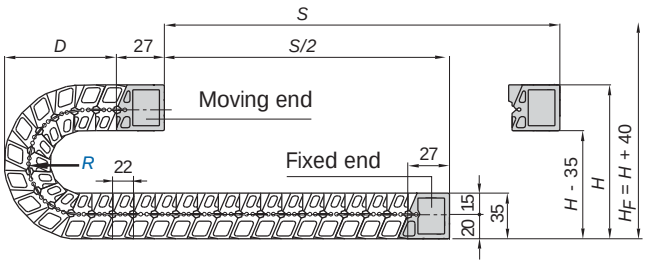




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 22 mm/link
Links/m = 46 (1012 mm)
Chain length = $S/2 + K$

R	055	075	100	150
H	180	220	270	370
D	108	128	153	203
K	220	280	360	520

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.29 Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.29 [kg/m]
E6.29. 030. R.0	30	46	0,73
E6.29. 040. R.0	40	56	0,75
E6.29. 050. R.0	50	66	0,78
E6.29. 060. R.0	60	76	0,80
E6.29. 070. R.0	70	86	0,83
E6.29. 080. R.0	80	96	0,85

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.29 [kg/m]
E6.29. 090. R.0	90	106	0,88
E6.29. 100. R.0	100	116	0,90
E6.29. 110. R.0	110	126	0,93
E6.29. 120. R.0	120	136	0,95
E6.29. 140. R.0	140	156	1,00

Available bending radii R [mm] 055 | 075 | 100 | 150

Supplement Part No. with required radius (R), example: E6.29.050.100.0

e-chain® links as single parts, overview ▶ page 925

Configuration options and order keys, overview ▶ page 926

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.29·R6.29 | Product Range | Standard

E6.29
R6.29



e-tubes | Series R6.29 fully enclosed | Crossbars removable along both radii

Part No. fully enclosed	Bi [mm]	Ba [mm]	R6.29 [kg/m]
R6.29. 030. R.0	30	46	0,80
R6.29. 040. R.0	40	56	0,85
R6.29. 050. R.0	50	66	0,89
R6.29. 060. R.0	60	76	0,94
R6.29. 070. R.0*	70	86	0,97
R6.29. 080. R.0	80	96	1,03

Part No. fully enclosed	Bi [mm]	Ba [mm]	R6.29 [kg/m]
R6.29. 090. R.0*	90	106	1,08
R6.29. 100. R.0*	100	116	1,13
R6.29. 110. R.0	110	126	1,18
R6.29. 120. R.0	120	136	1,22

*Width available upon request. Please consult igus® for delivery time.

Available bending radii R [mm] 055 | 075 | 100 | 150

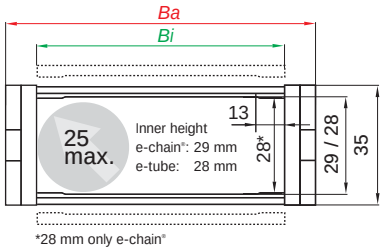
Supplement Part No. with required radius (R), example: R6.29.050.100.0

Order key

E6.29.050.100.0 Crossbar every 2nd link
R6.29.050.100.0 Fully enclosed e-tube

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Inner height
- Series / Type

Dimensioning



*28 mm only e-chain®

e-chain® links as single parts, overview ▶ page 925

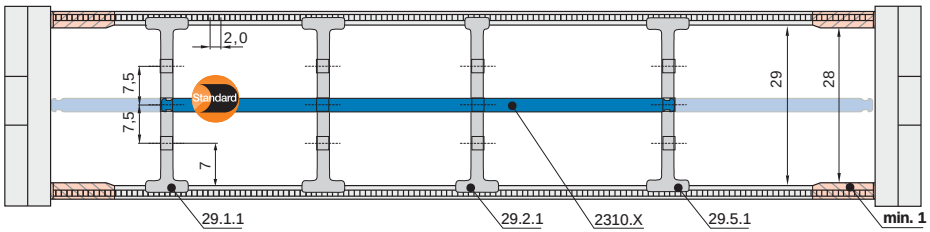
Configuration options and order keys, overview ▶ page 926

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

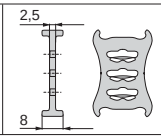
E6 | E6.29 | e-chains® Interior separation | New in this catalog

New generation interior separation - for e-chains®



Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



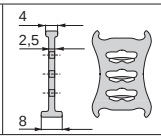


Standard separator, wide base	
unassembled	29.1
assembled	29.1.1

Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains®.



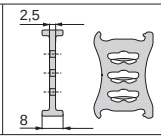


Separator, narrow head	
unassembled	29.2
assembled	29.2.1

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



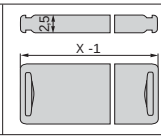


Notch separator for notch crossbar	
unassembled	29.5
assembled	29.5.1

Locks safely in 2 mm increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.





Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



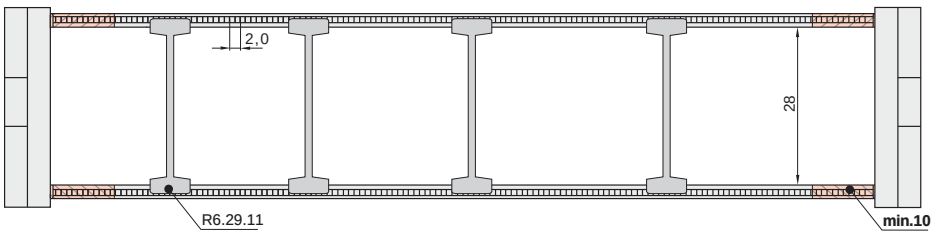
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

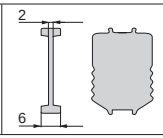
E6 | Series R6.29 | e-tubes Interior separation

Previous interior separation - for e-tubes



Note: Please observe a lateral spacing of **10 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!





Separator for e-tubes	
unassembled	R6.29.01
assembled	R6.29.11

Vertical separator R6.29.01

For e-tubes R6.29. The notches on this seperator mark the side that fixes to the lid.

Separator with integrated strain relief

Strain relief separators Part No. E6.29.02.Z (for e-chains®) and R6.29.02.Z (for e-tubes) can be integrated into the mounting bracket and can be placed there at any point of the e-chain®. It combines strain relief and interior separation ● For the use in the first or last chain link ● Easy to assemble without any screws.
More information ► from page 1170

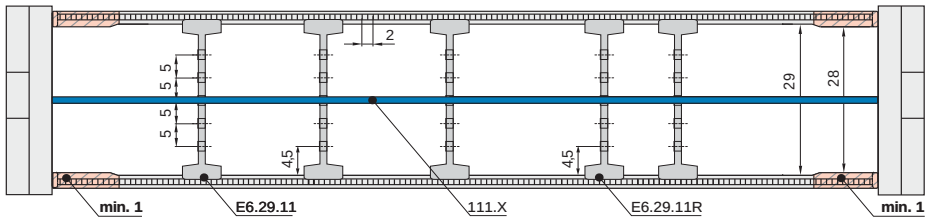


Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

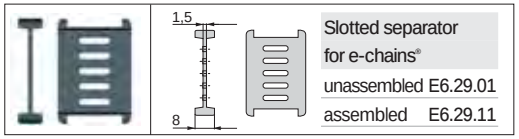
E6 | Series E6.29 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/R6.29



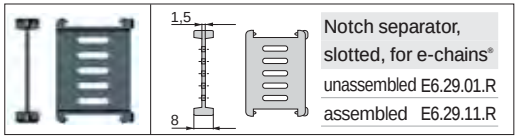
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	E6.29.01
assembled	E6.29.11

Slotted separator E6.29.01

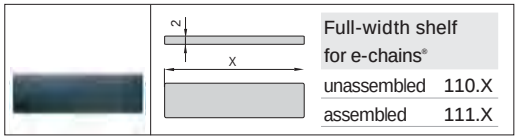
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Notch separator, slotted, for e-chains®	
unassembled	E6.29.01.R
assembled	E6.29.11.R

Notch separator, slotted E6.29.01.R

Locks safely in 2 mm increments. Notch separator for exact positioning in e-chains®. Slipping of the separator during operation is therefore impossible.



Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves

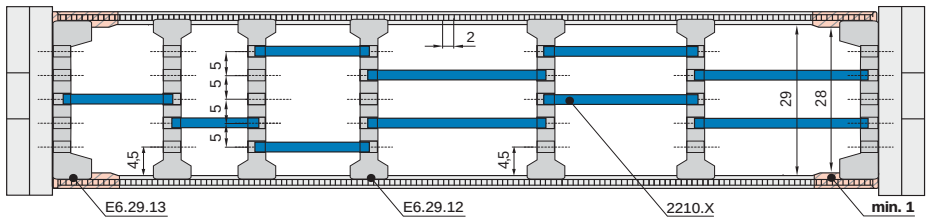
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
030	110.30	111.30	070	110.70	111.70	110	110.110	111.110
040	110.40	111.40	080	110.80	111.80	120	110.120	111.120
050	110.50	111.50	090	110.90	111.90			
060	110.60	111.60	100	110.10	111.100			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

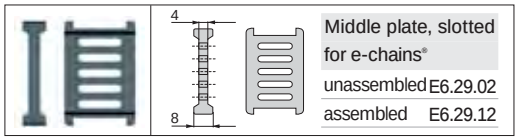
E6 | Series E6.29 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/R6.29



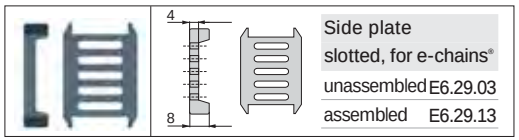
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate, slotted for e-chains®	
unassembled	E6.29.02
assembled	E6.29.12

Middle plate E6.29.12

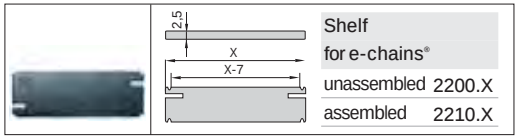
To achieve a modular shelving the shelf 2200.X can be arranged at 5 different heights (in 5 mm increments).



Side plate slotted, for e-chains®	
unassembled	E6.29.03
assembled	E6.29.13

Side plate E6.29.03

Works like middle plate. Allows modular shelving close to the side links. No lateral spacing necessary!



Shelf for e-chains®	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 5 different heights (in 5 mm increments).

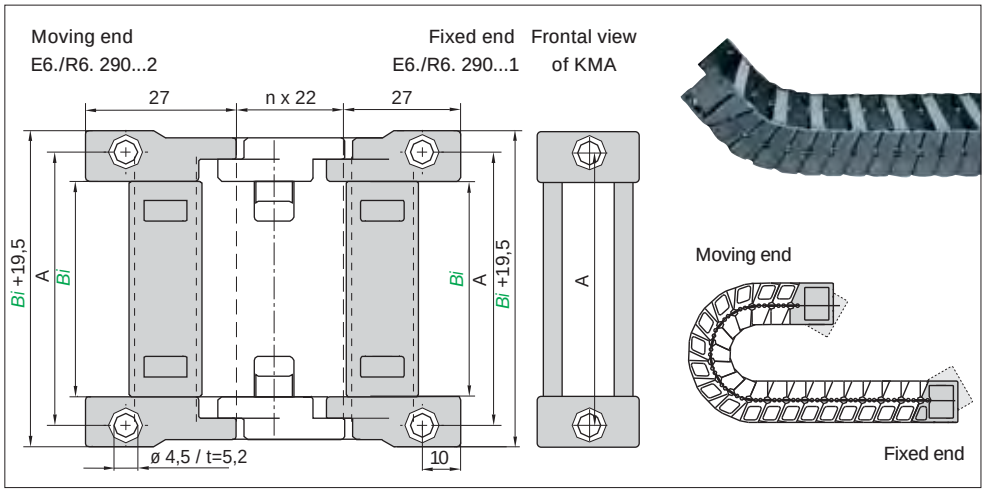
Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	076	2200.76	2210.76
023	2200.23	2210.23	048	2200.48	2210.48	088	2200.88	2210.88
028	2200.28	2210.28	058	2200.58	2210.58	099	2200.99	2210.99
033	2200.33	2210.33	068	2200.68	2210.68			
038	2200.38	2210.38	073	2200.73	2210.73			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.29 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]
030.	E6.290. R6.290. 030. 12	40	30
040.	E6.290. R6.290. 040. 12	50	40
050.	E6.290. R6.290. 050. 12	60	50
060.	E6.290. R6.290. 060. 12	70	60
070.	E6.290. R6.290. 070. 12	80	70
080.	E6.290. R6.290. 080. 12	90	80

(KMA = Polymer Metal Mounting Bracket)

Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]
090.	E6.290. R6.290.* 090. 12	100	90
100.	E6.290. R6.290.* 100. 12	110	100
110.	E6.290. R6.290. 110. 12	120	110
120.	E6.290. R6.290. 120. 12	130	120
140.	E6.290 – 140. 12	150	140

*Width available upon request.

Please consult igus® for delivery time.

Standard

- Standard
- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure

E6.290.080.12**A**

A…must be indicated on preassembled configurations
Full set
Width index
Series

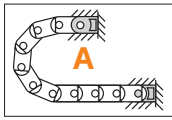
Single-part order:

Mounting bracket Moving end

E6.290.080.2**A**

Mounting bracket Fixed end

E6.290.080.1**A**

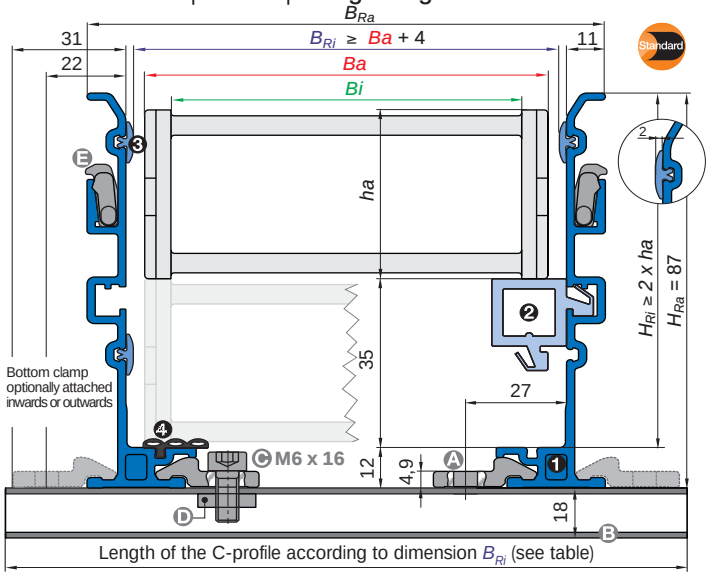


These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
▶ e.g. E6.290.080.12**A**

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Aluminum SuperTrough | Basic Version

Part No. 971.30 | 971.31 | Trough height: 87 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Installation set "Basic" with C-Profile

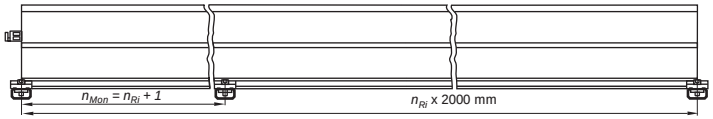
Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	50	upon request	960.30.150
.040	60	upon request	960.30.175
.050	70	upon request	960.30.175
.060	80	960.30.150	960.30.175
.070	90	960.30.150	960.30.200
.080	100	960.30.150	960.30.200
.090	110	960.30.175	960.30.225
.100	120	960.30.175	960.30.225
.110	130	960.30.200	960.30.225
.120	140	960.30.200	960.30.250

Insert for the installation set "Heavy-Duty": **971.50.XXX** instead of 960.30.XXX on the right column "attached outwards"

Order example: Length of travel 30 m - Center mounted for Series E6.29.060.100.0 with B_{Ri} = 80

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 971.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 971.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.150
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 971.30.SLA

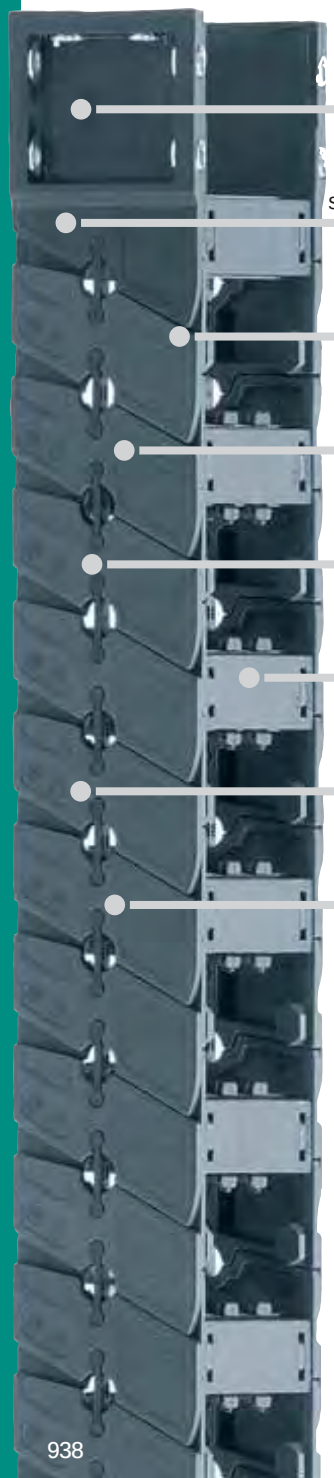


Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1198

- Trough set
- Installation set
- Glide bar
- C-Profile

Ba = Outer width e-chains®
Bi = Inner width e-chains®
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets



Universal:
All-sides attachment

Long service life:
Minimum vibration, high stability and tensile strength

Low-noise 37dB(A)[1]:
Small pitch for smooth running

Dynamic:
For high speeds and high accelerations

Cleanroom[2]:
Virtually no wear or abrasion

Fast assembly:
Openable along inner and outer radius

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Extremely low-noise, low vibration, high stability

When to use Series E6.35:

- If a particularly low noise, low vibration e-chain® with an inner height of 35 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 140 mm
- For unsupported lengths up to 1,9 m and fill weights up to 6 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

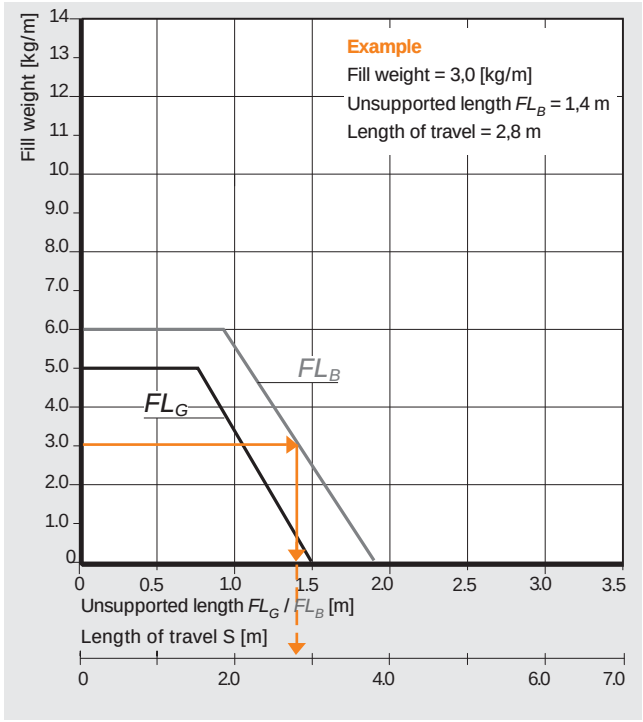
2) Cleanroom - testetd series, more details ▶ page 879

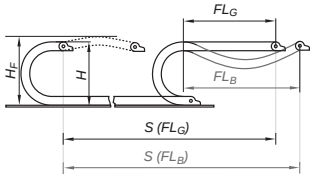
When to use a different igus® Series:

- Limited in side-mounted applications
- ▶ Series E4.32 System E4.1, page 646
- No use with RBR (reverse bending radius)
- ▶ Series E4.32 System E4.1, page 646
- No use with high additional fill weights
- ▶ Series E4.32 System E4.1, page 646
- No use in dirty environments
- ▶ Series R4.32 System E4.1, page 646
- If a fully enclosed e-tube is required
- ▶ Series R58 E2 e-tubes, page 550

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.35

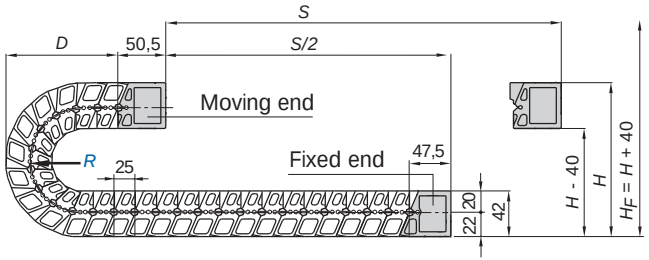




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 25 mm/link
Links/m = 40 (1000 mm)
Chain length = $S/2 + K$

R	055	075	100	125*	150
H	189	229	279	329	379
D	115	135	160	185	210
K	225	290	365	445	525

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.35 Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.35 [kg/m]
E6.35. 030. R.0	30	50	0,88
E6.35. 040. R.0	40	60	0,90
E6.35. 050. R.0	50	70	0,92
E6.35. 060. R.0	60	80	0,94
E6.35. 070. R.0	70	90	0,96
E6.35. 080. R.0	80	100	0,99

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.35 [kg/m]
E6.35. 090. R.0	90	110	1,01
E6.35. 100. R.0	100	120	1,03
E6.35. 110. R.0	110	130	1,05
E6.35. 120. R.0	120	140	1,07
E6.35. 140. R.0	140	160	1,11

*Radius available upon request, please consult igus® for delivery time

Available bending radii R [mm] 055 | 075 | 100 | 125* | 150 |

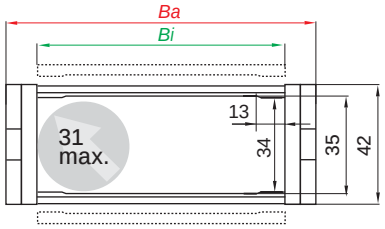
Supplement Part No. with required radius (R), example: E6.35.080.100.0

Order key

E6.35.080.100.0 Crossbar every 2nd link

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Inner height
- Series / Type

Dimensioning



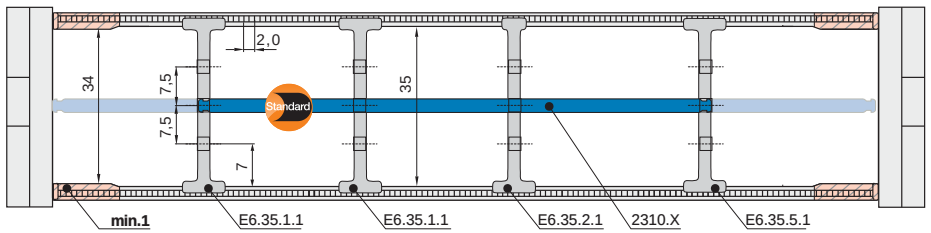
e-chain® links as single parts, overview ► page 925

Configuration options and order keys, overview ► page 926

Available from stock. Delivery time* in 24h or today!

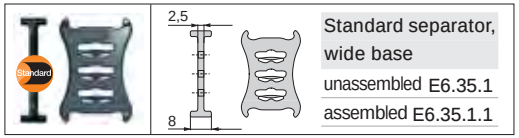
*Delivery time means time until shipping of goods (after technical release)

New generation interior separation - for e-chains®



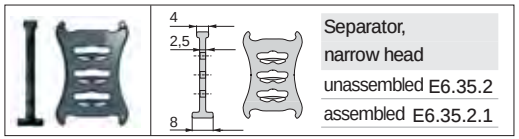
Note: Please observe a lateral spacing of **1 mm** to the side links.

In the standard configuration separators are assembled every 2nd e-chain® link!



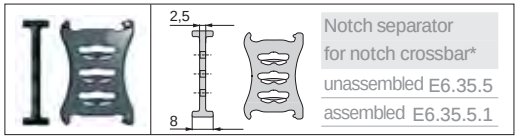
Standard - for all applications

Separator with a wide base for maximum locking strength and safe standing in e-chains®.



For even faster installation

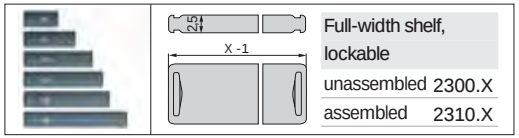
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Locks safely in 2 mm increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.

*Available upon request, please consult igus® for delivery time



Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



Lockable full-width shelves - for the standard interior separation

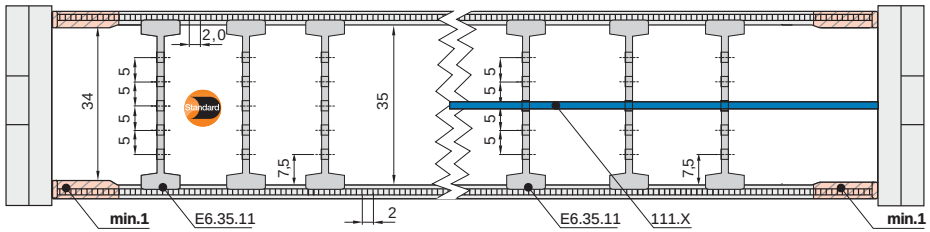
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

Interior separation with single-part order. Delivery time* in 24h or today!

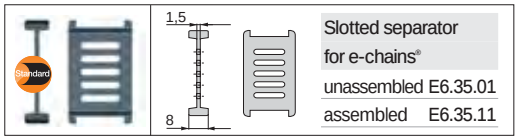
*Delivery time means time until shipping of goods (after technical release)

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.35



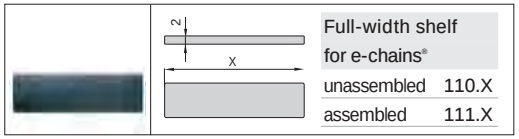
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Slotted separator for e-chains®	
unassembled	E6.35.01
assembled	E6.35.11

Vertical separator E6.35.01

Vertical separators are used if a vertical subdivision of the e-chain® interior is required. For combinations with full-width shelves.



Full-width shelf for e-chains®	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 5 different heights (in 5 mm increments).

Full-width shelves 110.X

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
030	110.30	111.30	070	110.70	111.70	110	110.110	111.110
040	110.40	111.40	080	110.80	111.80	120	110.120	111.120
050	110.50	111.50	090	110.90	111.90			
060	110.60	111.60	100	110.100	111.100			

Separator with integrated strain relief

Strain relief separator Part No. E6.35.02.Z can be integrated into the mounting bracket and can be placed there at any point of the e-chain®. It combines strain relief and interior separation ● For the use in the first or last chain link ● Easy to assemble without any screws. More information ► from page 1170

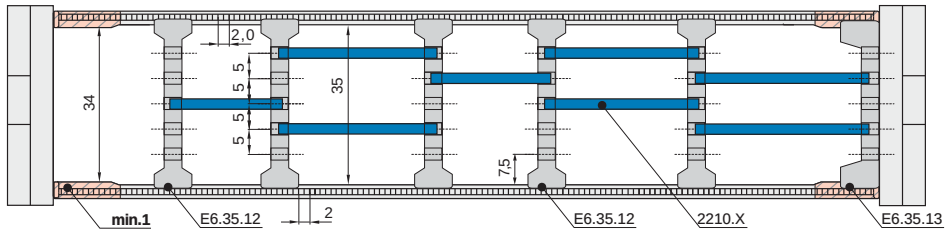


Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

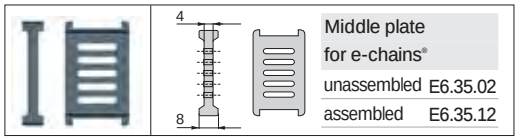
E6 | Series E6.35 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.35



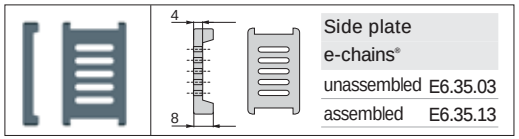
Note: Please observe a lateral spacing of **1 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Middle plate for e-chains®	
unassembled	E6.35.02
assembled	E6.35.12

Middle plate E6.35.12

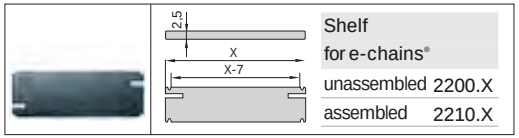
To achieve a modular shelving the shelf 2200.X can be arranged at 5 different heights (in 5 mm increments).



Side plate e-chains®	
unassembled	E6.35.03
assembled	E6.35.13

Side plate E6.35.03

Works like middle plate. Allows modular shelving close to the side links. No lateral spacing necessary!



Shelf for e-chains®	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 5 different heights (in 5 mm increments).

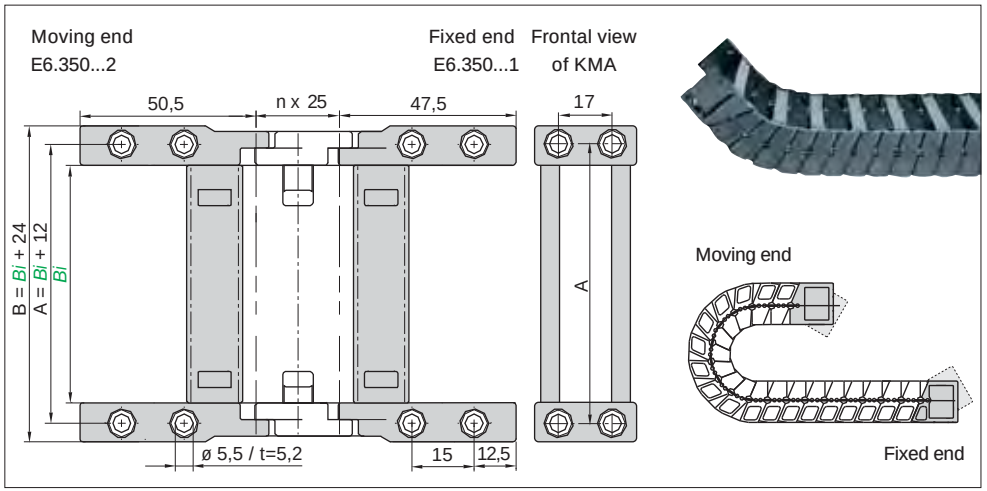
Shelves 2200.X

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	073	2200.73	2210.73
023	2200.23	2210.23	048	2200.48	2210.48	076	2200.76	2210.76
028	2200.28	2210.28	058	2200.58	2210.58	088	2200.88	2210.88
033	2200.33	2210.33	063	2200.65	2210.65	099	2200.99	2210.99
038	2200.38	2210.38	068	2200.68	2210.68			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.35 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set **KMA pivoting**	A [mm]	B [mm]	Bi [mm]
030.	▶ E6.350. 030. 12	42	54	30
040.	▶ E6.350. 040. 12	52	64	40
050.	▶ E6.350. 050. 12	62	74	50
060.	▶ E6.350. 060. 12	72	84	60
070.	▶ E6.350. 070. 12	82	94	70
080.	▶ E6.350. 080. 12	92	104	80
090.	▶ E6.350. 090. 12	102	114	90
100.	▶ E6.350. 100. 12	112	124	100
110.	▶ E6.350. 110. 12	122	134	110
120.	▶ E6.350. 120. 12	132	144	120
140.	▶ E6.350. 140. 12	152	164	140

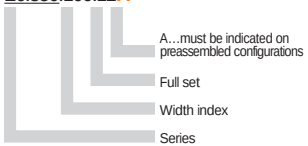
(KMA = Polymer Metal Mounting Bracket)

Standard

- Standard
- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure

E6.350.100.12**A**



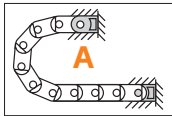
Single-part order:

Mounting bracket Moving end

E6.350.100.2 **A**

Mounting bracket Fixed end

E6.350.100.1 **A**

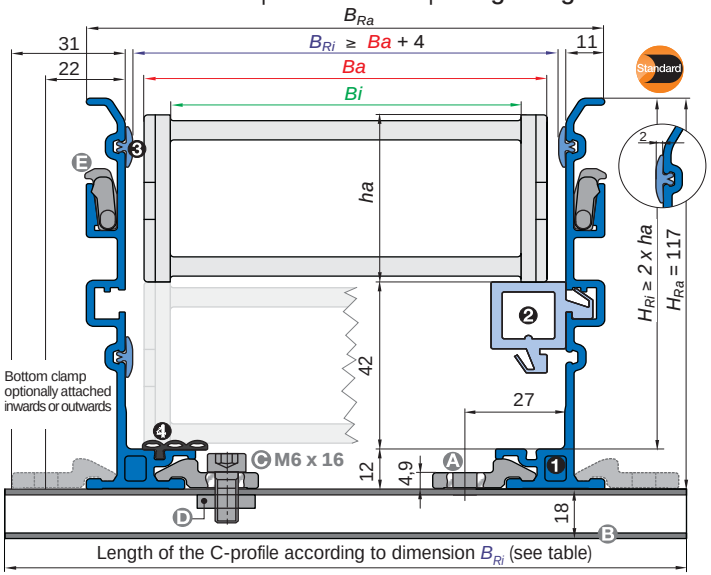


These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A**
▶ e.g. E6.350.100.12**A**

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Aluminum SuperTrough | Basic Version

Part No. 972.02.30.SL | 972.02.31.SL | Trough height: 117 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Installation set "Basic" with C-Profile

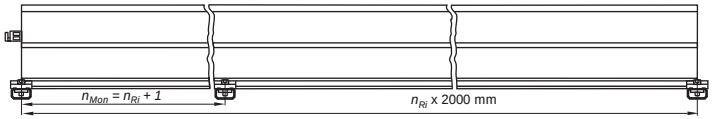
Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	54	upon request	960.30.150
.040	64	upon request	960.30.175
.050	74	960.30.125	960.30.175
.060	84	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.080	104	960.30.150	960.30.200
.090	114	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.110	134	960.30.200	960.30.250
.120	144	960.30.200	960.30.250

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"

Order example: Length of travel 30 m - Center mounted for Series E6.29.080.100.0 with B_{Ri} = 104

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 972.02.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 972.02.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.30.150
Module for the fixed end	
Order text: 1 set	Part No. 972.82
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 972.02.30.SL**A**



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1198

● Trough set ● Installation set ● Glide bar
● C-Profile
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets
Ba = Outer width e-chains®
Bi = Inner width e-chains®



Universal:
All-sides attachment

Low-noise 37dB(A)[1]:
Small pitch for smooth running

Long service life:
Minimum vibration, high stability and tensile strength

Dynamic:
For high speeds and high accelerations

Fast assembly:
Openable along inner and outer radius

Cleanroom[2]:
Virtually no wear or abrasion

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Chip protection:
e-tube with enclosed design available

Extremely low-noise, low vibration, high stability

When to use Series E6.40·R6.40:

- If a particularly low noise, low vibration e-chain® with an inner height of 40 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 300 mm
- For unsupported lengths up to 2,75 m and fill weights up to 11 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

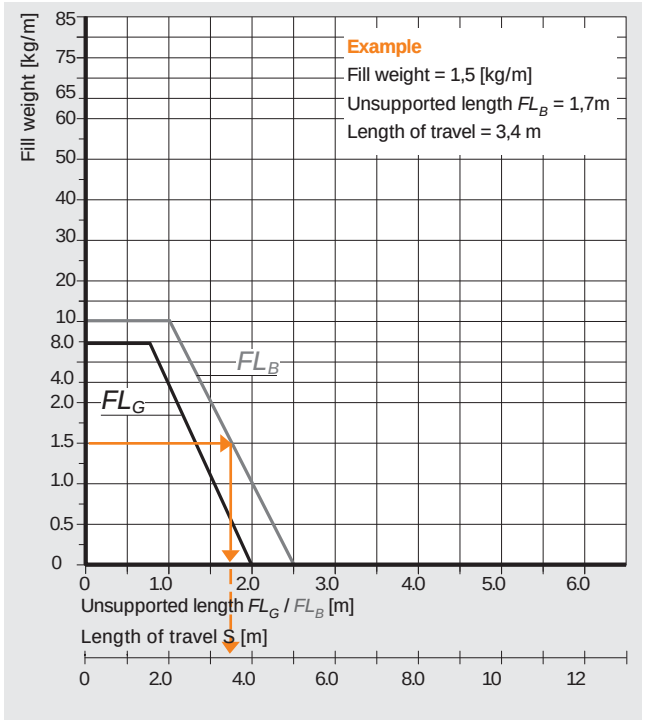
2) Cleanroom - testetd series, more details ▶ page 879

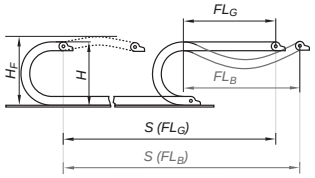
When to use a different igus® Series:

- Limited in side-mounted applications
▶ Series E4.42 System E4.1, page 662
- No use with RBR (reverse bending radius)
▶ Series E4.42 System E4.1, page 662
- No use with high additional fill weights
▶ Series E4.42 System E4.1, page 662

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.40



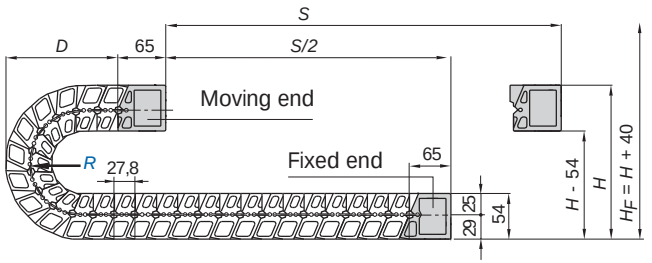


Standard

Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 27,8 mm/link
Links/m = 36 (1001 mm)
Chain length = $S/2 + K$

R	063	075	100	125	150	200
H	224	248	298	348	398	498
D	134	146	171	196	221	271
K	255	295	370	450	530	685

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.40 Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.40 [kg/m]
E6.40. 040. R.0	40	60	1,29
E6.40. 050. R.0	50	70	1,33
E6.40. 062. R.0	62	82	1,38
E6.40. 070. R.0	70	90	1,41
E6.40. 075. R.0	75	95	1,43
E6.40. 087. R.0	87	107	1,48
E6.40. 100. R.0	100	120	1,53
E6.40. 125. R.0	125	145	1,63

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.40 [kg/m]
E6.40. 150. R.0	150	170	1,73
E6.40. 175. R.0	175	195	1,83
E6.40. 200. R.0	200	220	1,93
E6.40. 225. R.0	225	245	2,02
E6.40. 250. R.0	250	270	2,12
E6.40. 275. R.0	275	295	2,22
E6.40. 300. R.0	300	320	2,32

Available bending radii R [mm] 063 | 075 | 100 | 125 | 150 | 200

Supplement Part No. with required radius (R), example: E6.40.100.100.0

e-chain® links as single parts, overview ▶ page 925

Configuration options and order keys, overview ▶ page 926

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.40·R6.40 | Product Range | Standard

E6.40
R6.40



e-tubes | Series R6.40 fully enclosed | Crossbars removable along both radii

Part No. fully enclosed	Bi [mm]	Ba [mm]	R6.40 [kg/m]
R6.40.* 040. R.0	40	60	–
R6.40.* 050. R.0	50	70	–
R6.40. 062. R.0	62	82	1,59
R6.40.* 070. R.0	70	90	–
R6.40. 075. R.0	75	95	1,65
R6.40.* 087. R.0	87	107	–
R6.40.* 100. R.0	100	120	–
R6.40.* 125. R.0	125	145	–

Part No. fully enclosed	Bi [mm]	Ba [mm]	R6.40 [kg/m]
R6.40.* 150. R.0	150	170	–
R6.40.* 175. R.0	175	195	–
R6.40.* 200. R.0	200	220	–
R6.40.* 225. R.0	225	245	–
R6.40.* 250. R.0	250	270	–
R6.40.* 275. R.0	275	295	–
R6.40.* 300. R.0	300	320	–

*Width available upon request. Please consult igus® for delivery time.

Available bending radii R [mm] 063 | 075 | 100 | 125 | 150 | 200

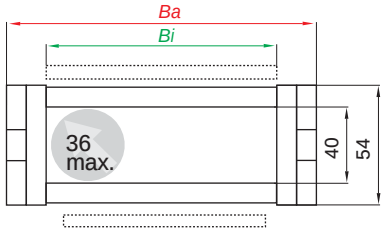
Supplement Part No. with required radius (R), example: R6.40.100.100.0

Order key

E6.40.100.100.0 Crossbar every 2nd link
R6.40.100.100.0 Fully enclosed e-tube

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 925

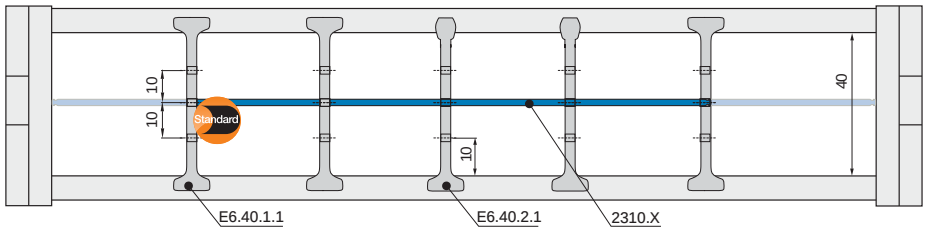
Configuration options and order keys, overview ▶ page 926

Available from stock. Delivery time* in 24h or today!

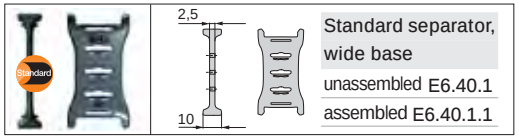
*Delivery time means time until shipping of goods (after technical release)

E6 | E6.40 | e-chains® Interior separation | New in this catalog

New generation interior separation - for e-chains®



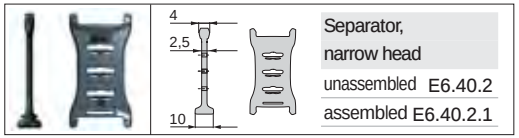
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	E6.40.1
assembled	E6.40.1.1

Standard - for all applications

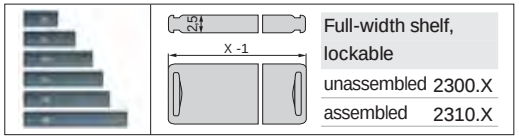
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	E6.40.2
assembled	E6.40.2.1

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



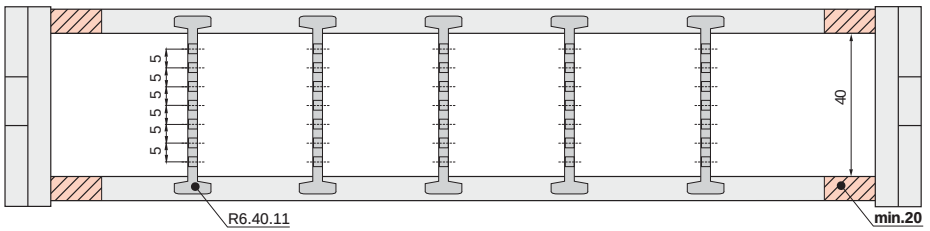
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

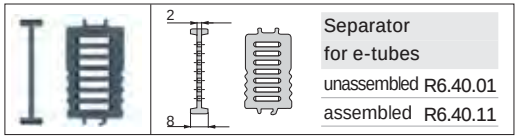
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series R6.40 | e-tubes Interior separation

Previous interior separation - for e-tubes



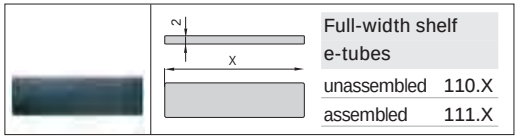
Note: Please observe a lateral spacing of **20 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-tubes	
unassembled	R6.40.01
assembled	R6.40.11

Vertical separator R6.40.01

For e-tubes R6.40. The notches on this seperator mark the side that fixes to the lid.



Full-width shelf e-tubes	
unassembled	110.X
assembled	111.X

Full-width shelf 110.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 7 different heights (in 5 mm increments).

Full-width shelves

Width X [mm]	unassembled	assembled
050	110.50	111.50

Separator with integrated strain relief

Strain relief separator Part No. E6.40.02.Z can be integrated into the mounting bracket and can be placed there at any point of the e-chain®. It combines strain relief and interior separation ● For the use in the first or last chain link ● Easy to assemble without any screws. More information ► from page 1170

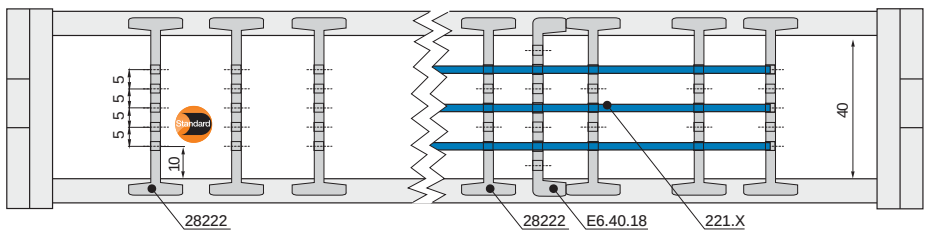


Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

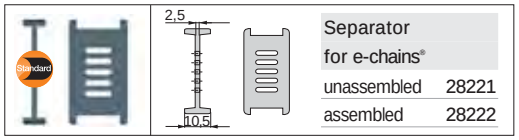
E6 | Series E6.40 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ▶ www.igus.eu/eu/E6.40



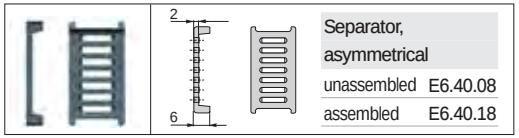
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Separator for e-chains®	
unassembled	28221
assembled	28222

Vertical separator 28221

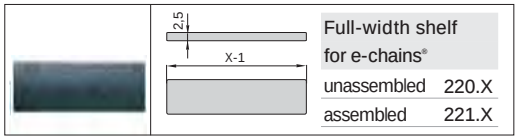
Vertical separators are used if a vertical subdivision of the e-chain® interior is required. For combinations with full-width shelves.



Separator, asymmetrical	
unassembled	E6.40.08
assembled	E6.40.18

Separator, asymmetrical E6.40.08

Asymmetrical separator, for defined distance. No additional spacers necessary. For side-mounted applications.



Full-width shelf for e-chains®	
unassembled	220.X
assembled	221.X

Full-width shelf 220.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 7 different heights (in 5 mm increments).

Full-width shelves 220.X

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
040	220.40	221.40	075	220.75	221.75	150	220.150	221.150
050	220.50	221.50	087	220.87	221.87	175	220.175	221.175
062	220.62	221.62	100	220.100	221.100	200	220.200	221.200
070	220.70	221.70	125	220.125	221.125			

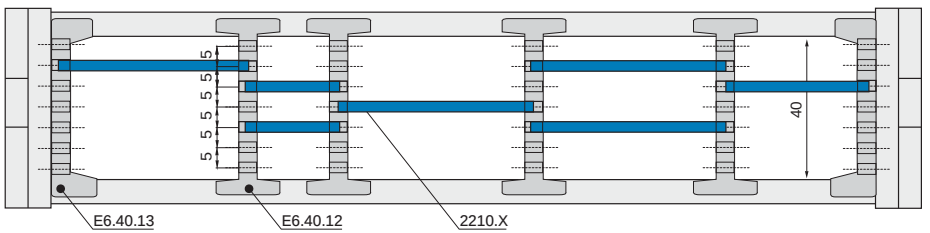
Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.40 | e-chains® Interior separation | Options

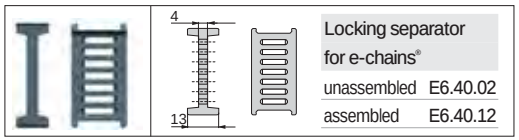
E6.40
R6.40

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ▶ www.igus.eu/eu/E6.40



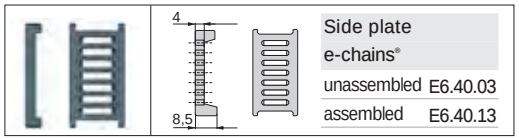
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Locking separator for e-chains®	
unassembled	E6.40.02
assembled	E6.40.12

Locking separator E6.40.02

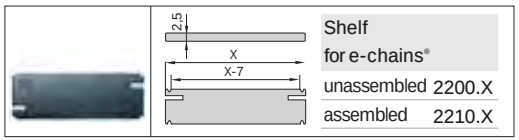
Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Side plate e-chains®	
unassembled	E6.40.03
assembled	E6.40.13

Side plate E6.40.03

Works like middle plate. Allows modular shelving close to the side links. No lateral spacing necessary!



Shelf for e-chains®	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 7 different heights (in 5 mm increments).

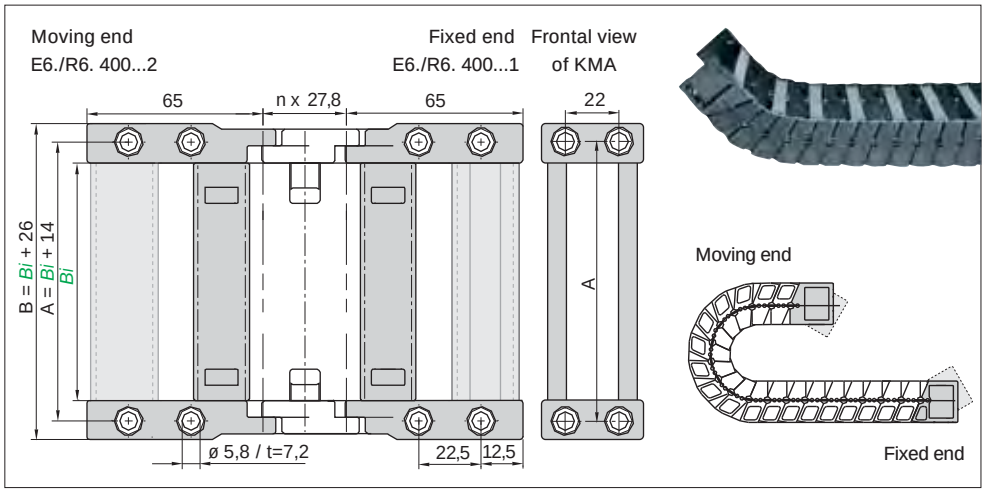
Shelves 2200.X

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	073	2200.73	2210.73
023	2200.23	2210.23	048	2200.48	2210.48	076	2200.76	2210.76
028	2200.28	2210.28	058	2200.58	2210.58	088	2200.88	2210.88
033	2200.33	2210.33	063	2200.65	2210.65	099	2200.99	2210.99
038	2200.38	2210.38	068	2200.68	2210.68			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.40·R6.40 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]
040.	E6.400. R6.400.*040.12.C	54	40
050.	E6.400. R6.400.*050.12.C	64	50
062.	E6.400. R6.400. 062.12.C	76	62
070.	E6.400. R6.400.*070.12.C	84	70
075.	E6.400. R6.400. 075.12.C	89	75
087.	E6.400. R6.400.*087.12.C	101	87
100.	E6.400. R6.400.*100.12.C	114	100
125.	E6.400. R6.400.*125.12.C	139	125
150.	E6.400. R6.400.*150.12.C	154	150
175.	E6.400. R6.400.*175.12.C	189	175
200.	E6.400. R6.400.*200.12.C	214	200
225.	E6.400. R6.400.*225.12.C	239	225
250.	E6.400. R6.400.*250.12.C	264	250
275.	E6.400. R6.400.*275.12.C	289	275
300.	E6.400. R6.400.*300.12.C	314	300

*Width available upon request.

(KMA = Polymer Metal Mounting Bracket)

Please consult igus® for delivery time.

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure

E6.400.100.12.CA

- A…must be indicated on preassembled configurations
- C-profile option
- Full set
- Width index
- Series

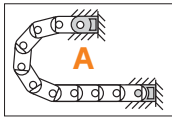
Single-part order:

Mounting bracket Moving end

E6.400.100.2.CA

Mounting bracket Fixed end

E6.400.100.1.CA

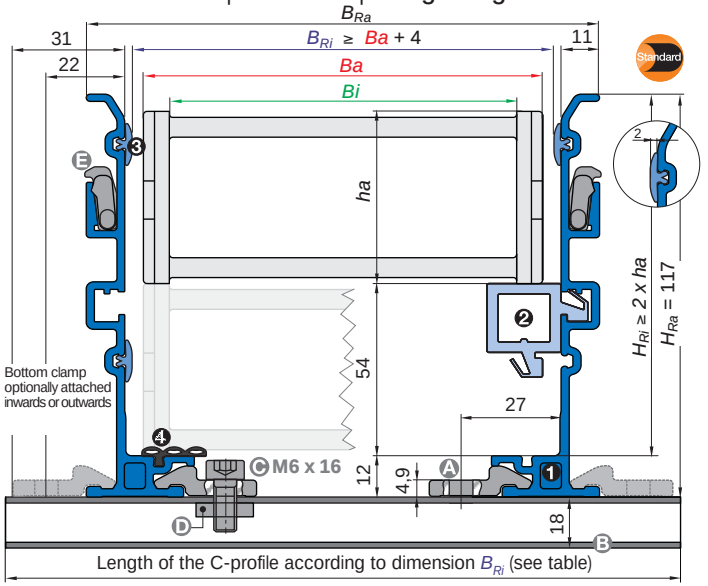


These attachment types are set automatically in the choice of the KMA mounting bracket. For the preassembled mode please add index **A** ▶e.g. E6.400.100.12.CA

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

Aluminum SuperTrough | Basic Version

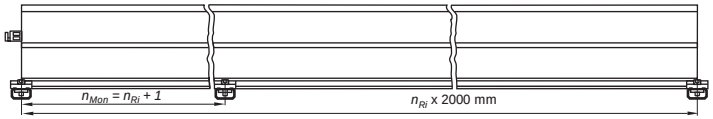
Part No. 972.30.SL | 972.31.SL | Trough height: 117 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶table Ⓒ Screw M6 x 16 Ⓓ Sliding nut M6 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E6.40.100.100.0 with B_{Ri} = 124

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	972.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	972.31.SL
Installation set "Basic" complete (guide trough-sets + 1)		
Order text: 17 installation sets	Part No.	960.30.175
Module for the fixed end		
Order text: 1 set	Part No.	972.80
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No.	972.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1198

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains®
Bi = Inner width e-chains®
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	64	upon request	960.30.175
.050	74	960.30.125	960.30.175
.062	86	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.075	99	960.30.150	960.30.200
.087	111	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.125	149	960.30.200	960.30.250
.150	174	960.30.225	960.30.275
.175	199	960.30.250	960.30.300
.200	224	960.30.275	960.30.325
.225	249	960.30.300	960.30.350
.250	274	960.30.325	960.30.375
.275	299	960.30.350	960.30.400
.300	324	960.30.375	960.30.425

Insert for the installation set "Heavy-Duty": **972.50.XXX** instead of 960.30.XXX on the right column "attached outwards"



Universal:
All-sides attachment

Low-noise 41dB(A)[1]:
Small pitch for smooth running

Long service life:
Minimum vibration, high stability and tensile strength

Dynamic:
For high speeds and high accelerations

Fast assembly:
Openable along inner and outer radius

Cleanroom[2]:
Virtually no wear or abrasion

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Chip protection:
e-tube with enclosed design available

Extremely low-noise, low vibration, high stability

When to use Series E6.52·R6.52:

- If a particularly low noise, low vibration e-chain® with an inner height of 52 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 300 mm
- For unsupported lengths up to 3,0 m and fill weights up to 15 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

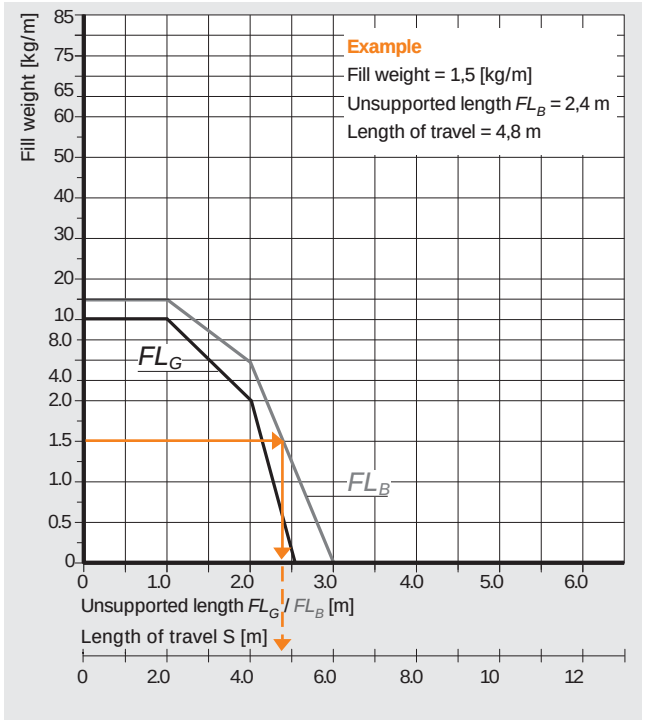
2) Cleanroom - testetd series, more details ▶ page 879

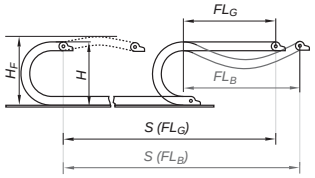
When to use a different igus® Series:

- Limited in side-mounted applications
- ▶ Series E4.56 System E4.1, page 678
- No use with RBR (reverse bending radius)
- ▶ Series E4.56 System E4.1, page 678
- No use with high additional fill weights
- ▶ Series E4.56 System E4.1, page 678
- No use in dirty environments
- ▶ Series E4.56 System E4.1, page 678
- For still less vibration and noise generation or even higher dynamics
- ▶ Series E61.52 System E6.1, page 1008

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.52

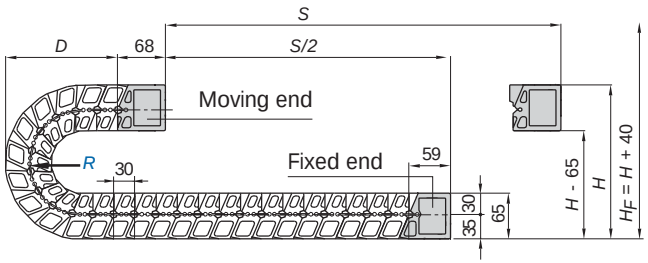




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 30 mm/link
Links/m = 34 (1020 mm)
Chain length = $S/2 + K$

R	075	100	150	200	250
H	270	320	420	520	620
D	155	180	230	280	330
K	300	375	535	690	850

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.52 Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.52 [kg/m]
E6.52. 040. R.0	40	64	≈ 1,76
E6.52. 050. R.0	50	74	≈ 1,80
E6.52. 062. R.0	62	86	≈ 1,84
E6.52. 070. R.0	70	94	≈ 1,87
E6.52. 075. R.0	75	99	≈ 1,89
E6.52. 087. R.0	87	111	≈ 1,94
E6.52. 100. R.0	100	124	≈ 1,98
E6.52. 125. R.0	125	149	≈ 2,07

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.52 [kg/m]
E6.52. 150. R.0	150	174	≈ 2,17
E6.52. 175. R.0	175	199	≈ 2,26
E6.52. 200. R.0	200	224	≈ 2,36
E6.52. 225. R.0	225	249	≈ 2,45
E6.52. 250. R.0	250	274	≈ 2,54
E6.52. 275. R.0	275	299	≈ 2,64
E6.52. 300. R.0	300	324	≈ 2,73

Available bending radii R [mm] 075 | 100 | 150 | 200 | 250 |

Supplement Part No. with required radius (R), example: E6.52.100.100.0

e-chain® links as single parts, overview ▶ page 925

Configuration options and order keys, overview ▶ page 926

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



e-tubes | Series R6.52 fully enclosed | Crossbars removable along both radii

Part No. fully enclosed	Bi [mm]	Ba [mm]	R6.52 [kg/m]
R6.52.* 040. R.0	40	64	≈ 1,78
R6.52. 050. R.0	50	74	≈ 1,89
R6.52.* 062. R.0	62	86	≈ 1,97
R6.52.* 070. R.0	70	94	≈ 2,07
R6.52. 075. R.0	75	99	≈ 2,12
R6.52.* 087. R.0	87	111	≈ 2,21
R6.52. 100. R.0	100	124	≈ 2,35
R6.52. 125. R.0	125	149	≈ 2,57

Part No. fully enclosed	Bi [mm]	Ba [mm]	R6.52 [kg/m]
R6.52. 150. R.0	150	174	≈ 2,80
R6.52. 175. R.0	175	199	≈ 3,03
R6.52.* 200. R.0	200	224	≈ 3,25
R6.52.* 225. R.0	225	249	≈ 3,46
R6.52.* 250. R.0	250	274	≈ 3,68
R6.52.* 275. R.0	275	299	≈ 3,92
R6.52.* 300. R.0	300	324	≈ 4,15

*Width available upon request. Please consult igus® for delivery time.

Available bending radii R [mm] 075 | 100 | 150 | 200 | 250 |

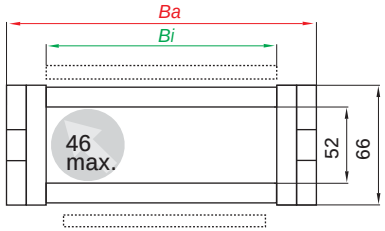
Supplement Part No. with required radius (R), example: R6.52.100.100.0

Order key

E6.52.100.100.0 Crossbar every 2nd link
R6.52.100.100.0 Fully enclosed e-tube

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Inner height
- Series / Type

Dimensioning



e-chain® links as single parts, overview ▶ page 925

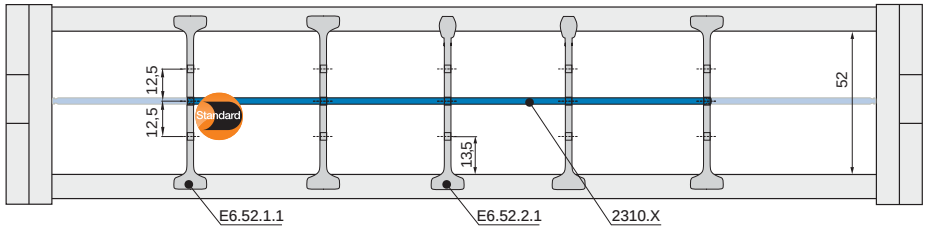
Configuration options and order keys, overview ▶ page 926

Available from stock. Delivery time* in 24h or today!

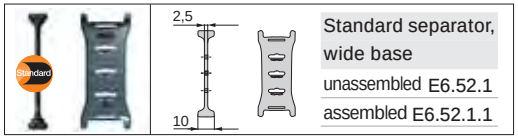
*Delivery time means time until shipping of goods (after technical release)

E6 | E6.52 | e-chains® Interior separation | New in this catalog

New generation interior separation - for e-chains®



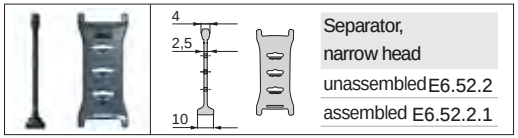
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	E6.52.1
assembled	E6.52.1.1

Standard - for all applications

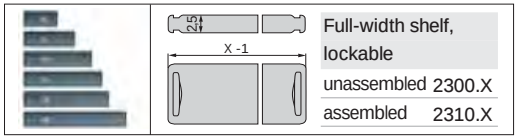
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	E6.52.2
assembled	E6.52.2.1

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



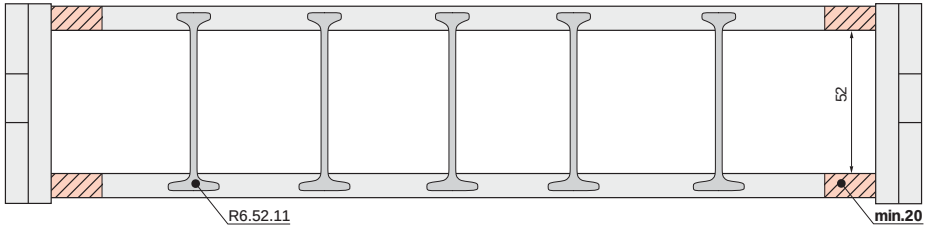
Lockable full-width shelves - for the standard interior separation

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series R6.52 | e-tubes Interior separation

Previous interior separation - for e-tubes



Note: Please observe a lateral spacing of **20 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-tubes	
unassembled	R6.52.01
assembled	R6.52.11

Vertical separator R6.52.01

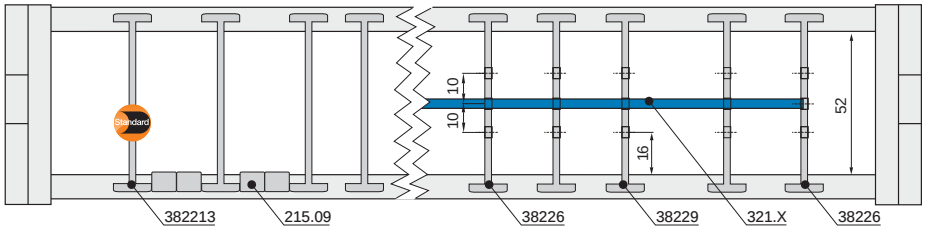
For e-tubes R6.52. The notches on this seperator mark the side that fixes to the lid.

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

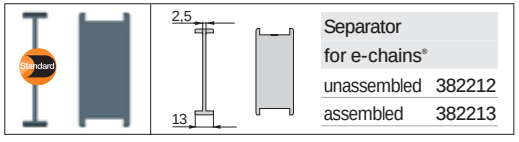
E6 | Series E6.52 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.52



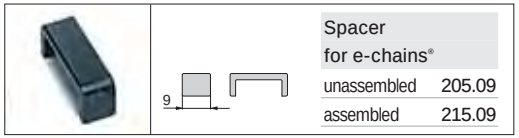
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Separator for e-chains®	
unassembled	382212
assembled	382213

Vertical separator 382212

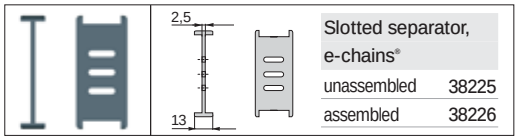
Vertical separators are used if a vertical subdivision of the e-chain® interior is required.



Spacer for e-chains®	
unassembled	205.09
assembled	215.09

Spacer 205.09

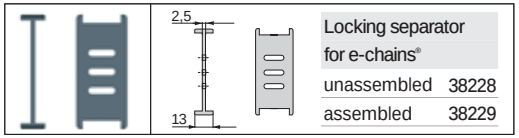
Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications).



Slotted separator, e-chains®	
unassembled	38225
assembled	38226

Slotted separator 38225

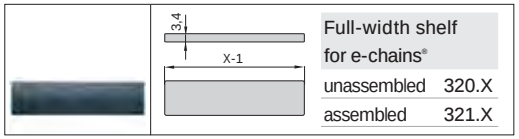
is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Locking separator for e-chains®	
unassembled	38228
assembled	38229

Locking separator 38228

Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Full-width shelf for e-chains®	
unassembled	320.X
assembled	321.X

Full-width shelf 320.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 10 mm increments).

Full-width shelves 320.X

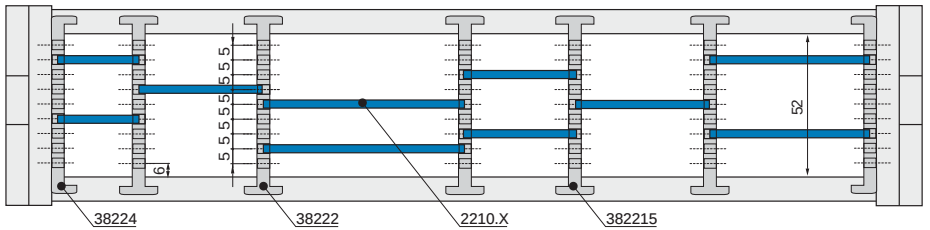
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
040	320.040	321.040	075	320.075	321.075	175	320.175	321.175
050	320.050	321.050	087	320.087	321.087	200	320.200	321.200
062	320.062	321.062	125	320.125	321.125			
070	320.070	321.070	150	320.150	321.150			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

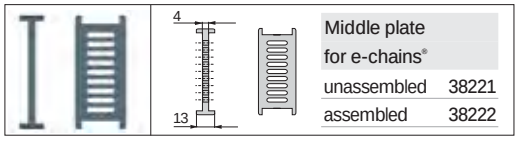
E6 | Series E6.52 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.52



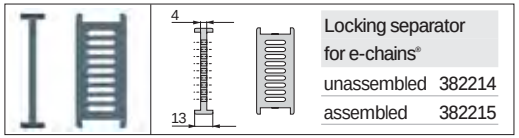
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Middle plate for e-chains®	
unassembled	38221
assembled	38222

Middle plate 38221

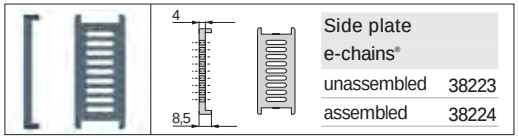
To achieve a modular shelving the shelf 2200.X can be arranged at 9 different heights (in 5 mm increments).



Locking separator for e-chains®	
unassembled	382214
assembled	382215

Locking separator 382214

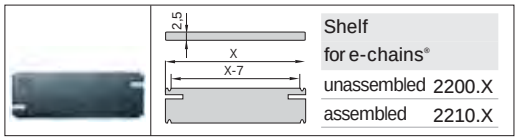
Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Side plate e-chains®	
unassembled	38223
assembled	38224

Side plate 38223

Works like middle plate. Allows modular shelving close to the side links. No lateral spacing necessary!



Shelf for e-chains®	
unassembled	2200.X
assembled	2210.X

Shelf 2200.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 9 different heights (in 5 mm increments).

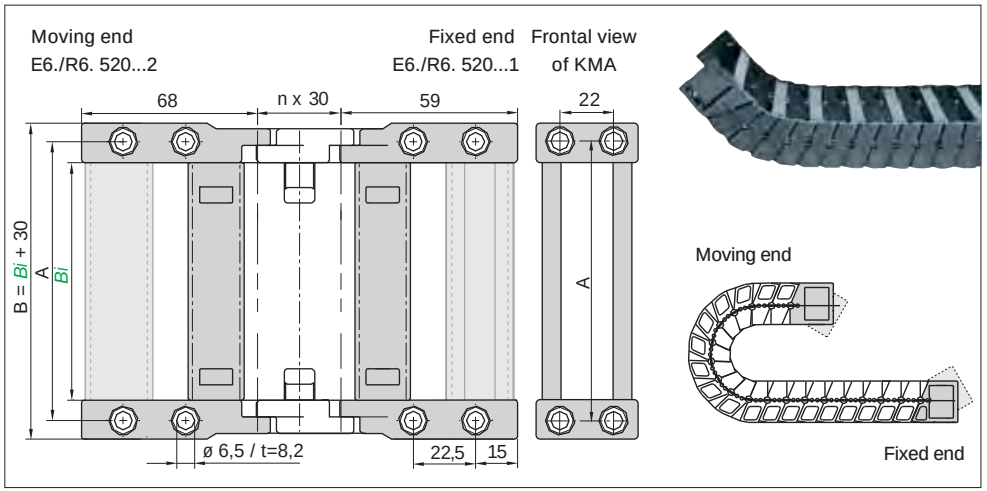
Shelves 2200.X

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	2200.18	2210.18	043	2200.43	2210.43	073	2200.73	2210.73
023	2200.23	2210.23	048	2200.48	2210.48	076	2200.76	2210.76
028	2200.28	2210.28	058	2200.58	2210.58	088	2200.88	2210.88
033	2200.33	2210.33	063	2200.65	2210.65	099	2200.99	2210.99
038	2200.38	2210.38	068	2200.68	2210.68			

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.52·R6.52 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set **KMA pivoting**	A [mm]	Bi [mm]
040.	▶ E6.520. R6.520.*040.12.C	56	40
050.	▶ E6.520. R6.520. 050.12.C	66	50
062.	▶ E6.520. R6.520.*062.12.C	78	62
070.	▶ E6.520. R6.520.*070.12.C	86	70
075.	▶ E6.520. R6.520. 075.12.C	91	75
087.	▶ E6.520. R6.520.*087.12.C	103	87
100.	▶ E6.520. R6.520. 100.12.C	116	100
125.	▶ E6.520. R6.520. 125.12.C	141	125
150.	▶ E6.520. R6.520. 150.12.C	166	150
175.	▶ E6.520. R6.520. 175.12.C	191	175
200.	▶ E6.520. R6.520.*200.12.C	216	200
225.	▶ E6.520. R6.520.*225.12.C	241	225
250.	▶ E6.520. R6.520.*250.12.C	266	250
275.	▶ E6.520. R6.520.*275.12.C	291	275
300.	▶ E6.520. R6.520.*300.12.C	316	300

*Width available upon request.

(KMA = Polymer Metal Mounting Bracket)

Please consult igus® for delivery time.

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure

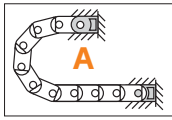
E6.520.100.12.CA

- A…must be indicated on preassembled configurations
- C-profile option
- Full set
- Width index
- Series

Single-part order:

Mounting bracket Moving end
E6.520.100.2.CA

Mounting bracket Fixed end
E6.520.100.1.CA

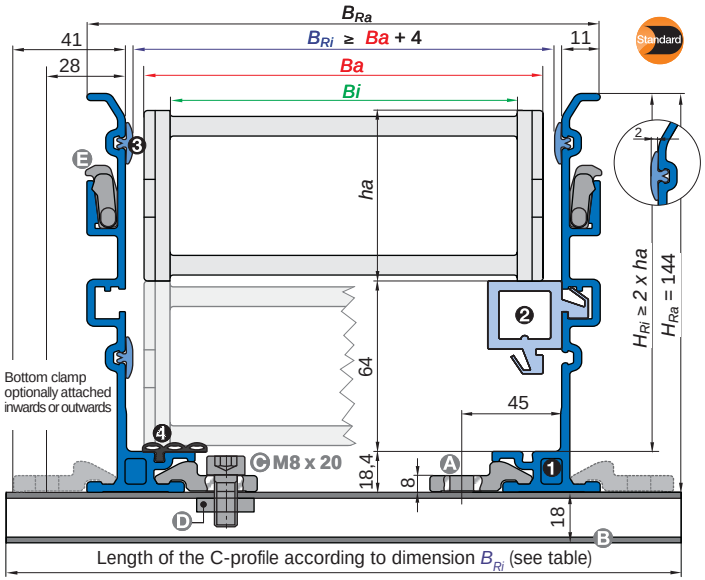


These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
▶ e.g. E6.520.100.12.CA

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Aluminum SuperTrough | Basic Version

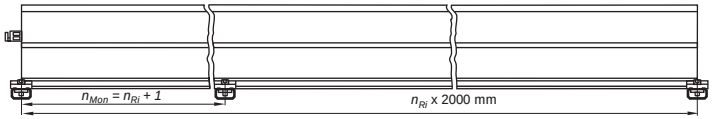
Part No. 973.30.SL | 973.31.SL | Trough height: 144 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E6.52.100.300.0 with B_{Ri} = 128

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 973.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 973.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.40.175
Module for the fixed end	
Order text: 1 set	Part No. 973.81
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 973.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1202

● Trough set ● Installation set ● Glide bar
● C-Profile
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets
Ba = Outer width e-chains®
Bi = Inner width e-chains®

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	68	upon request	960.40.200
.050	78	upon request	960.40.200
.062	90	upon request	960.40.225
.070	98	upon request	960.40.225
.075	103	upon request	960.40.225
.087	115	upon request	960.40.250
.100	128	960.40.175	960.40.250
.125	153	960.40.200	960.40.275
.150	178	960.40.225	960.40.300
.175	203	960.40.250	960.40.325
.200	228	960.40.275	960.40.350
.225	253	960.40.300	960.40.375
.250	278	960.40.325	960.40.400
.275	303	960.40.350	960.40.425
.300	328	960.40.375	960.40.450

Insert for the installation set "Heavy-Duty": **973.50.XXX** instead of 960.40.XXX on the right column "attached outwards"



Universal:
All-sides attachment

Low-noise 46 dB(A)[1]:
Small pitch for smooth running

Long service life:
Minimum vibration, high stability and tensile strength

Dynamic:
For high speeds and high accelerations

Fast assembly:
Openable along inner and outer radius

Cleanroom[2]:
Virtually no wear or abrasion

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Extremely low-noise, low vibration, high stability

When to use Series E6.62:

- If a particularly low noise, low vibration e-chain® with an inner height of 62 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 400 mm
- For unsupported lengths up to 4,0 m and fill weights up to 45 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

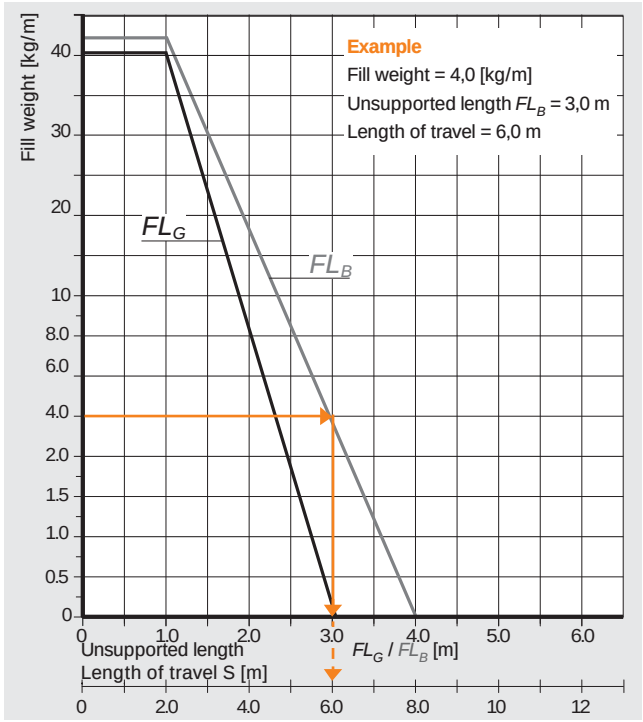
2) Cleanroom - testetd series, more details ▶ page 879

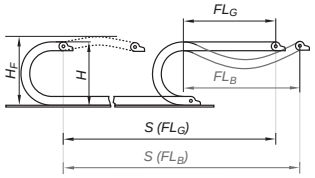
When to use a different igus® Series:

- Limited in side-mounted applications
- ▶ Series E4.56 System E4.1, page 678
- No use with RBR (reverse bending radius)
- ▶ Series E4.56 System E4.1, page 678
- No use with high additional fill weights
- ▶ Series E4.56 System E4.1, page 678
- No use in dirty environments
- ▶ Series R4.56 System E4.1, page 678

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.62

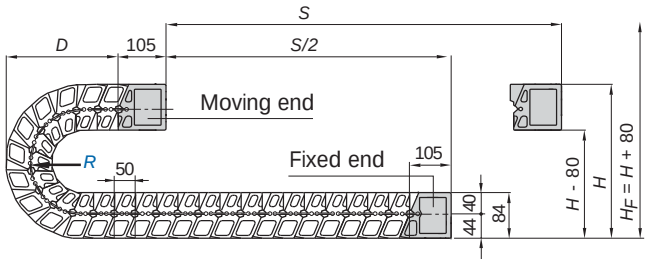




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 50 mm/link
Links/m = 20 (1000 mm)
Chain length = $S/2 + K$

R	115	150	200	250	300	350
H	388	458	558	658	758	858
D	234	269	319	369	419	469
K	465	575	730	890	1045	1200

The required clearance height: $H_F = H + 80$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.62 Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.62 [kg/m]
E6.62. 05. R.0	50	86	3,22
E6.62. 06. R.0	68	104	3,28
E6.62. 07. R.0	75	111	3,31
E6.62. 087. R.0	87	123	3,35
E6.62. 097. R.0	97	133	3,38
E6.62. 10. R.0	100	136	3,39
E6.62. 11. R.0	108	144	3,42
E6.62. 112. R.0	112	148	3,43
E6.62. 12. R.0	125	161	3,48
E6.62. 137. R.0	137	173	3,52
E6.62. 15. R.0	150	186	3,57
E6.62. 162. R.0	162	198	3,61
E6.62. 17. R.0	168	204	3,63
E6.62. 18. R.0	175	211	3,65
E6.62. 187. R.0	187	223	3,69
E6.62. 20. R.0	200	236	3,74

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.62 [kg/m]
E6.62. 212. R.0	212	248	3,78
E6.62. 23. R.0	225	261	3,83
E6.62. 237. R.0	237	273	3,87
E6.62. 25. R.0	250	286	3,91
E6.62. 262. R.0	262	298	3,95
E6.62. 28. R.0	275	311	4,00
E6.62. 29. R.0	287	323	4,04
E6.62. 30. R.0	300	336	4,09
E6.62. 312. R.0	312	348	4,13
E6.62. 325. R.0	325	361	4,17
E6.62. 337. R.0	337	373	4,21
E6.62. 350. R.0	350	386	4,26
E6.62. 362. R.0	362	398	4,30
E6.62. 375. R.0	375	411	4,35
E6.62. 387. R.0	387	423	4,39
E6.62. 400. R.0	400	436	4,43

Available bending radii *R* [mm] 115 | 150 | 200 | 250 | 300 | 350

Supplement Part No. with required radius (*R*), example: E6.62.10.250.0

e-chain® links as single parts, overview ▶ page 925

Configuration options and order keys, overview ▶ page 926

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



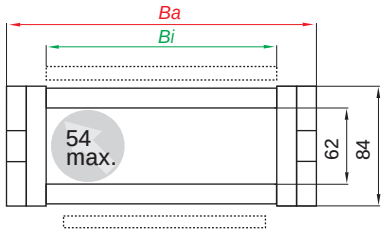
igus® System E6 on a linear drive for high speeds

Order key

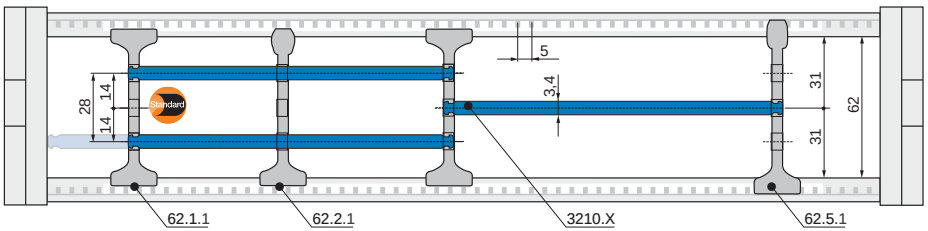
E6.62.10.250.0 Crossbar every 2nd link

- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

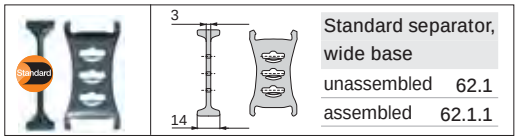
Dimensioning



New generation interior separation - for e-chains®



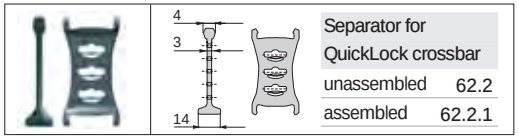
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	62.1
assembled	62.1.1

Standard - for all applications

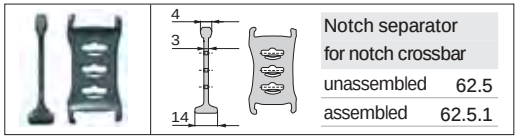
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	62.2
assembled	62.2.1

For even faster installation

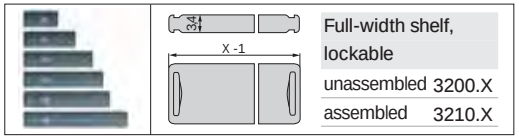
Separator for igus® QuickLock crossbar 385.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Notch separator for notch crossbar	
unassembled	62.5
assembled	62.5.1

Locks safely in 5 mm increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

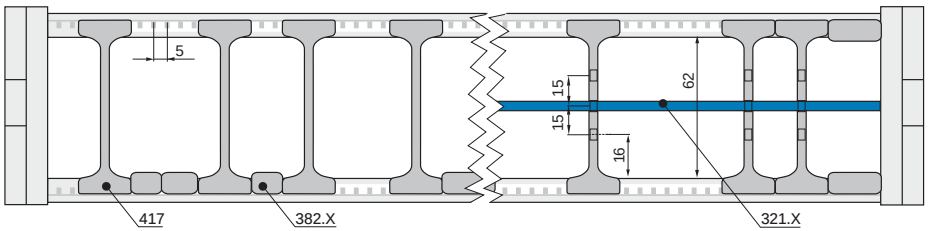
Lockable full-width shelves



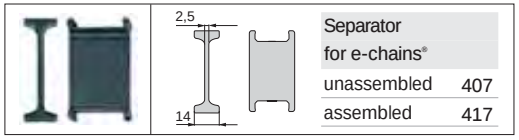
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	3200.050	3210.050	125	3200.125	3210.125	225	3200.225	3210.225
075	3200.075	3210.075	150	3200.150	3210.150	250	3200.250	3210.250
100	3200.100	3210.100	175	3200.175	3210.175			
115	3200.115	3210.115	200	3200.200	3210.200			

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.62



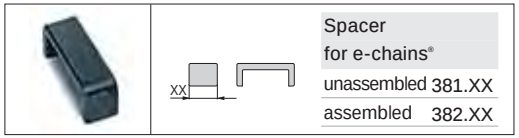
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Separator for e-chains®	
unassembled	407
assembled	417

Vertical separator 407

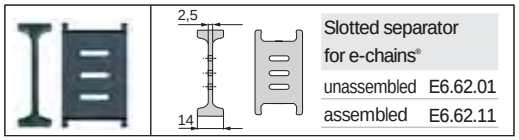
For a vertical subdividing. Offers safe stability due to its wide base design, also when used with thick cables or hoses.



Spacer for e-chains®	
unassembled	381.XX
assembled	382.XX

Spacer 381.XX

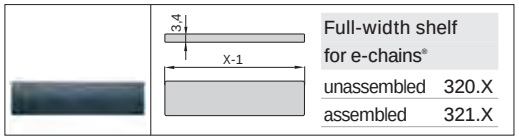
Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20 mm).



Slotted separator for e-chains®	
unassembled	E6.62.01
assembled	E6.62.11

Slotted separator E6.62.01

is used when vertical and horizontal separation is required. Due to its slot, it allows basic vertical/horizontal shelving arrangements.



Full-width shelf for e-chains®	
unassembled	320.X
assembled	321.X

Full-width shelf 320.X

This option makes sense in applications with many thin cables with similar diameters. Full-width shelves can be arranged at 3 different heights (in 15 mm increments).

Full-width shelves 320.X

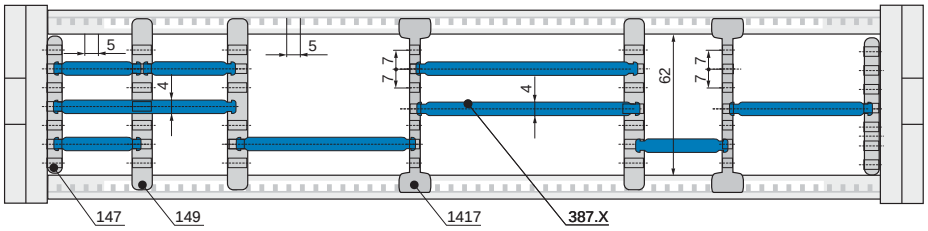
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	320.50	321.50	125	320.125	321.125	187	320.187	321.187
068	320.68	321.68	137	320.137	321.137	200	320.200	321.200
075	320.75	321.75	150	320.150	321.150	212	320.212	321.212
087	320.87	321.87	162	320.162	321.162	225	320.225	321.225
108	320.108	321.108	168	320.168	321.168	237	320.237	321.237
112	320.112	321.112	175	320.175	321.175	250	320.250	321.250

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

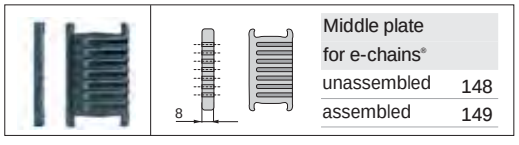
E6 | Series E6.62 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.62



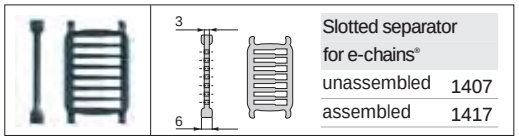
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Middle plate for e-chains®	
unassembled	148
assembled	149

Middle plate 148

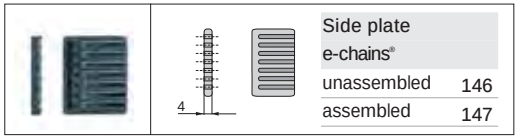
To achieve a modular shelving the shelf 386.X (table left page) can be arranged at 7 different heights (in 7 mm increments).



Slotted separator for e-chains®	
unassembled	1407
assembled	1417

Slotted separator 1407

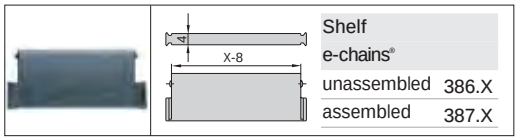
For very fine subdivisions. However, they cannot be retro-fitted into an existing separation system without dismantling the interior separators first.



Side plate e-chains®	
unassembled	146
assembled	147

Side plate 146

Works like middle plate. Allows modular shelving close to the side links.



Shelf e-chains®	
unassembled	386.X
assembled	387.X

Shelf 386.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 7 different heights (in 7 mm increments).

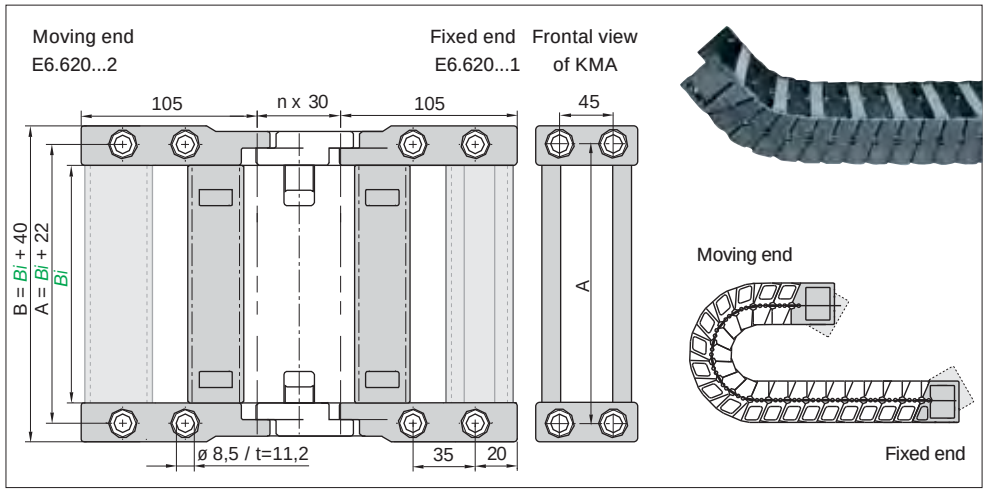
Shelves

Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
018	386.18	387.18	050	386.50	387.50	108	386.108	387.108
023	386.23	387.23	054	386.54	387.54	125	386.125	387.125
025	386.25	387.25	062	386.62	387.62	150	386.150	387.150
028	386.28	387.28	075	386.75	387.75	175	386.175	387.175
033	386.33	387.33	087	386.87	387.87	200	386.200	387.200
043	386.43	387.43	100	386.100	387.100	208	386.208	387.208

Interior separation with single-part order. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

E6 | Series E6.62 | KMA mounting brackets pivoting

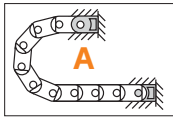
For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]	Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]
05.	► E6.620. 05. 12.C	72	50	212.	► E6.620. 212. 12.C	234	212
06.	► E6.620. 06. 12.C	90	68	23.	► E6.620. 23. 12.C	247	225
07.	► E6.620. 07. 12.C	97	75	237.	► E6.620. 237. 12.C	259	237
087.	► E6.620. 087. 12.C	109	87	25.	► E6.620. 25. 12.C	272	250
097.	► E6.620. 097. 12.C	119	97	262.	► E6.620. 262. 12.C	284	262
10.	► E6.620. 10. 12.C	122	100	28.	► E6.620. 28. 12.C	297	275
11.	► E6.620. 11. 12.C	130	108	29.	► E6.620. 29. 12.C	309	287
112.	► E6.620. 112. 12.C	134	112	30.	► E6.620. 30. 12.C	322	300
12.	► E6.620. 12. 12.C	147	125	312	► E6.620. 312. 12.C	334	312
137.	► E6.620. 137. 12.C	159	137	325.	► E6.620. 325. 12.C	347	325
15.	► E6.620. 15. 12.C	172	150	337.	► E6.620. 337. 12.C	359	337
162.	► E6.620. 162. 12.C	184	162	350.	► E6.620. 350. 12.C	372	350
17.	► E6.620. 17. 12.C	190	168	362	► E6.620. 362. 12.C	384	362
18.	► E6.620. 18. 12.C	197	175	375.	► E6.620. 375. 12.C	397	375
187.	► E6.620. 187. 12.C	209	187	387.	► E6.620. 387. 12.C	409	387
20.	► E6.620. 20. 12.C	222	200	400.	► E6.620. 400. 12.C	422	400

(KMA = Polymer Metal Mounting Bracket)

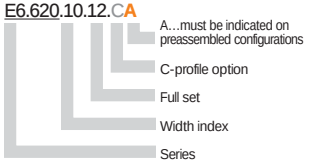


These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
►e.g. E6.620.10.12.C**A**



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
  (KMA = Polymer Metal Mounting Bracket)

Part No. structure
E6.620.10.12.C**A**



Single-part order:
Mounting bracket Moving end
E6.620.10.2.C**A**
Mounting bracket Fixed end
E6.620.10.1.C**A**

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

Aluminum SuperTrough | Basic Version

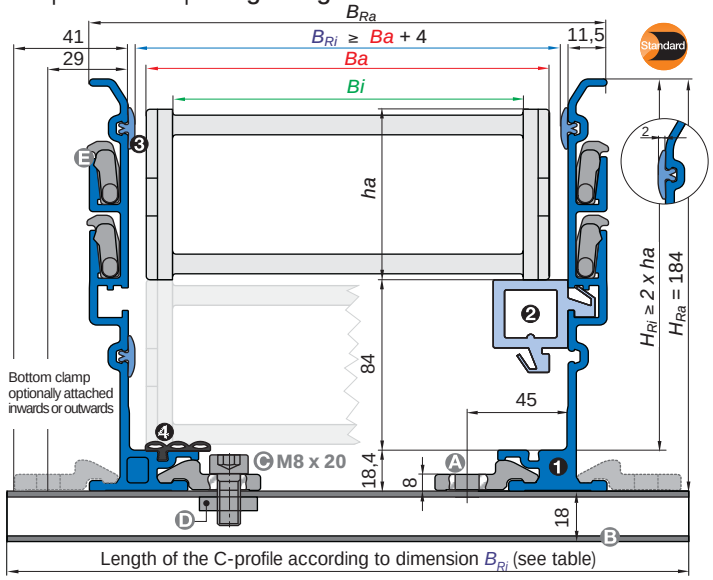
Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	90	upon request	960.50.225
.06	108	upon request	960.50.225
.07	115	upon request	960.50.250
.087	127	960.50.175	960.50.250
.10	140	960.50.200	960.50.275
.11	148	960.50.200	960.50.275
.112	152	960.50.200	960.50.275
.12	165	960.50.225	960.50.300
.137	177	960.50.225	960.50.300
.15	190	960.50.250	960.50.325
.162	202	960.50.250	960.50.325
.17	208	960.50.275	960.50.325
.18	215	960.50.275	960.50.350
.187	227	960.50.275	960.50.350
.20	240	960.50.300	960.50.375
.212	252	960.50.300	960.50.375
.23	265	960.50.325	960.50.400
.237	277	960.50.325	960.50.400
.25	290	960.50.350	960.50.425
.262	302	960.50.350	960.50.425
.28	315	960.50.375	960.50.450
.29	327	960.50.375	960.50.450
.30	340	960.50.400	960.50.475
.312	352	960.50.400	960.50.475
.325	365	960.50.425	960.50.500
.337	377	960.50.425	960.50.500
.350	390	960.50.450	960.50.525
.362	402	960.50.450	960.50.525
.375	415	960.50.475	960.50.550
.387	427	960.50.475	960.50.550
.400	440	960.50.500	960.50.575

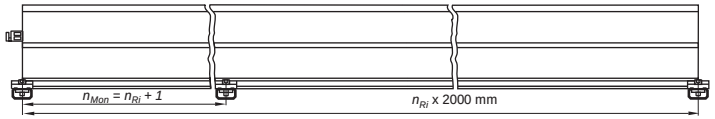
Insert for the installation set "Heavy-Duty": **974.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E6.62.10.250.0 with B_{Ri} = 140

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 974.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 974.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.200
Module for the fixed end	
Order text: 1 set	Part No. 974.80
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No.974.30.SLA

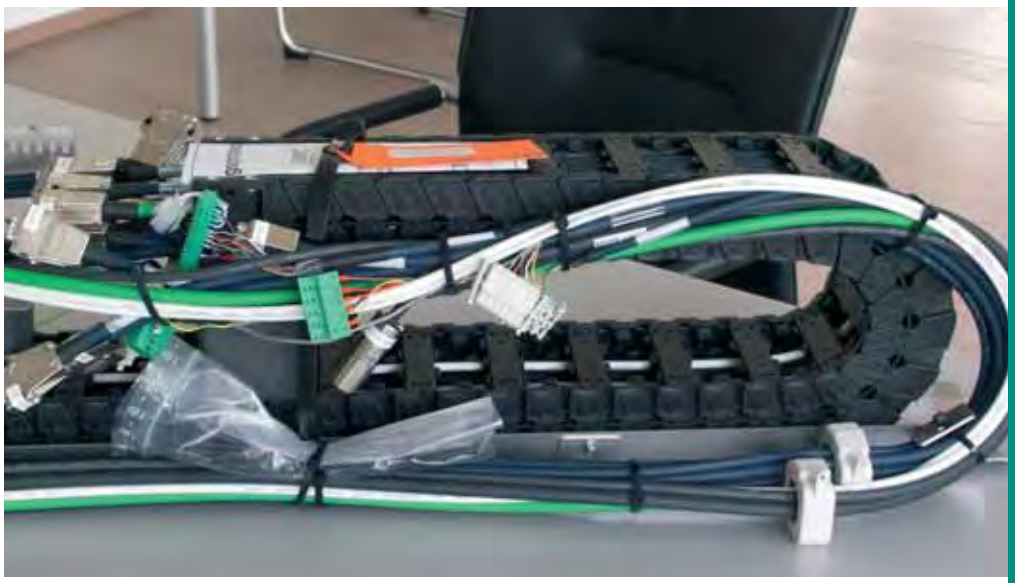


Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1202

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains®
Bi = Inner width e-chains®
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets

E6.62



Preassembled energy supply systems reduce throughput and assembly times significantly. Because in this positioning system, cleanroom compatibility is required, each preassembled e-chainsystem® is attached with a cleaning protocol.



Universal:
All-sides attachment

Low-noise 46dB(A)[1]:
Small pitch for smooth running

Long service life:
Minimum vibration, high stability and tensile strength

Dynamic:
For high speeds and high accelerations

Fast assembly:
Openable along inner and outer radius

Cleanroom[2]:
Virtually no wear or abrasion

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Extremely low-noise, low vibration, high stability

When to use Series E6.80L:

- If a particularly low noise, low vibration e-chain® with an inner height of 80 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 550 mm
- For unsupported lengths up to 2,5 m and fill weights up to 26 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

2) Cleanroom - testetd series, more details ▶ page 879

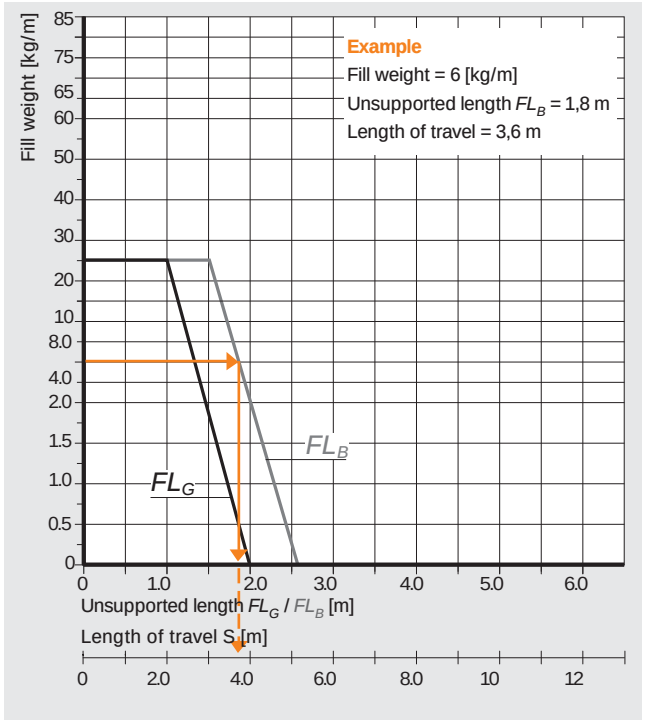
When to use a different igus® Series:

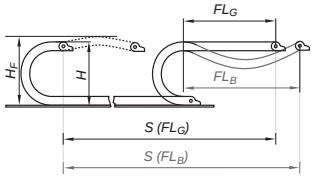
- Limited in side-mounted applications
- ▶ Series 15050 System E4/light, page 830
- No use with RBR (reverse bending radius)
- ▶ Series 15050 System E4/light, page 830
- No use with high additional fill weights
- ▶ Series 15050 System E4/light, page 830
- No use in dirty environments
- ▶ Series 19850 System E4/light, page 830

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.80L

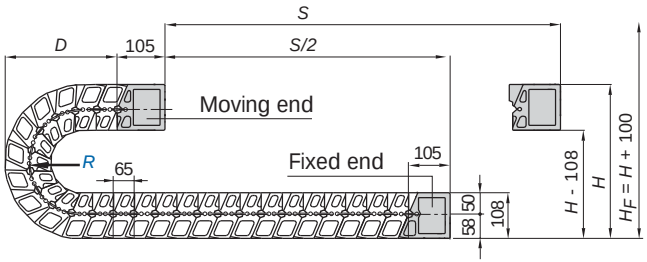




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 65 mm/link
Links/m = 16 (1040 mm)
Chain length = $S/2 + K$

R	100*	150*	175	200*	250*	300*
H	416	516	566	616	716	816
D	256	306	331	356	406	456
K	445	605	680	760	915	1075

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.80L Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.80L [kg/m]
E6.80L. 08. R.0	87	101	3,28
E6.80L. 10. R.0	100	114	3,33
E6.80L. 11. R.0	112	126	3,38
E6.80L. 12. R.0	125	139	3,43
E6.80L. 13. R.0	137	151	3,49
E6.80L. 15. R.0	150	164	3,55
E6.80L. 16. R.0	162	176	3,61
E6.80L. 17. R.0	175	189	3,67
E6.80L. 18. R.0	187	201	3,73
E6.80L. 20. R.0	200	214	3,79
E6.80L. 21. R.0	212	226	3,85
E6.80L. 22. R.0	225	239	3,91
E6.80L. 23. R.0	237	251	3,97
E6.80L. 25. R.0	250	264	4,02
E6.80L. 26. R.0	262	276	4,09
E6.80L. 27. R.0	275	289	4,14
E6.80L. 28. R.0	287	301	4,20
E6.80L. 30. R.0	300	314	4,26
E6.80L. 31. R.0	312	326	4,32

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.80L [kg/m]
E6.80L. 32. R.0	325	339	4,38
E6.80L. 33. R.0	337	351	4,44
E6.80L. 35. R.0	350	364	4,50
E6.80L. 36. R.0	362	376	4,56
E6.80L. 37. R.0	375	389	4,62
E6.80L. 38. R.0	387	401	4,68
E6.80L. 40. R.0	400	414	4,74
E6.80L. 41. R.0	412	426	4,80
E6.80L. 42. R.0	425	439	4,85
E6.80L. 43. R.0	437	451	4,92
E6.80L. 45. R.0	450	464	5,03
E6.80L. 46. R.0	462	476	5,09
E6.80L. 47. R.0	475	489	5,15
E6.80L. 48. R.0	487	501	5,21
E6.80L. 50. R.0	500	514	5,27
E6.80L. 51. R.0	512	526	5,33
E6.80L. 52. R.0	525	539	5,39
E6.80L. 53. R.0	537	551	5,45
E6.80L. 55. R.0	550	564	5,51

*Radius available upon request, please consult igus® for delivery time

Available bending radii *R* [mm] 100* | 150* | **175** | 200* | 250* | 300*

Supplement Part No. with required radius (*R*), example: E6.80L.10.175.0

e-chain® links as single parts, overview ► page 925

Configuration options and order keys, overview ► page 926

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



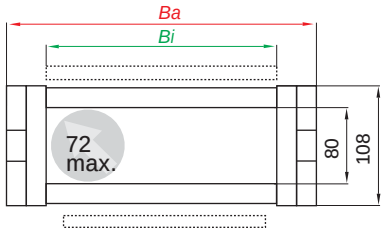
igus® System E6, pick and place robot - speed 8 m/s, acceleration 78,5 m/s²

Order key

E6.80L.10.175.0 Crossbar every 2nd link

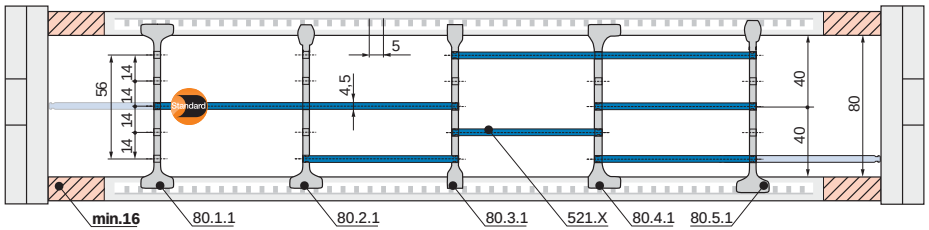
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning

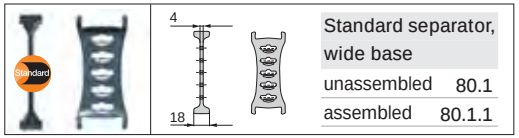


E6 | Series E6.80L | Interior separation | New in this catalog

New generation interior separation - for e-chains®



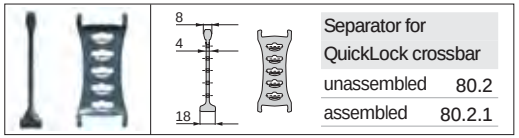
Note: Please observe a lateral spacing of **16 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	80.1
assembled	80.1.1

Standard - for all applications

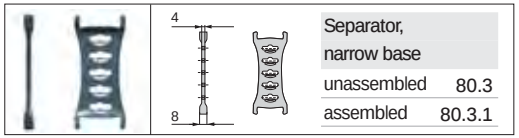
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	80.2
assembled	80.2.1

For even faster installation

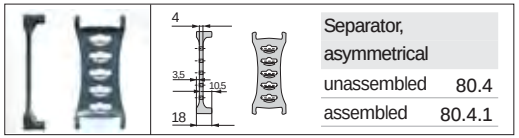
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	80.3
assembled	80.3.1

For many thin cables

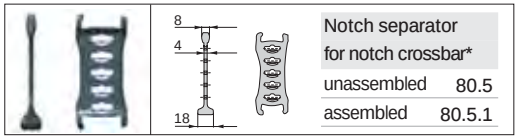
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Separator, asymmetrical	
unassembled	80.4
assembled	80.4.1

For side-mounted applications

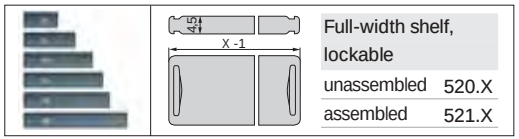
Asymmetrical separator, for defined distance.
No additional spacers necessary.



Notch separator for notch crossbar*	
unassembled	80.5
assembled	80.5.1

Locks safely in 5 mm increments

Notch separator for exact positioning in e-chains®.
Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.

Rastbare Full-width shelves



Width X [mm]	unassembled	assembled
050	520.050	521.050
065	520.065	521.065
075	520.075	521.075
100	520.100	521.100
125	520.125	521.125

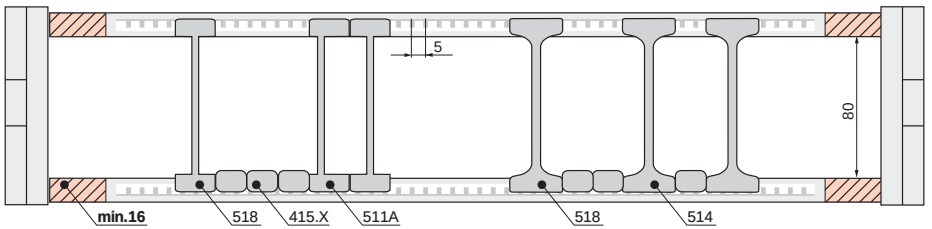
Width X [mm]	unassembled	assembled
150	520.150	521.150
175	520.175	521.175
200	520.200	521.200
225	520.225	521.225
250	520.250	521.250

Width X [mm]	unassembled	assembled
300	520.300	521.300
350	520.350	521.350
375	520.375	520.375
387	520.387	520.387
450	520.450	521.450

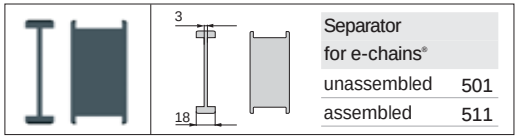
E6 | Series E6.80L | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.80L



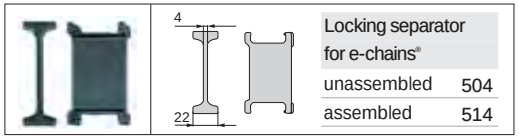
Note: Please observe a lateral spacing of **16 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-chains®	
unassembled	501
assembled	511

Vertical separator 501

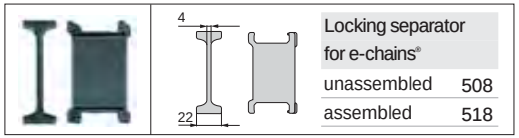
Offers safe stability, also when used with thick cables or hoses.



Locking separator for e-chains®	
unassembled	504
assembled	514

Locking separator 504

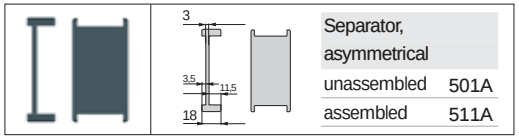
Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Locking separator for e-chains®	
unassembled	508
assembled	518

Locking separator 508

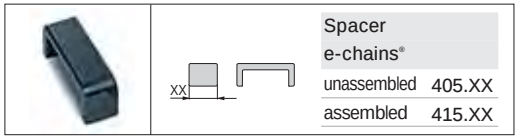
For applications exposed to very high humidity (> 85%). Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Separator, asymmetrical	
unassembled	501A
assembled	511A

Separator, asymmetrical 501A

With 18 mm base, for the combination of spacers and separators with different widths, e.g. for side-mounted applications.



Spacer e-chains®	
unassembled	405.XX
assembled	415.XX

Spacer 405.XX

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between 10, 15, 20, 30, 40 mm).

Shelves - for interior separation options

Width X [mm]	unassembled	assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43

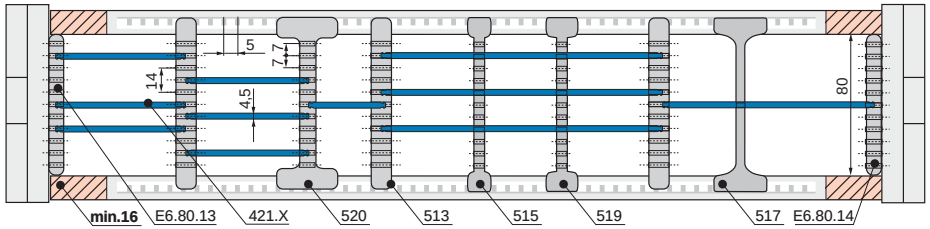
Width X [mm]	unassembled	assembled
050	420.50	421.50
062	420.62	421.62
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125

Width X [mm]	unassembled	assembled
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

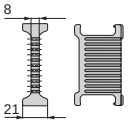
E6 | Series E6.80L | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

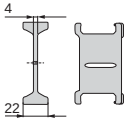
All elements of the previous interior separation can still be ordered ►www.igus.eu/eu/E6.80L



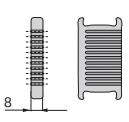
Note: Please observe a lateral spacing of **16 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link.

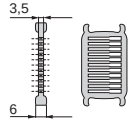
Locking vertical separator for e-chains®	
unassembled	510
assembled	520

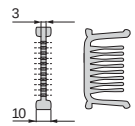
Locking separator for e-chains®	
unassembled	507
assembled	517

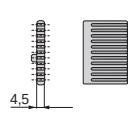
Middle plate for e-chains® / e-tubes	
unassembled	503
assembled	513

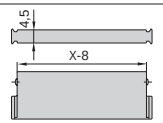
Slotted separator for e-chains® / e-tubes	
unassembled	505
assembled	515

Open slotted separator for e-chains® / e-tubes	
unassembled	509
assembled	519

Side plate left / right	
unassembled	E6.80.03
assembled	E6.80.13
unassembled	E6.80.04
assembled	E6.80.14

Shelf	
unassembled	420.X
assembled	421.X

Locking vertical separator 510 (e-chains® only)

Works like middle plate, for applications exposed to very high humidity (> 85%).

Locking separator 507

Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.

Middle plate 503

To achieve a modular shelving the shelf 420.X (table left page) can be arranged at 11 different heights (in 7 mm increments).

Slotted separator 505

For very fine subdivisions. However, they cannot be retro-fitted into an existing separation system without dismantling the interior separators first.

Open, slotted separator 509 (unilateral open)

Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate E6.80.13 and E6.80.14

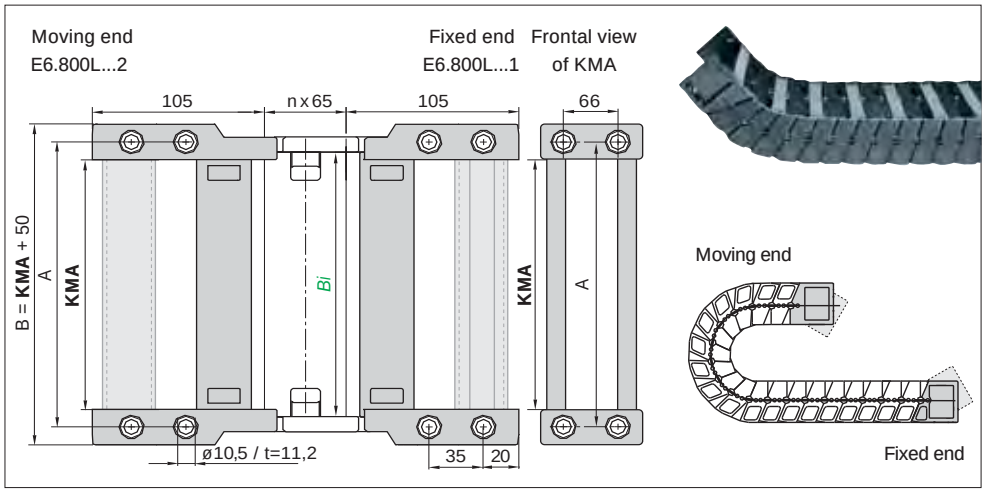
Note on side plates: For the side part E6.80.01.XX of the e-chain®, please use the side plate E6.80.13, and for the side part E6.80.02.XX, the side plate E6.80.14! Allows a rack-like division up to the side links. No lateral spacing necessary!

Shelf 420.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 11 different heights (in 7 mm increments). (not for 504, 508).

E6 | Series E6.80L | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment

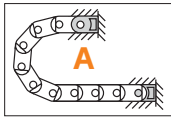


KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set KMA pivoting	A [mm]	KMA [mm]
08.	E6.800L. 08. 12.C	103	75
10.	E6.800L. 10. 12.C	115	87
11.	E6.800L. 11. 12.C	128	100
12.	E6.800L. 12. 12.C	140	112
13.	E6.800L. 13. 12.C	153	125
15.	E6.800L. 15. 12.C	165	137
16.	E6.800L. 16. 12.C	178	150
17.	E6.800L. 17. 12.C	190	162
18.	E6.800L. 18. 12.C	203	175
20.	E6.800L. 20. 12.C	215	187
21.	E6.800L. 21. 12.C	228	200
22.	E6.800L. 22. 12.C	240	212
23.	E6.800L. 23. 12.C	253	225
25.	E6.800L. 25. 12.C	265	237
26.	E6.800L. 26. 12.C	278	250
27.	E6.800L. 27. 12.C	290	262
28.	E6.800L. 28. 12.C	303	275
30.	E6.800L. 30. 12.C	315	287
31.	E6.800L. 31. 12.C	328	300

(KMA = Polymer Metal Mounting Bracket)

Width index	Part No. Full set KMA pivoting	A [mm]	KMA [mm]
32.	E6.800L. 32. 12.C	340	312
33.	E6.800L. 33. 12.C	353	325
35.	E6.800L. 35. 12.C	365	337
36.	E6.800L. 36. 12.C	378	350
37.	E6.800L. 37. 12.C	390	362
38.	E6.800L. 38. 12.C	403	375
40.	E6.800L. 40. 12.C	415	387
41.	E6.800L. 41. 12.C	428	400
42.	E6.800L. 42. 12.C	440	412
43.	E6.800L. 43. 12.C	453	425
45.	E6.800L. 45. 12.C	465	437
46.	E6.800L. 46. 12.C	478	450
47.	E6.800L. 47. 12.C	490	462
48.	E6.800L. 48. 12.C	503	475
50.	E6.800L. 50. 12.C	515	487
51.	E6.800L. 51. 12.C	528	500
52.	E6.800L. 52. 12.C	540	512
53.	E6.800L. 53. 12.C	553	225
55.	E6.800L. 55. 12.C	565	537



These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
►e.g. E6.800L.10.12.CA

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request (KMA = Polymer Metal Mounting Bracket)

Part No. structure
E6.800L.10.12.CA
- A...must be indicated on preassembled configurations
- C-profile option
- Full set
- Width index
- Series

Single-part order:
Mounting bracket Moving end
E6.800L.10.2.CA
Mounting bracket Fixed end
E6.800L.10.1.CA

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148



Universal:
All-sides attachment

Low-noise 46dB(A)[1]:
Small pitch for smooth running

Long service life:
Minimum vibration, high stability and tensile strength

Dynamic:
For high speeds and high accelerations

Fast assembly:
Openable along inner and outer radius

Cleanroom[2]:
Virtually no wear or abrasion

Modular design:
Can be shortened and lengthened

High stability:
For unsupported applications

Extremely low-noise, low vibration, high stability

When to use Series E6.80:

- If a particularly low noise, low vibration e-chain® with an inner height of 80 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 600 mm
- For unsupported lengths up to 5,25 m and fill weights up to 56 kg/m
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

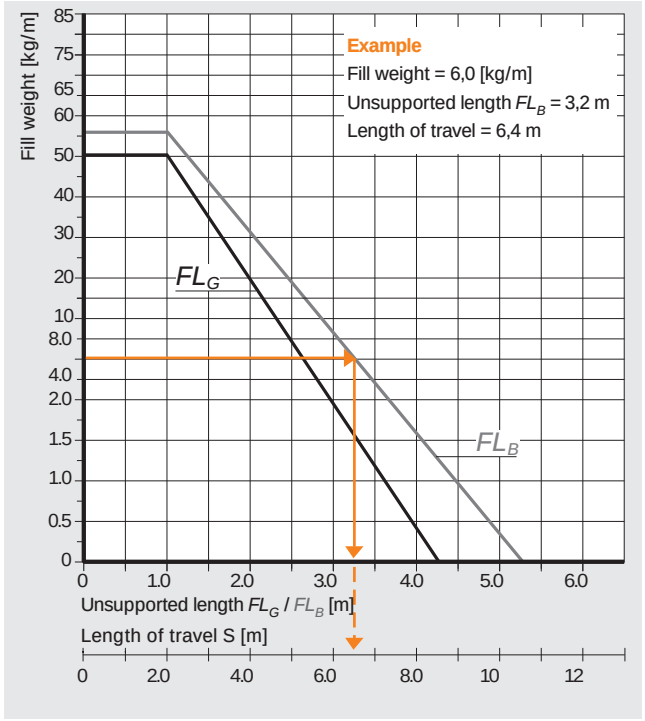
2) Cleanroom - testetd series, more details ▶ page 879

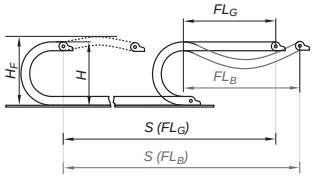
When to use a different igus® Series:

- Limited in side-mounted applications
▶ Series E4.80 System E4.1, page 694
- No use with RBR (reverse bending radius)
▶ Series E4.80 System E4.1, page 694
- No use with high additional fill weights
▶ Series E4.80 System E4.1, page 694
- No use in dirty environments
▶ Series R4.80 System E4.1, page 694

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/E6.80

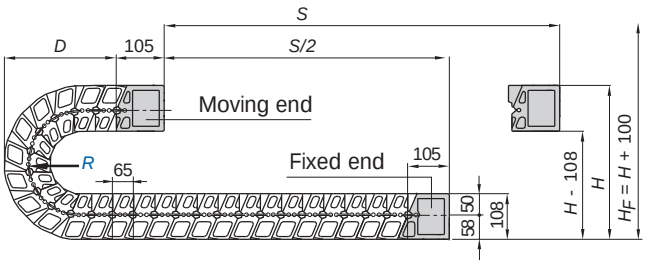




Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95

In special cases, gliding applications are also possible, please consult igus®.



Technical Data

Speed, material, temperature and flammability class ▶ page 924

Pitch = 65 mm/link
Links/m = 16 (1040 mm)
Chain length = $S/2 + K$

R	150	200	250	300	350	400	450
H	516	616	716	816	916	1016	1116
D	306	356	406	456	506	556	606
K	605	760	920	1075	1230	1390	1545

The required clearance height: $H_F = H + 100$ mm (with 5,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E6.80 Crossbars every 2nd link | Removable along both radii

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.80 [kg/m]
E6.80.05.R.0	50	100	5,21
E6.80.06.R.0	65	115	5,28
E6.80.07.R.0	75	125	5,33
E6.80.08.R.0	87	137	5,38
E6.80.10.R.0	100	150	5,45
E6.80.11.R.0	112	162	5,50
E6.80.12.R.0	125	175	5,57
E6.80.13.R.0	137	187	5,62
E6.80.15.R.0	150	200	5,68
E6.80.16.R.0	162	212	5,74
E6.80.17.R.0	175	225	5,80
E6.80.18.R.0	187	237	5,86
E6.80.20.R.0	200	250	5,92
E6.80.21.R.0	212	262	5,98
E6.80.22.R.0	225	275	6,04
E6.80.23.R.0	237	287	6,10
E6.80.25.R.0	250	300	6,16
E6.80.26.R.0	262	312	6,21
E6.80.27.R.0	275	325	6,28
E6.80.28.R.0	287	337	6,33
E6.80.30.R.0	300	350	6,39

Part No. Crossbars every 2nd link	Bi [mm]	Ba [mm]	E6.80 [kg/m]
E6.80.31.R.0	312	362	6,45
E6.80.32.R.0	325	375	6,51
E6.80.33.R.0	337	387	6,57
E6.80.35.R.0	350	400	6,63
E6.80.36.R.0	362	412	6,69
E6.80.37.R.0	375	425	6,75
E6.80.38.R.0	387	437	6,80
E6.80.40.R.0	400	450	6,88
E6.80.41.R.0	412	462	6,92
E6.80.42.R.0	425	475	6,99
E6.80.43.R.0	437	487	7,04
E6.80.45.R.0	450	500	7,10
E6.80.46.R.0	462	512	7,16
E6.80.47.R.0	475	525	7,22
E6.80.48.R.0	487	537	7,28
E6.80.50.R.0	500	550	7,34
E6.80.51.R.0	512	562	7,40
E6.80.52.R.0	525	575	7,46
E6.80.53.R.0	537	587	7,52
E6.80.55.R.0	550	600	7,58
E6.80.60.R.0	600	650	7,81

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 450

Supplement Part No. with required radius (*R*), example: E6.80.10.300.0

e-chain® links as single parts, overview ► page 925

Configuration options and order keys, overview ► page 926

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



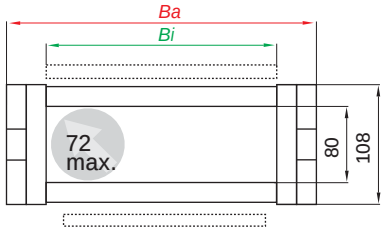
Long travel and side mounted installation with the vibration-free and low noise Series E6.29 in this camera application

Order key

E6.80.10.300.0 Crossbar every 2nd link

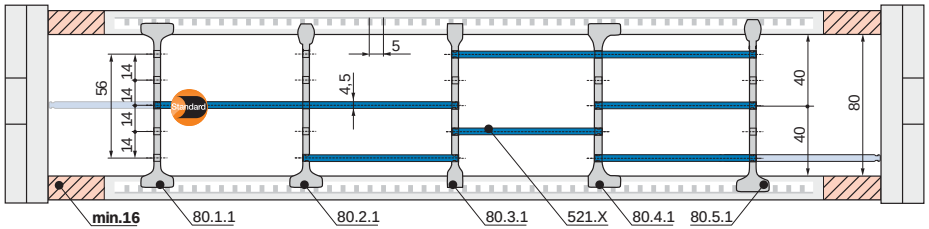
- Standard color black
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series / Type

Dimensioning

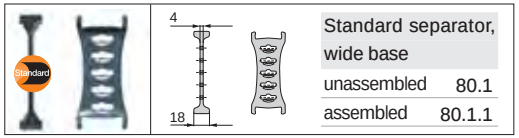


E6 | Series E6.80 | Interior separation | New in this catalog

New generation interior separation - for e-chains®



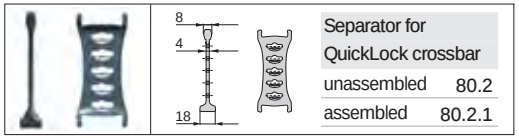
Note: Please observe a lateral spacing of **16 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	80.1
assembled	80.1.1

Standard - for all applications

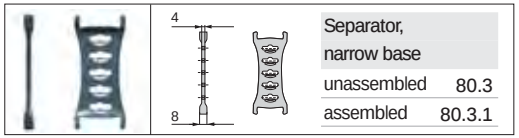
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	80.2
assembled	80.2.1

For even faster installation

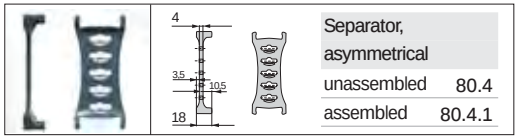
Separator for igus® QuickLock crossbar 450.X.Q. Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	80.3
assembled	80.3.1

For many thin cables

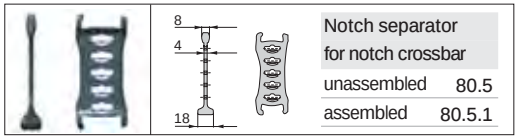
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Separator, asymmetrical	
unassembled	80.4
assembled	80.4.1

For side-mounted applications

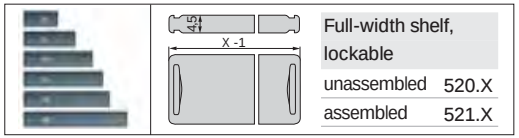
Asymmetrical separator, for defined distance.
No additional spacers necessary.



Notch separator for notch crossbar	
unassembled	80.5
assembled	80.5.1

Locks safely in 5 mm increments

Notch separator for exact positioning in e-chains®.
Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

Full-width shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.

Rastbare Full-width shelves



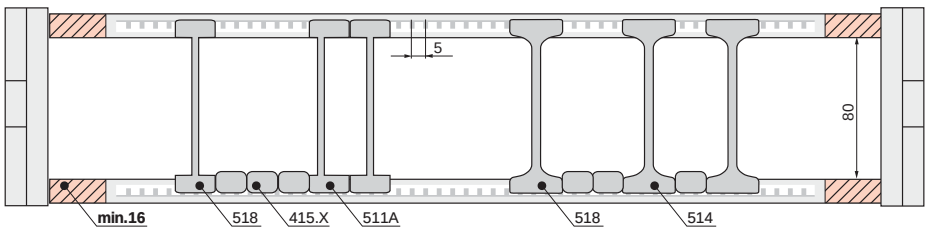
Width X [mm]	unassembled	assembled
050	520.050	521.050
065	520.065	521.065
075	520.075	521.075
100	520.100	521.100
125	520.125	521.125

Width X [mm]	unassembled	assembled
150	520.150	521.150
175	520.175	521.175
200	520.200	521.200
225	520.225	521.225
250	520.250	521.250

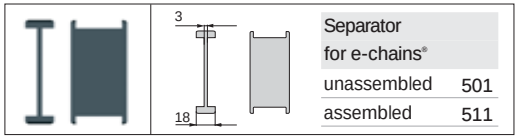
Width X [mm]	unassembled	assembled
300	520.300	521.300
350	520.350	521.350
375	520.375	520.375
387	520.387	520.387
450	520.450	521.450

Previous interior separation - for e-chains®

All elements of the previous interior separation can still be ordered ► www.igus.eu/eu/E6.80



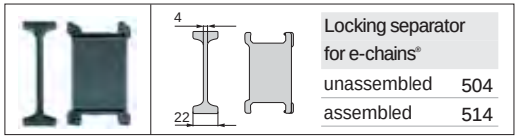
Note: Please observe a lateral spacing of **16 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link!



Separator for e-chains®	
unassembled	501
assembled	511

Vertical separator 501

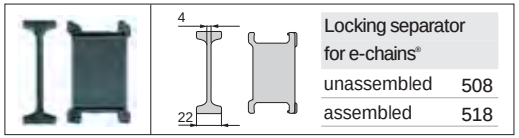
Offers safe stability, also when used with thick cables or hoses.



Locking separator for e-chains®	
unassembled	504
assembled	514

Locking separator 504

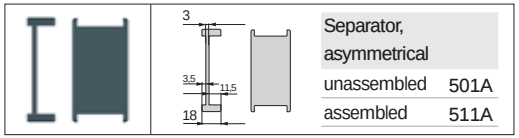
Locks with extra retention force. Tip: one locking separator per e-chain® link for better mounting.



Locking separator for e-chains®	
unassembled	508
assembled	518

Locking separator 508

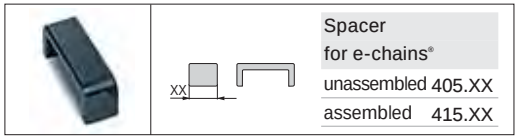
Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.



Separator, asymmetrical	
unassembled	501A
assembled	511A

Separator, asymmetrical 501A

With 18 mm base, for the combination of spacers and separators with different widths, e.g. for side-mounted applications



Spacer for e-chains®	
unassembled	405.XX
assembled	415.XX

Spacer 405.XX

Separators can be fixed in position by spacers. The available interior height is reduced by 2 mm per spacer (4 mm when spacers are fitted on both sides). To avoid this, the parts can also be installed from the outside on the opening crossbar. (not for long travel applications). XX = width of the spacer (please choose between10, 15, 20, 30, 40 mm).

Shelves - for interior separation options

Width X [mm]	unassembled	assembled
018	420.18	421.18
023	420.23	421.23
025	420.25	421.25
028	420.28	421.28
033	420.33	421.33
043	420.43	421.43

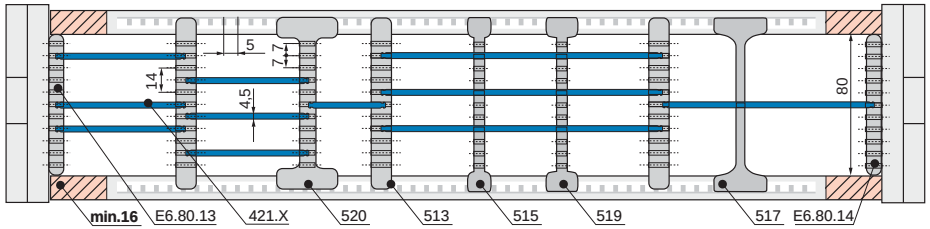
Width X [mm]	unassembled	assembled
050	420.50	421.50
062	420.62	421.62
075	420.75	421.75
088	420.88	421.88
100	420.100	421.100
125	420.125	421.125

Width X [mm]	unassembled	assembled
150	420.150	421.150
175	420.175	421.175
187	420.187	421.187
200	420.200	421.200

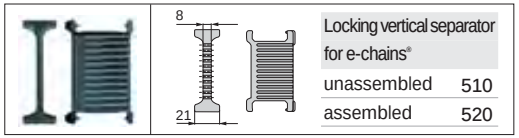
E6 | Series E6.80 | e-chains® Interior separation | Options

Previous interior separation - for e-chains®

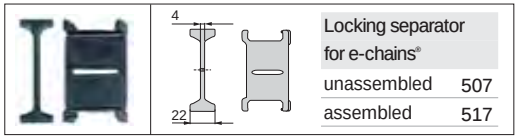
All elements of the previous interior separation can still be ordered ▶ www.igus.eu/eu/E6.80



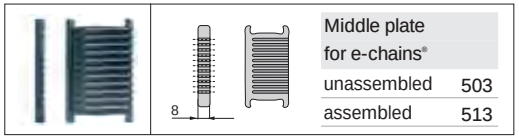
Note: Please observe a lateral spacing of **16 mm** to the side links.
In the standard configuration separators are assembled every 2nd e-chain® link.



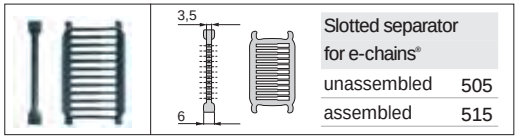
Locking vertical separator for e-chains®	
unassembled	510
assembled	520



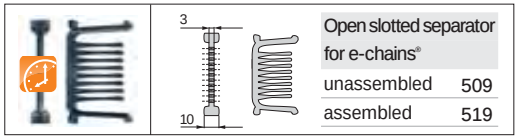
Locking separator for e-chains®	
unassembled	507
assembled	517



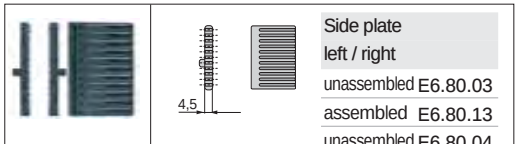
Middle plate for e-chains®	
unassembled	503
assembled	513



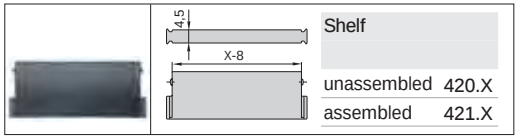
Slotted separator for e-chains®	
unassembled	505
assembled	515



Open slotted separator for e-chains®	
unassembled	509
assembled	519



Side plate left / right	
unassembled	E6.80.03
assembled	E6.80.13
unassembled	E6.80.04
assembled	E6.80.14



Shelf	
unassembled	420.X
assembled	421.X

Locking vertical separator 510

Works like middle plate, for applications exposed to very high humidity (> 85%).

Locking separator 507

Extra retention force by asymmetric claws. Ensure proper alignment. Tip: one locking vertical separator per e-chain® link for better mounting.

Middle plate 503

To achieve a modular shelving the shelf 420.X (table on previous page) can be arranged at 11 different heights (in 7 mm increments).

Slotted separator 505

For very fine subdivisions. However, they cannot be retro-fitted into an existing separation system without dismantling the interior separators first.

Open, slotted separator 509 (unilateral open)

Fast assembly - can be retrofitted into an existing interior separation system without a need for dismantling the interior separators. During an installation of open slotted separators, the top and bottom notches cannot be occupied by shelves.

Side plate E6.80.13 and E6.80.14

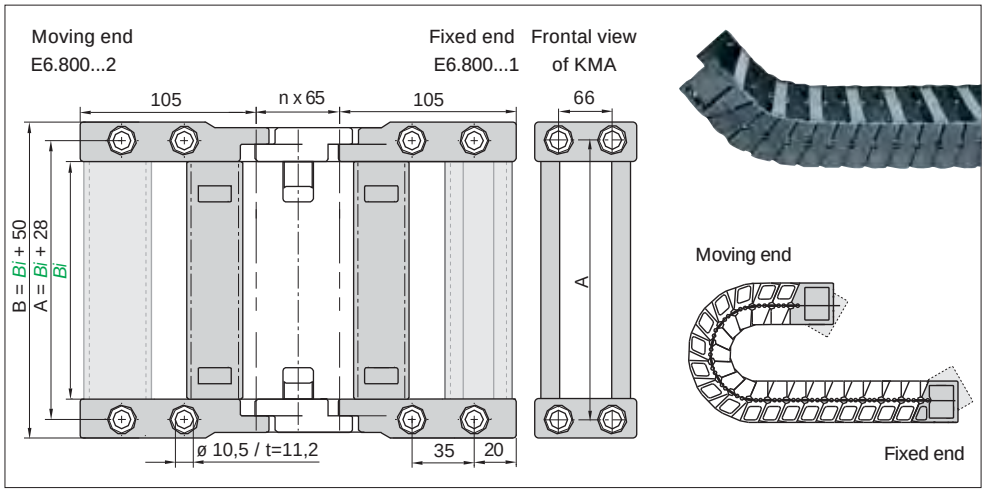
Note on side plates: For the side part E6.80.01.XX of the e-chain®, please use the side plate E6.80.13, and for the side part E6.80.02.XX, the side plate E6.80.14! Allows a rack-like division up to the side links. No lateral spacing necessary!

Shelf 420.X

For applications involving many cables with different diameters, shelves can be arranged at alternate heights. They can be arranged at 11 different heights (in 7 mm increments). (not for 504, 508).

E6 | Series E6.80 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment

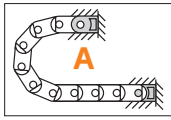


KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]
05.	E6.800. 05. 12.C	78	50
06.	E6.800. 06. 12.C	93	65
07.	E6.800. 07. 12.C	103	75
08.	E6.800. 08. 12.C	115	87
10.	E6.800. 10. 12.C	128	100
11.	E6.800. 11. 12.C	140	112
12.	E6.800. 12. 12.C	153	125
13.	E6.800. 13. 12.C	165	137
15.	E6.800. 15. 12.C	178	150
16.	E6.800. 16. 12.C	190	162
17.	E6.800. 17. 12.C	203	175
18.	E6.800. 18. 12.C	215	187
20.	E6.800. 20. 12.C	228	200
21.	E6.800. 21. 12.C	240	212
22.	E6.800. 22. 12.C	253	225
23.	E6.800. 23. 12.C	265	237
25.	E6.800. 25. 12.C	278	250
26.	E6.800. 26. 12.C	290	262
27.	E6.800. 27. 12.C	303	275
28.	E6.800. 28. 12.C	315	287
30.	E6.800. 30. 12.C	328	300

Width index	Part No. Full set KMA pivoting	A [mm]	Bi [mm]
31.	E6.800. 31. 12.C	340	312
32.	E6.800. 32. 12.C	353	325
33.	E6.800. 33. 12.C	365	337
35.	E6.800. 35. 12.C	378	350
36.	E6.800. 36. 12.C	390	362
37.	E6.800. 37. 12.C	403	375
38.	E6.800. 38. 12.C	415	387
40.	E6.800. 40. 12.C	428	400
41.	E6.800. 41. 12.C	440	412
42.	E6.800. 42. 12.C	453	425
43.	E6.800. 43. 12.C	465	437
45.	E6.800. 45. 12.C	478	450
46.	E6.800. 46. 12.C	490	462
47.	E6.800. 47. 12.C	503	475
48.	E6.800. 48. 12.C	515	487
50.	E6.800. 50. 12.C	528	500
51.	E6.800. 51. 12.C	540	512
52.	E6.800. 52. 12.C	553	525
53.	E6.800. 53. 12.C	565	537
55.	E6.800. 55. 12.C	578	550
60.	E6.800. 60. 12.C	628	600

(KMA = Polymer Metal Mounting Bracket)



These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
▶ e.g. E6.800.237.12.CA

Standard

- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
(KMA = Polymer Metal Mounting Bracket)

Part No. structure
E6.800.237.12.CA
A...must be indicated on preassembled configurations
C-profile option
Full set
Width index
Series

Single-part order:
Mounting bracket Moving end
E6.800.237.2.CA
Mounting bracket Fixed end
E6.800.237.1.CA

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

Aluminum SuperTrough | Basic Version

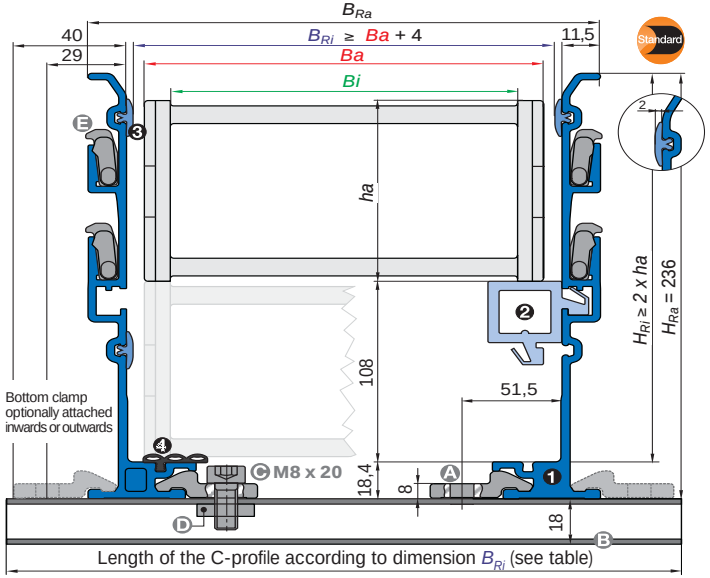
Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm

Installation set "Basic" with C-Profile

Bottom clamp optionally attached inwards or outwards

For Width Index	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	104	upon request	960.50.225
.06	119	upon request	960.50.250
.07	129	upon request	960.50.250
.08	141	960.50.200	960.50.275
.10	154	960.50.225	960.50.275
.11	167	960.50.225	960.50.300
.12	179	960.50.250	960.50.300
.13	192	960.50.250	960.50.325
.15	204	960.50.275	960.50.325
.16	217	960.50.275	960.50.350
.17	229	960.50.300	960.50.350
.18	242	960.50.300	960.50.375
.20	254	960.50.325	960.50.375
.21	267	960.50.325	960.50.400
.22	279	960.50.350	960.50.400
.23	292	960.50.350	960.50.425
.25	304	960.50.375	960.50.425
.26	317	960.50.375	960.50.450
.27	329	960.50.400	960.50.450
.28	342	960.50.400	960.50.475
.30	354	960.50.425	960.50.475
.31	367	960.50.425	960.50.500
.32	379	960.50.450	960.50.500
.33	392	960.50.450	960.50.525
.35	404	960.50.475	960.50.525
.36	417	960.50.475	960.50.550
.37	429	960.50.500	960.50.550
.38	442	960.50.500	960.50.575
.40	454	960.50.525	960.50.575
.41	467	960.50.525	960.50.600
.42	479	960.50.550	960.50.600
.43	492	960.50.550	960.50.625
.45	504	960.50.575	960.50.625
.46	517	960.50.575	960.50.650
.47	529	960.50.600	960.50.650
.48	542	960.50.600	960.50.675
.50	554	960.50.625	960.50.675
.51	567	960.50.625	960.50.700
.52	579	960.50.650	960.50.700
.53	592	960.50.650	960.50.725
.55	604	960.50.675	960.50.725
.60	654	960.50.725	960.50.775

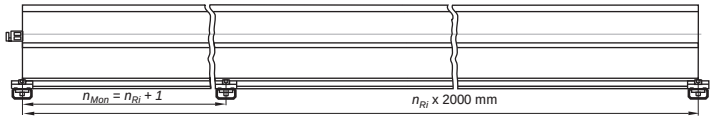
Insert for the installation set "Heavy-Duty": **975.50.XXX** instead of 960.50.XXX on the right column "attached outwards"



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 20 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series E6.80.10.300.0 with B_{Ri} = 154

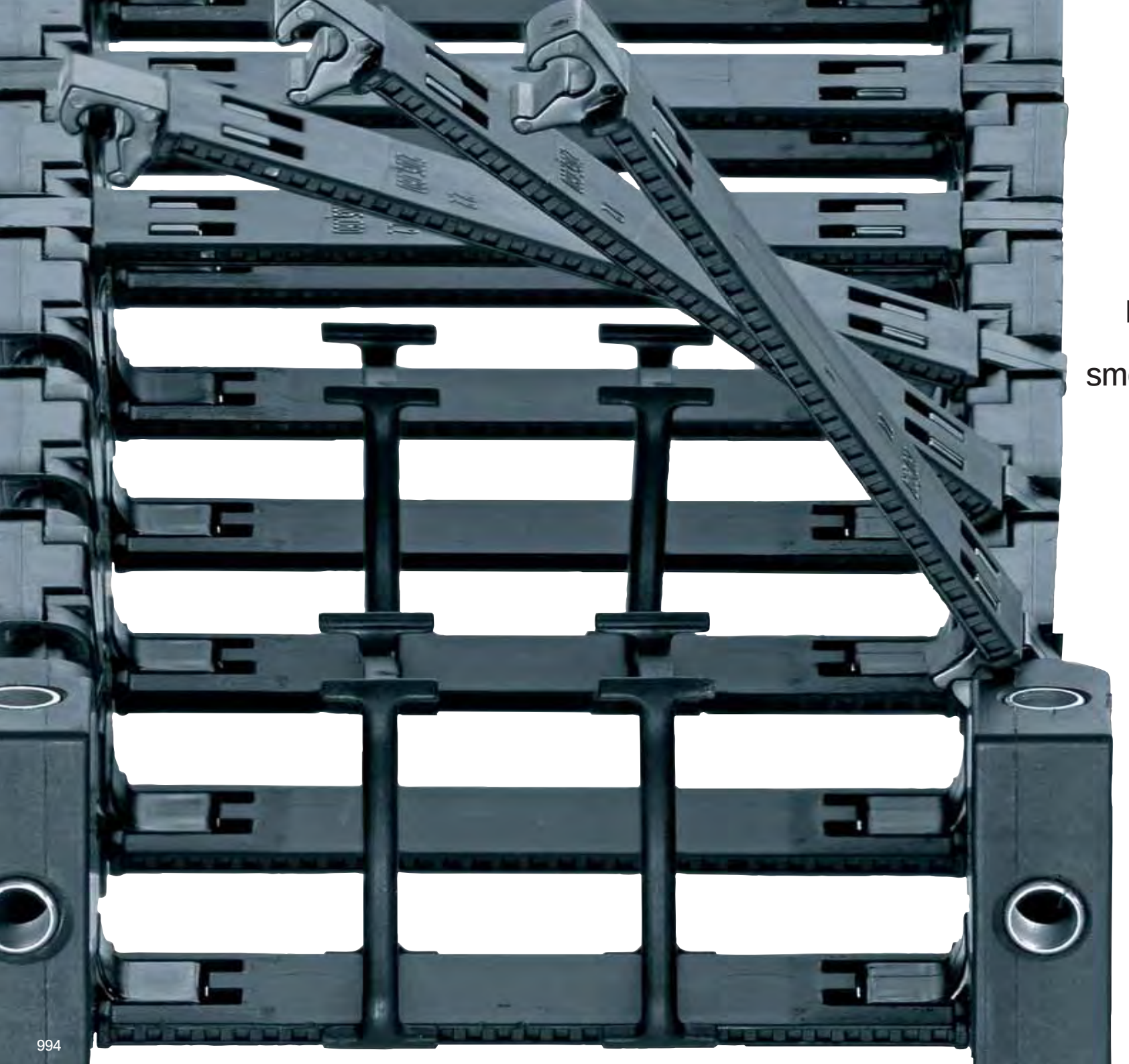
Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 975.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 975.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 960.50.225
Module for the fixed end	
Order text: 1 set	Part No. 975.80
Option: For an additional noise dampening	
with silencer profile, please add Index A - Example:	Part No. 975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

Aluminum SuperTrough "Basic" in detail and the "Heavy-Duty" version for heavy machinery ▶ from page 1206

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height
H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



igus®
E6.1

New Generation.
less weight,
smoother operation
more dynamics

New in this catalog

More dynamics, smoother running, easier to open, 2th generation - E6.1

The E6.1 series is an advancement of the E6 series. While having all its advantages, like the stability and cleanroom suitability, it is even lighter, faster and quieter. In addition, its accessibility to the interior and the assembly and handling have been improved.

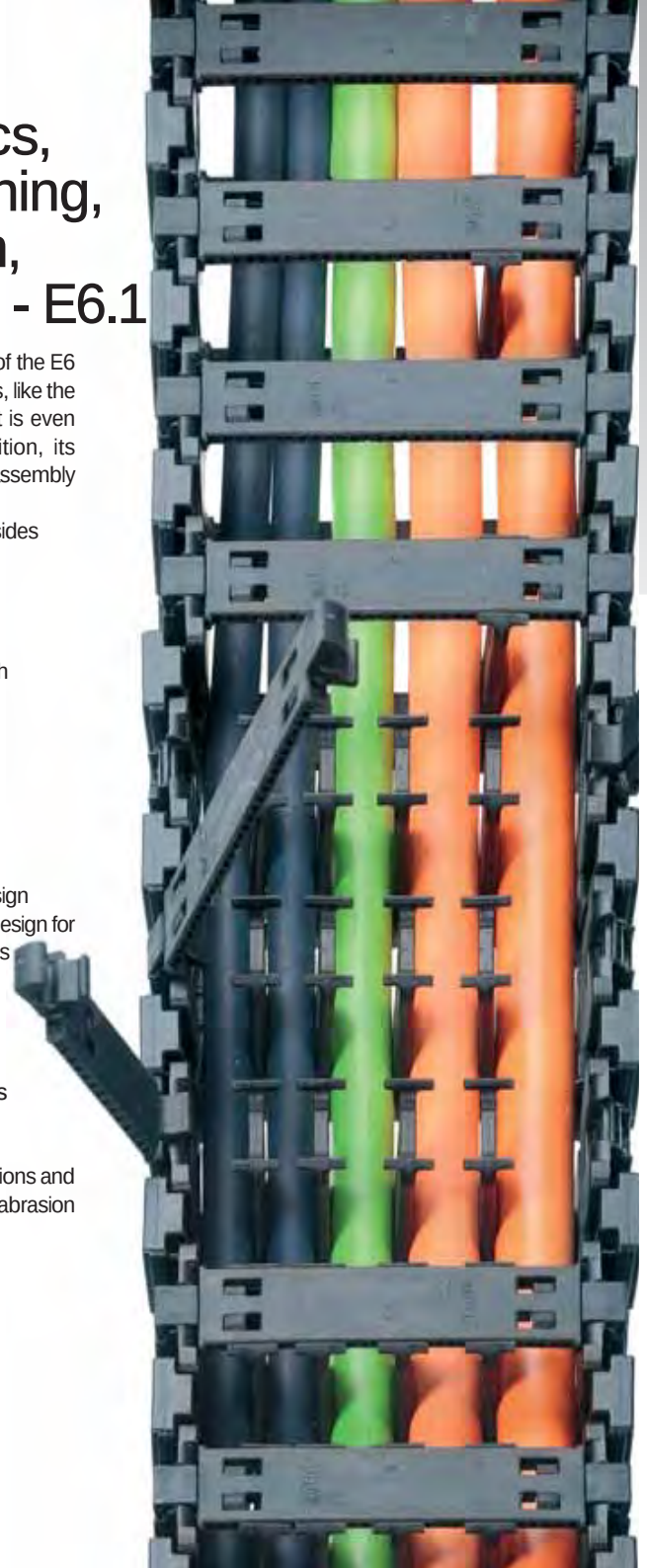
- Crossbars are openable on both sides (Series E61.29) and removable in the inner and outer radius
- Option without camber NC by turning the inner link
- Extremely quiet through small pitch and brake in the stop-dog system
- Extremly low vibration
- Low-abrasion link system (no pin/hole connection)
- Virtually no polygon effect, thereby "smooth rolling" operation
- Faster lengthening and shortening through optimized connection design
- Smooth and obstacle free interior design for a long lifetime for cables and hoses
- Weight savings approx. 30% compared to the System E6
- Cost-effective

Typical industries and applications

- Semiconductor industry
- Printer industry
- Applications with highest accelerations and where noise minimization and low abrasion are important

Extremely low noise

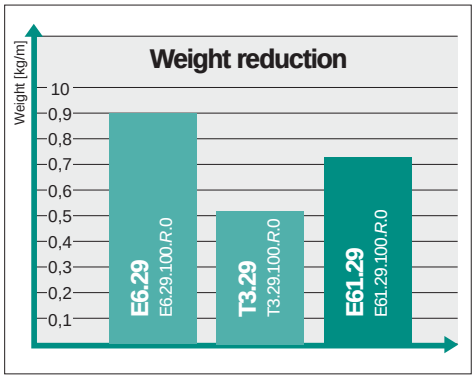
System E6.1 - 6-piece e-chain®-links



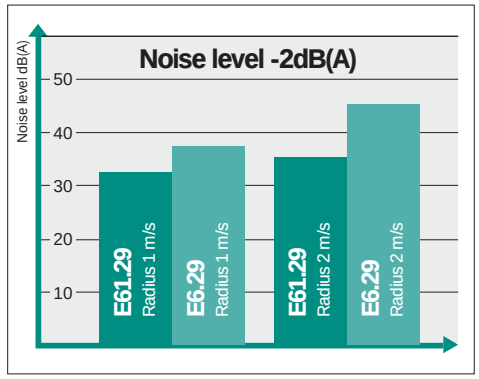


To underline the suitability for cleanrooms and increase the service life of cables and hoses further, the interior of the new E6.1 has been designed extremely "cable friendly". Crossbars are very smooth and rounded, as is the transition from chain link to crossbar, moreover all the moulding and marker points have been placed outside the chain cross-section.

System E6.1 internal tests in the igus® lab



The new E6.1 generation can take up higher accelerations, due to a weight reduction, making it a highly dynamic yet still extremely quiet e-chain®



Series E61.29 tests in the igus® test lab show noise levels, which are 2 dB(A) below the already class-leading noise-levels of the igus® E6.29 series

IPA Qualification Certificate - Report IG 1303-640-1:
ISO Class 1, according to DIN EN ISO 14644-1
for System E6.1, Series E61.29.50.075.0 and
E61.29.50.075.0.CR at v = 0,5 m/s, 1 m/s, 2 m/s

Content overview, selection table and assembly instructions ► next page

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Unsupported length max. [m]	page
							
			System E6.1 Openable along inner and outer radius				
E61.29 New*	29	30 - 140	44 - 144	35	55 - 150	≈ 1,5	1002
E61.52 New*	52	40 - 300	64 - 324	65	75 - 200	≈ 1,7	1008

*New in this catalog



Cleanroom qualification of E6.1 e-chains®

In many applications where cumbersome special solutions are used, a simple standard e-chain® can be used instead. A comprehensive test program was devised and performed for both gliding use and unsupported use. For many applications, the e-chains® in special materials are practically abrasion-free. Detailed test results are available upon request. IPA tests confirm that standard igus® e-chains® meet cleanroom requirements. "Tested and certified as very good!" e-chains® for cleanroom applications in the test stand Cleanroom environments demand very high wear resistance of moving parts. e-chains®, for example, must be very wear resistant, in order to meet normal requirements for such a sensitive environment.

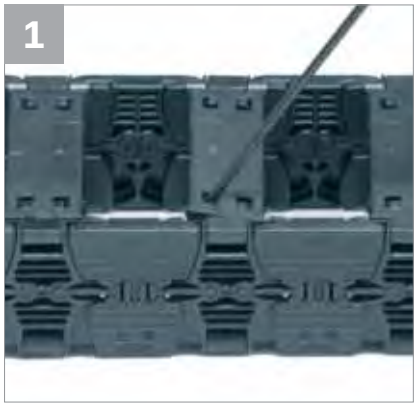
Fraunhofer TESTED DEVICE IPA

Fraunhofer TESTED DEVICE IPA

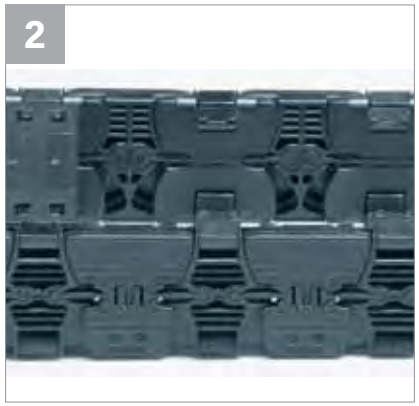
IPA Qualification Certificate - Report IG 1303-640-1:

ISO Class 1, according to DIN EN ISO 14644-1
for System E6.1, Series E61.29.50.075.0 and
E61.29.50.075.0.CR at v = 0,5 m/s, 1 m/s, 2 m/s

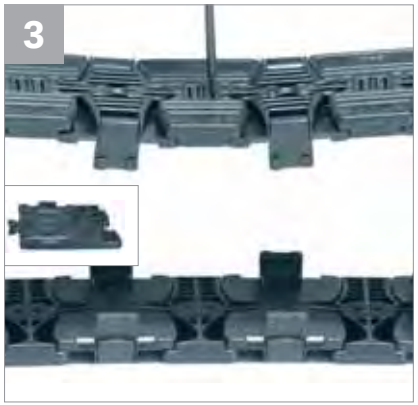
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Remove crossbar by hand or screwdriver.
Repeat the procedure on the underside



To disconnect remove a total
of 2 crossbars on each side



Force out connector with a screwdriver.
Repeat the procedure on the opposite side



Turn e-chains® apart until the interlocking of the chain links detaches. Repeat the procedure on the opposite side

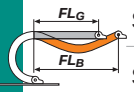
Technical Data, overview ▶ page 1000

e-chain® links as single parts, overview ▶ page 1000

Configuration options and order keys, overview ▶ page 1001

Assembly video available online at ▶ www.igus.eu/eu/E61_assembly

Technical Data - E6.1



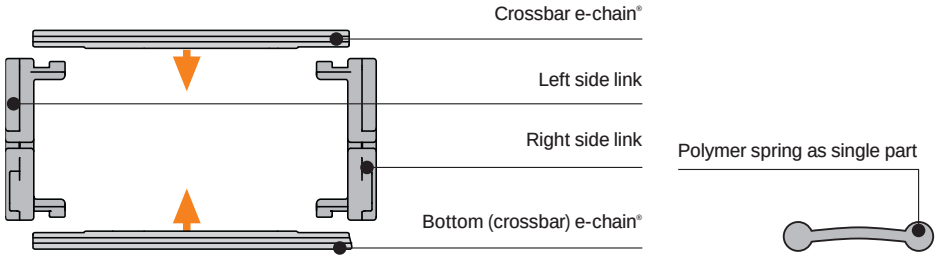
Speed / acceleration FL_G max.	max. 20 [m/s] / max. 200 [m/s²]
Speed / acceleration FL_B max.	max. 3 [m/s] / max. 6 [m/s²]
Material - permitted temperature °C	-40° up to +70° C
Flammability class	VDE 0304 IIC UL94-HB

FL_G = with straight upper run FL_B = with permitted sag

Installation methods overview, maximum travels - E6.1

e-chain® Series	Unsupported application	Vertical hanging	Vertical standing
E61.29	≤ 1,5 m	≤ 25 m	≤ 2,0 m
E61.52	≤ 2,5 m	≤ 40 m	≤ 2,0 m

Part No. 6-piece e-chain® links as single parts - E6.1



Series	Crossbar[1] e-chain®	Inner side link	Outer side link[2]	Polymer spring e-chain®
E61.29	2105.*Bi*	E61.29.01	E61.29.02.*R*.0	E61.29.155
E61.52	225.*Bi*	E61.52.01	E61.52.02.*R*.0	E61.52.205

1) Crossbar / lid / bottom - supplement Part No. with required width index (*Bi*), example: 2105.030

2) Outer side link - supplement Part No. with required radius (*R*), example: E61.29.02.100.0

	Standard	*NC-Version - (no camber) without pretension*
Part No.	**Standard**	**NC-Version**
		
	E61.52.100.*R*.0	E61.52.100.*R*.0.**NC**
	Delivery time* 24h or today!	Delivery time* 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Order example | Order key and color options

Order example for complete e-chain® Series E61.52 (1,0 m, with crossbars every link), color black, mounting brackets and interior separation

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 34 links	E61.52.100.075.0
+ Mounting brackets	1 set	E61.520.100.12
+ Interior separation	with 2 separators assembled every 2nd link	2 x52.1.1

Order text: 1,0 m E61.52.100.075.0 + E61.520.100.12 + 2 x 52.1.1

Order key
E61.52.100.075.0

- Standard color black
- Bending radius *R*
- Width index
- Inner height
- Series / Type

Color options for e-chains® and e-tubes

Color	Order index	Color	Order index
Black Standard, from stock!	**.0**	White special color	.1
Slate grey only ESD material	.ESD	Gray white special color	.1S
Gray brown only HT material	.HT	Orange special color	.2
Gray special color only e-chains®	.3	Yellow special color	.4
Dusty grey special color only e-tubes	.31	Light grey special color	.14

Black e-chains® available from stock!
Delivery time* for special colors: from 5 work days

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

New in this catalog



Universal:
All-sides attachment

Dynamic:
For high speeds and high accelerations

Low-noise[1]:
Small pitch for smooth running

Fast assembly:
Openable along inner and outer radius

Long service life:
Minimum vibration, high stability and tensile strength

Virtually no wear:
No pin and bore connection

Modular design:
Can be shortened and lengthened

Cleanroom ISO Class 1[2]:
Virtually no wear or abrasion

Extremely low-noise, low vibration, small size

When to use Series E61.29:

- If a particularly low noise, low vibration e-chain® with an inner height of 29 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 140 mm
- For unsupported lengths up to 1,5 m and fill weights up to 3,5 kg/m
- Optimized interior-exterior dimensions ratio due to narrow outer links
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

2) Cleanroom - Series E61.29.50.075.0, more details ▶ page 879

When to use a different igus® Series:

- Limited in side-mounted applications
- ▶ Series 2400/2500 E2/000, page 426
- No use with RBR (reverse bending radius)
- ▶ Series 2400/2500 E2/000, page 426
- No use with high additional fill weights
- ▶ Series 2400/2500 E2/000, page 426
- No use in dirty environments
- ▶ Series 2480 E2/000, page 426
- No use in case of enlarged unsupported travels
- ▶ Series E6.29 System E6, page 928

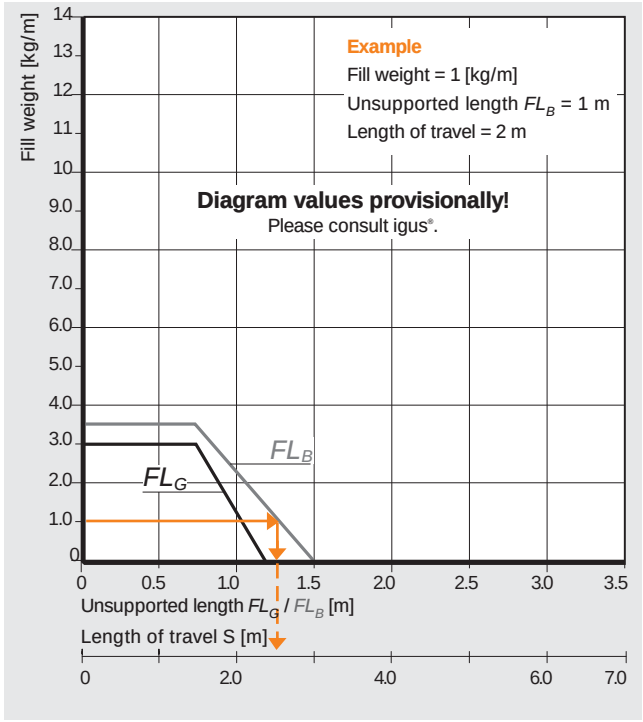


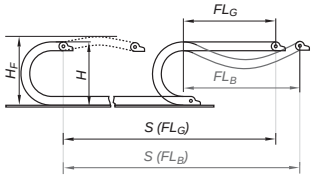
Speciality E61.29:
Pivotable crossbars left and right

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

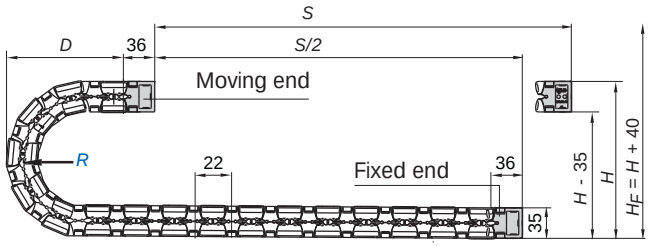
3D-CAD files, configurators, PDF ► www.igus.eu/eu/E61.29





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, page 95



Technical Data

Speed, material, temperature and flammability class ▶ page 1001

Pitch = 22 mm/link
Links/m = 46 (1012 mm)
Chain length = $S/2 + K$

R	55	75	100	125	150
H	175	215	265	315	365
D	105,5	125,5	150,5	175,5	200,5
K	220	280	360	440	520

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

FL_G = with straight upper run
FL_B = with permitted sag

S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height

D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E61.29 | Openable along inner and outer radius

Part No. e-chain®	Bi [mm]	Ba [mm]	Weight [kg/m]
E61.29. 030 R.0	30	44	0,558
E61.29. 040 R.0	40	54	0,583
E61.29. 050 R.0	50	64	0,608
E61.29. 060 R.0	60	74	0,633
E61.29. 070 R.0	70	84	0,657
E61.29. 080 R.0	80	94	0,682

Part No. e-chain®	Bi [mm]	Ba [mm]	Weight [kg/m]
E61.29. 090 R.0	90	104	0,707
E61.29. 100 R.0	100	114	0,732
E61.29. 110 R.0	110	124	0,757
E61.29. 120 R.0	120	134	0,782
E61.29. 140 R.0	140	144	0,807

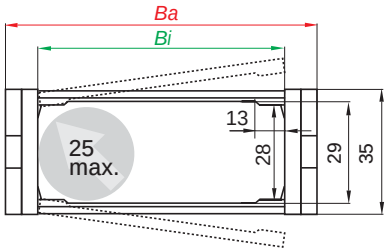
Available bending radii R [mm] 055 | 075 | 100 | 150 |

Supplement Part No. with required radius (R), example: E61.29 .050.100.0

Order key

E61.29 .050.100.0

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



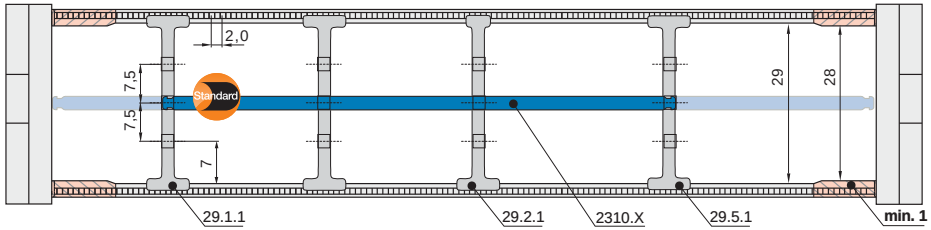
e-chain® links as single parts, overview ▶ page 1000

Configuration options and order keys, overview ▶ page 1001

Available from stock. Delivery time* in 24h or today!

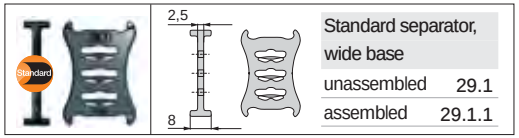
*Delivery time means time until shipping of goods (after technical release)

New generation interior separation - for e-chains®



Note: Please observe a lateral spacing of **1 mm** to the side links.

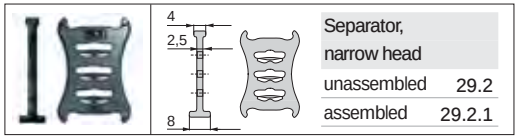
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	29.1
assembled	29.1.1

Standard - for all applications

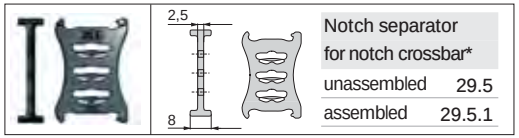
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	29.2
assembled	29.2.1

For even faster installation

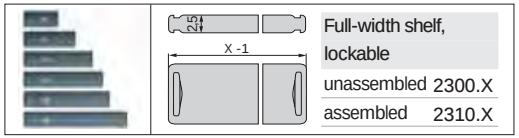
Firm hold on one side with a wide base, narrow on the opposite side for easy cable assembly (light grip).



Notch separator for notch crossbar*	
unassembled	29.5
assembled	29.5.1

Locks safely in 2,0 mm increments

Notch separator for exact positioning in e-chains®. Recommended for side-mounted applications.



Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



Lockable full-width shelves - for the standard interior separation

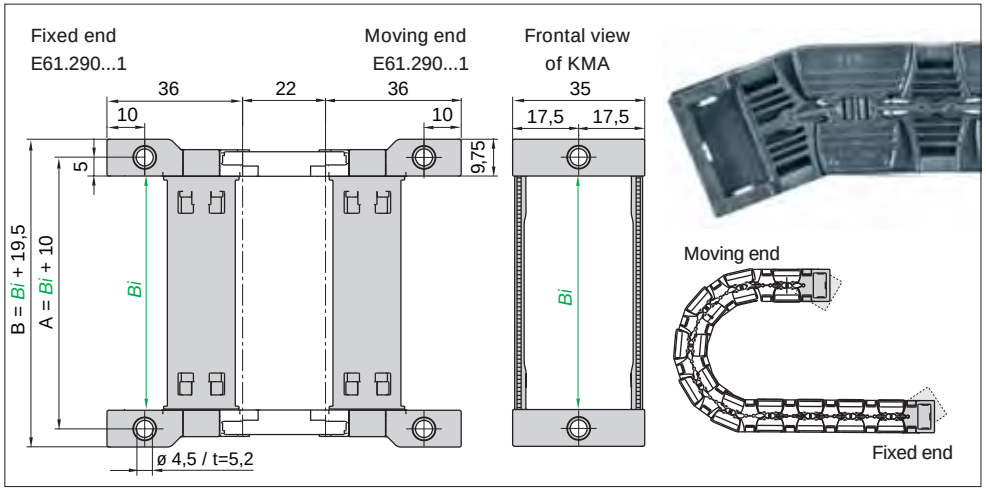
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

Interior separation with single-part order. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E6.1 | Series E61.29 | KMA mounting brackets pivoting

For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set **KMA pivoting**	A [mm]	*Bi* [mm]	Width index	Part No. Full set **KMA pivoting**	A [mm]	*Bi* [mm]
030	▶ E61.290.030.12	40	30	090	▶ E61.290.090.12	100	90
040	▶ E61.290.040.12	50	40	100	▶ E61.290.100.12	110	100
050	▶ E61.290.050.12	60	50	110	▶ E61.290.110.12	120	110
060	▶ E61.290.060.12	70	60	120	▶ E61.290.120.12	130	120
070	▶ E61.290.070.12	80	70	140	▶ E61.290.140.12	140	140
080	▶ E61.290.080.12	90	80				

(KMA = Polymer Metal Mounting Bracket)



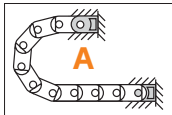
- Standard
- For tight installation conditions
- Corrosion resistant
- Option: threaded sockets upon request

(KMA = Polymer Metal Mounting Bracket)

Part No. structure

E61.290.050.12.A





These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
▶ e.g. E61.290.050.12.**A**

Single-part order:
Mounting bracket Moving end
E61.290.050.1.**A**
Mounting bracket Fixed end
E61.290.050.1.**A**

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

E6.1 | Series E61.29 | My sketches

E61.29

New in this catalog



Universal:
All-sides attachment

Dynamic:
For high speeds and high accelerations

Low-noise[1]:
Small pitch for smooth running

Fast assembly:
Openable along inner and outer radius

Long service life:
Minimum vibration, high stability and tensile strength

Virtually no wear:
No pin and bore connection

Modular design:
Can be shortened and lengthened

Cleanroom[2]:
Virtually no wear or abrasion

Extremely low-noise, low vibration, medium size

When to use Series E61.52:

- If a particularly low noise, low vibration e-chain® with an inner height of 52 mm is required
- At very high speeds and/or accelerations
- Inner widths up to 300 mm
- For unsupported lengths up to 1,75 m and fill weights up to 11 kg/m
- Optimized interior-exterior dimensions ratio due to narrow outer links
- For enlarged thrusts and tensile forces
- For small bending radii
- Minimal abrasion (e.g. cleanroom applications)

1) Low-noise - testetd series, more details ▶ page 878

2) Cleanroom - testetd series, more details ▶ page 879

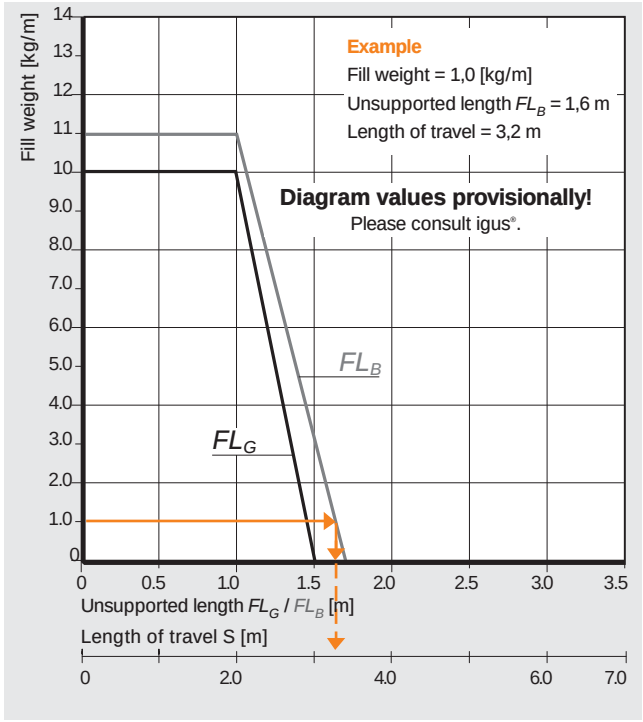
When to use a different igus® Series:

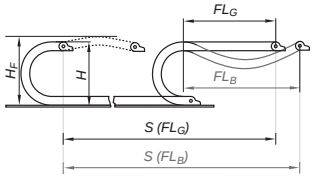
- Limited in side-mounted applications
- ▶ Series E4.56 System E4.1, page 678
- No use with RBR (reverse bending radius)
- ▶ Series E4.56 System E4.1, page 678
- No use with high additional fill weights
- ▶ Series E4.56 System E4.1, page 678
- No use in dirty environments
- ▶ Series E4.56 System E4.1, page 678
- No use in case of enlarged unsupported travels
- ▶ Series E6.52 System E6.1, page 956

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

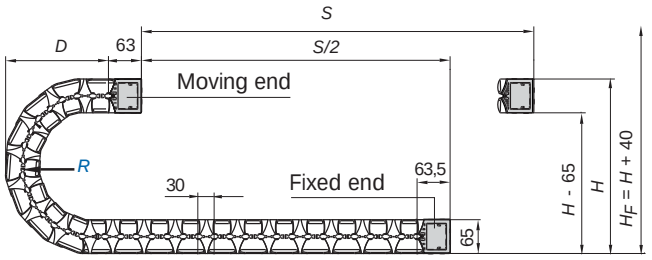
3D-CAD files, configurators, PDF ► www.igus.eu/eu/E61.52





Unsupported applications

Unsupported e-chains® feature positive camber over short travels. This must be accounted for when specifying the clearance height H_F. Please consult igus® if space is particularly restricted. More information ▶ Design, pagee 95



Technical Data

Speed, material, temperature and flammability class ▶ page 1001

Pitch = 30 mm/link
Links/m = 34 (1020 mm)
Chain length = $S/2 + K$

R	075	100*	125	150*	175*	200*
H	265	315	365	415	465	515
D	152,5	177,5	202,5	227,5	252,5	277,5
K	300	375	455	535	610	690

The required clearance height: $H_F = H + 40$ mm (with 2,0 kg/m fill weight)

*Radius available upon request, please consult igus® for delivery time

FL_G = with straight upper run
FL_B = with permitted sag
S = Length of travel
R = Bending radius
H = Nominal clearance height
H_F = Required clearance height
D = Overlength e-chain®, radius in final position
K = π • R + "safety"



e-chains® | Series E61.52 | Openable along inner and outer radius

Part No. e-chain®	Bi [mm]	Ba [mm]	Weight [kg/m]	Part No. e-chain®	Bi [mm]	Ba [mm]	Weight [kg/m]
E61.52. 040 R.0	40	64	≈ 1,68	E61.52. 150 R.0	150	174	≈ 2,17
E61.52. 050 R.0	50	74	≈ 1,72	E61.52. 175 R.0	175	199	≈ 2,28
E61.52. 052 R.0	52	76	≈ 1,73	E61.52. 200 R.0	200	224	≈ 2,40
E61.52. 062 R.0	62,5	86,5	≈ 1,78	E61.52. 225 R.0	225	249	≈ 2,50
E61.52. 070 R.0	70	94	≈ 1,81	E61.52. 250 R.0	250	274	≈ 2,62
E61.52. 075 R.0	75	99	≈ 1,84	E61.52. 262 R.0	262,5	286,5	≈ 2,68
E61.52. 087 R.0	87,5	111,5	≈ 1,89	E61.52. 275 R.0	275	299	≈ 2,73
E61.52. 100 R.0	100	124	≈ 1,95	E61.52. 300 R.0	300	324	≈ 2,84
E61.52. 125 R.0	125	149	≈ 2,06				

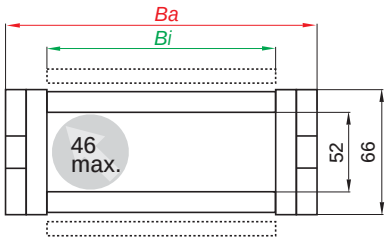
*Radius available upon request, please consult igus® for delivery time

Available bending radii R [mm] 075 | 100* | 125 | 150* | 175* | 200* |

Supplement Part No. with required radius (R), example: E61.52.100.075.0

Order key
E61.52.100.075.0

- Standard color black
- Bending radius R
- Width index (depends on Bi)
- Series / Type



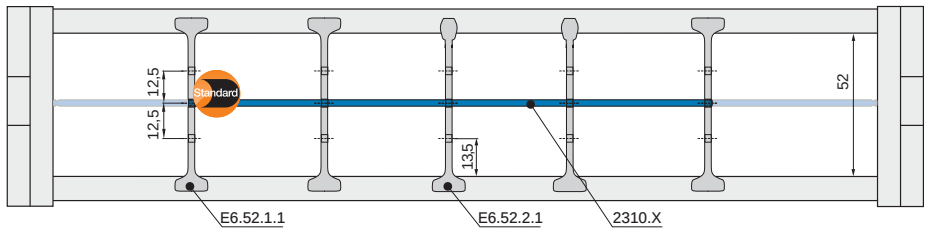
e-chain® links as single parts, overview ► page 1000

Configuration options and order keys, overview ► page 1001

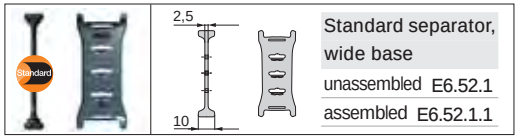
Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

New generation interior separation - for e-chains®



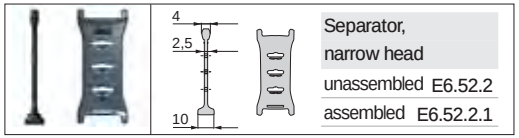
No lateral spacing to side links necessary.
In the standard configuration separators are assembled every 2nd e-chain® link.



Standard separator, wide base	
unassembled	E6.52.1
assembled	E6.52.1.1

Standard - for all applications

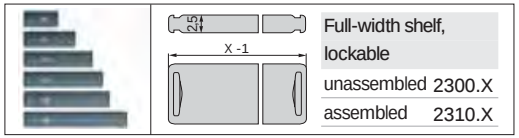
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator, narrow head	
unassembled	E6.52.2
assembled	E6.52.2.1

For even faster installation

Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Full-width shelf, lockable	
unassembled	2300.X
assembled	2310.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.



Lockable full-width shelves - for the standard interior separation

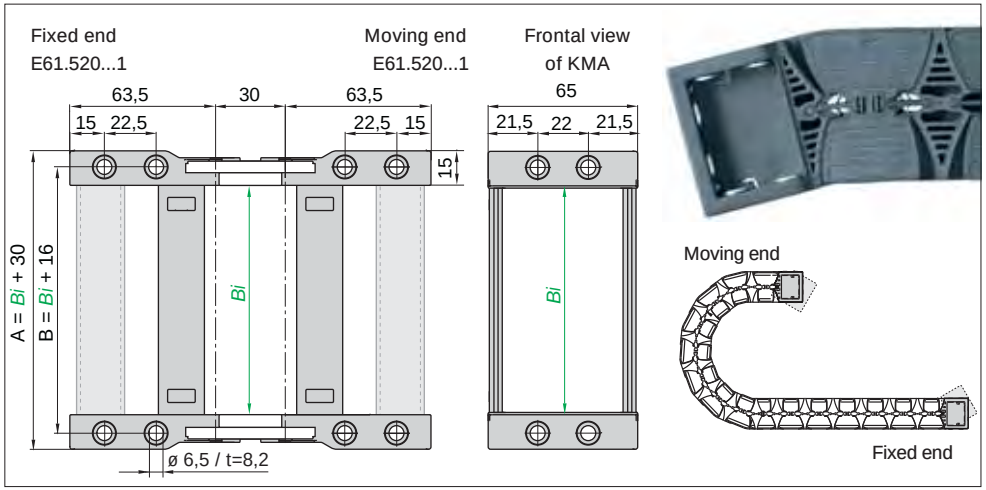
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
015	2300.015	2310.015	060	2300.060	2310.060	087	2300.087	2310.087
025	2300.025	2310.025	062	2300.062	2310.062	090	2300.090	2310.090
030	2300.030	2310.030	065	2300.065	2310.065	100	2300.100	2310.100
038	2300.038	2310.038	070	2300.070	2310.070	103	2300.103	2310.103
040	2300.040	2310.040	075	2300.075	2310.075	110	2300.110	2310.110
050	2300.050	2310.050	077	2300.077	2310.077	120	2300.120	2310.120
057	2300.057	2310.057	080	2300.080	2310.080	125	2300.125	2310.125

Interior separation with single-part order. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

E6.1 | Series E61.52 | KMA mounting brackets pivoting

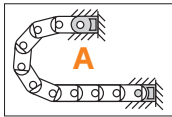
For tight installation conditions, all-sides attachment



KMA pivoting | All-sides attachment | Recommended for unsupported applications

Width index	Part No. Full set **KMA pivoting**	A [mm]	*Bi* [mm]
040.	E61.520.040.12.C	70	40
050.	E61.520.050.12.C	80	50
052.	E61.520.052.12.C	82	52
062.	E61.520.062.12.C	92,5	62,5
070.	E61.520.070.12.C	100	70
075.	E61.520.075.12.C	105	75
087.	E61.520.087.12.C	117,5	87,5
100.	E61.520.100.12.C	130	100
125.	E61.520.125.12.C	155	125
150.	E61.520.150.12.C	180	150
175.	E61.520.175.12.C	205	175
200.	E61.520.200.12.C	230	200
225.	E61.520.225.12.C	255	225
250.	E61.520.250.12.C	280	250
262.	E61.520.262.12.C	292,5	262,5
275.	E61.520.275.12.C	305	275
300.	E61.520.300.12.C	330	300

(KMA = Polymer Metal Mounting Bracket)



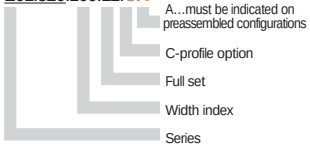
These attachment types are set automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**
▶ e.g. E6.520.100.12.**A**



- Standard
- For tight installation conditions
- Option: integrated chainfix strain relief with C-profile
- Corrosion resistant
- Option: threaded sockets upon request
(KMA = Polymer Metal Mounting Bracket)

Part No. structure

E61.520.100.12.C**A**

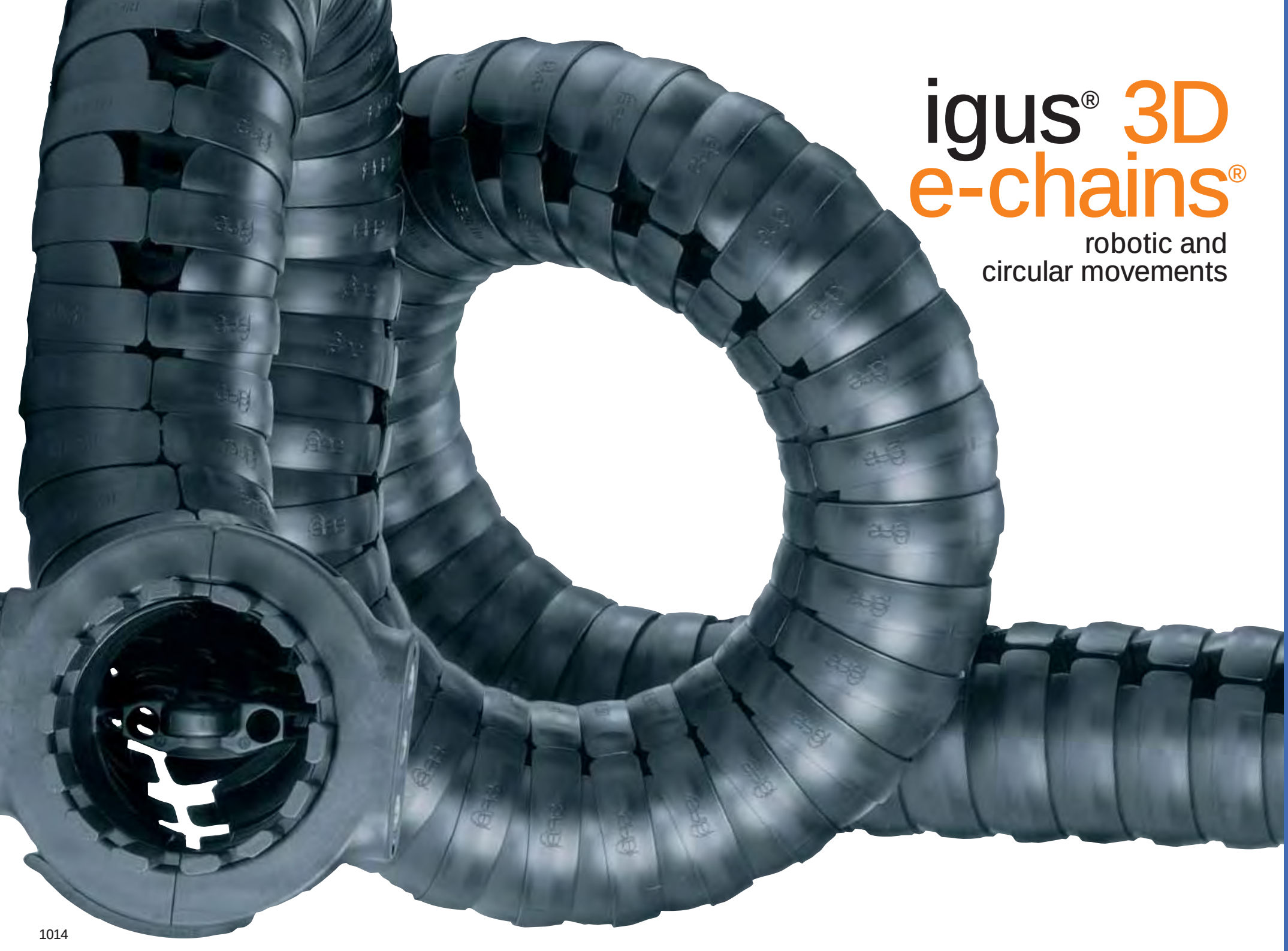


Single-part order:
Mounting bracket Moving end
E61.520.100.1.**A**
Mounting bracket Fixed end
E61.520.100.1.**A**

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶ from page 1148

E6.1 | Series E61.52 | My sketches

E61.52



igus® 3D e-chains®

robotic and
circular movements

triflex® R | easy triflex® | triflex®

Robotic- and 3D-applications



robotic e-chains® - triflex® R

- The first choice for multiaxis-robots
- Available in 4 Versions - from stock
- Torsion ca. ± 10° per link possible
- High torsional stability (TRC/TRE)
- Easy shortening and lengthening
- Small bending radius, small pitch

►**from page 1018**

► **www.igus.eu/eu/triflexR**



For simple 3D-applications - easy triflex®

- Easy filling from two sides and complex movements
- For reparations or supplements of existing triflex®-Systems
- For simple robotic- and 3D-applications
- Fast cable assembly with "easy"-design

►**from page 1052**

► **www.igus.eu/eu/easytriflex**



Enclosed 3D- e-chains® - triflex®

- 3-axis motions in machinery of all kinds (combined circle- and stroke-movements)
- Completely enclosed - protection against dirt and chips
- For simple 3D-applications
- High tensile strength
- Where rectangular shapes fit better

►**from page 1066**

► **www.igus.eu/eu/triflex**

twisterchain® new/classic | twisterband | e-spool

For circular movements and rotary motions in a small spaces



Higher loads - twisterchain® new

- Rotary/Spiral movements up to 540° possible
- Sturdier through intermediate link heavier loads possible
- Highly dynamic and smoother running (with a new guide trough)
- Cable-friendly, smooth interior
- Crossbars snap-open along inner radius
- Rotary speeds up to 2 m/s and more

►**from page 1082**

► **www.igus.eu/eu/twisterchain**



First generation - twisterchain® classic

- For new designs we recommend: TC32, TC42. TC56 ►from page 1082
- Fast cable change
- Modular design - variable widths
- Crossbars can be opened on both sides
- For circular motions up to 540° (with special attachments)

►**from page 1108**

► **www.igus.eu/eu/twisterchainClassic**



Rotary motions - twisterband

- Rotary motions in a small spaces up to 7000°
- 4 sizes available
- Rotary speeds up to 360°/s possible
- Compact, modular and lightweight
- Ribbons can be shortened easily
- Minimum installation space
- Can be used in various installation positions

►**from page 1130**

► **www.igus.eu/eu/twisterband**



e-spool New in this catalog

- The alternative to the cable drums
- Cable-friendly and guides various media safely
- No tensile stress on the cables
- Different media and diameters in the same drum are feasible
- Energy supply in all directions is possible
- Space-saving, no "chain junction"

►**from page 1142**

► **www.igus.eu/eu/e-spool**



igus®
triflex® R
3D-robotic e-chains®

Movements in 3-axes, inter alia, for robots triflex® R

triflex® R (R for "round") is the third generation of multi-axis e-chains®. Design features include:

- Approximately ±10° twist per e-chain® link
- High tensile strengthof the ball-and-socket joint
- Optional fibre rod for spring loading of the triflex® R
- Easy assembly and modification due to single moulded link design
- No support elements e.g. steel cables, spring suspensions etc. are necessary

These design features guide this product to success in the robot industry. A useful range of accessories is available and is constantly being developed.

Available in 4 Versions - from stock:

- TRC - closed design with smooth and robust exterior
- "easy"-design, easy to fill from outside
- TRL - light weight, with "easy"-design
- TRLF - Light-variant with snap lock mechanism

Typical industries and applications

● The first choice for multiaxis-robots ● Machine tools ● Handling machines - 6-axis ● Fördertechnik ● Packaging machines ● General mechanical engineering, etc.

iF product design award
2004 igus® Series TRC
2007 igus® Series TRL
2013 igus® Series TRLF

Cleanroom suitability upon request

UL94-V2 classifications

Series TRC - Electrically conductive ESD/ATEX version upon request





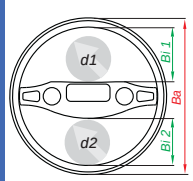
triflex® RS for a sleek chain guide. With triflex® RS, the multi-dimensionally moving triflex® R is routed parallel to the robot arm, saving space. Integrated spring rods generate the directed pretension so that it does not form loops on the robot hand. Optional: triflex® RS with cover - creates additional installation space on the robot. Video at ▶ www.igus.eu/RS_movie



triflex® R Set - Routed closely on the robotic arm for extreme flatness



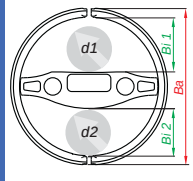
Pneumatic retraction system triflex® RSP - prevents loop formation on the robot

Series	Inner height Bi 1	Inner height Bi 2	max. cable ø d1	max. cable ø d2	Outer width Ba [mm]	Bending radii R [mm]	Pitch [mm]	Links per m	Page
									
TRC.30	12	10	10	8	34,5	50	11,3	89	1024
TRC.40	15	13	13	11	43	58	13,9	72	1024
TRC.60	22,5	19,5	20,5	17,5	65	87	20,4	49	1024
TRC.70	28	24	26	22	81	110	25,6	39	1024
TRC.85	33	28	31	26	94,5	135	30,6	33	1024
TRC.100	37,5	32,5	35,5	30,5	108	145	34,5	29	1024
TRC.125[2]	43,3	43,3	41	41	135	182	44,6	23	1024



Series "TRC" - closed design
dirt-resistant, smooth and robust exterior

2) TRC.125 - max. cable diameter Ø 41 mm. Max. cable diameter changes to Ø 36 mm only, if shortening/lengthening of a filled triflex® R is required

Series	Inner height Bi 1	Inner height Bi 2	max. cable ø d1	max. cable ø d2	Outer width Ba [mm]	Bending radii R [mm]	Pitch [mm]	Links per m	Page
									
TRE.30	12	10	10[1]	8[1]	34,5	50	11,3	89	1028
TRE.40	15	13	13[1]	11[1]	43	58	13,9	72	1028
TRE.60	22,5	19,5	20,5[1]	17,5[1]	65	87	20,4	49	1028
TRE.70	28	24	26[1]	22[1]	81	110	25,6	39	1028
TRE.85	33	28	31[1]	26[1]	94,5	135	30,6	33	1028
TRE.100	37,5	32,5	35,5[1]	30,5[1]	108	145	34,5	29	1028
TRE.125[2]	43,3	43,3	41[1]	41[1]	135	182	44,6	23	1028



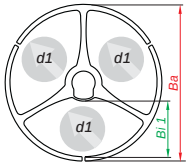
Series "TRE" - "easy"-design
Fast installation of cables and hoses, simply press cables in

1) For quick and easy insertion / removal of cables using the "easy"-design, we recommend a maximum cable diameter of 70% of the specified value.
2) TRE.125 - max. cable diameter Ø 41 mm. Max. cable diameter changes to Ø 36 mm only, if shortening/lengthening of a filled triflex® R is required

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Assembly video available online at ►www.igus.eu/eu/triflexR_assembly

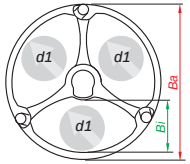
triflex® R | Contents | Selection Table

Series	Inner height Bi 1	Inner height Bi 2	max. cable ø d1	max. cable ø d2	Outer width Ba [mm]	Bending radii R [mm]	Pitch [mm]	Links per m	Page
									
TRL.30[3]	12,5	11	10[1]	8[1]	34,5	50	11,3	89	1032
TRL.40	15	–	13[1]	–	45	58	13,9	72	1032
TRL.60	23	–	20,5[1]	–	65	87	20,4	49	1032
TRL.70	28	–	26[1]	–	81	110	25,6	39	1032
TRL.100	38	–	35,5[1]	–	108	145	34,5	29	1032



Series "TRL" - 3-chamber system
The "light" variant of the "easy"-design simply press cables in

1) For quick and easy insertion / removal of cables using the "easy"-design, we recommend a maximum cable diameter of 70% of the specified value.
3) only with 2-chamber sytem

Series	Inner height Bi	max. cable ø d1	Outer width Ba [mm]	Bending radii R [mm]	Pitch [mm]	Links per m	Page
							
TRLF.65 New*	24,4	22	70,2	100	23,1	44	1036
TRLF.85 New*	32,8	30	94,5	135	31	33	1036
TRLF.100 New*	37,5	35,5	108	145	35,4	29	1036

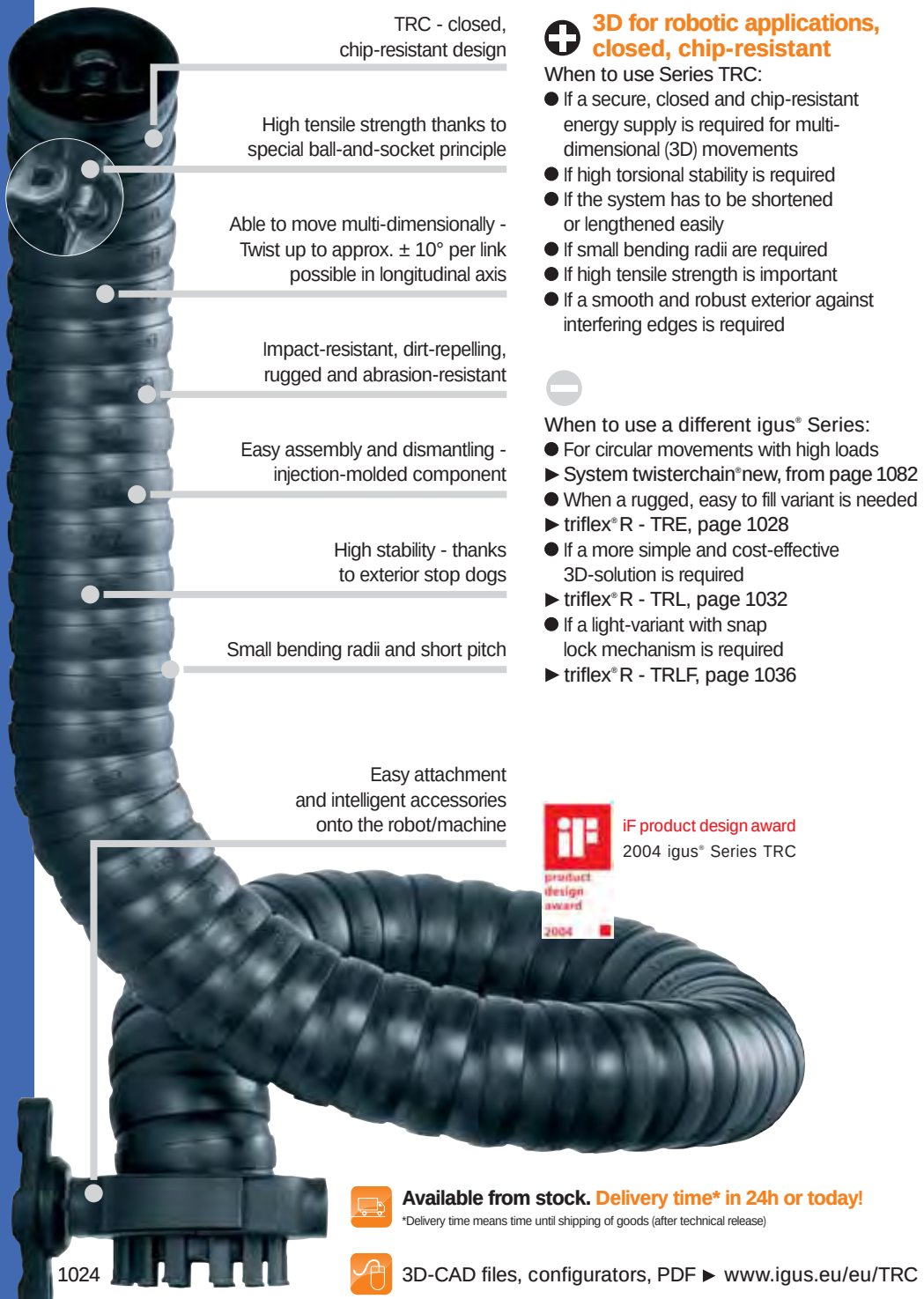


Series "TRLF" - Light-variant with snap lock mechanism
light and cost-effective

*New in this catalog

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Assembly video available online at ►www.igus.eu/eu/triflexR_assembly



3D for robotic applications, closed, chip-resistant

When to use Series TRC:

- If a secure, closed and chip-resistant energy supply is required for multi-dimensional (3D) movements
- If high torsional stability is required
- If the system has to be shortened or lengthened easily
- If small bending radii are required
- If high tensile strength is important
- If a smooth and robust exterior against interfering edges is required

When to use a different igus® Series:

- For circular movements with high loads
  ▶ System twisterchain® new, from page 1082
- When a rugged, easy to fill variant is needed
  ▶ triflex® R - TRE, page 1028
- If a more simple and cost-effective 3D-solution is required
  ▶ triflex® R - TRL, page 1032
- If a light-variant with snap lock mechanism is required
  ▶ triflex® R - TRLF, page 1036

iF product design award
2004 igus® Series TRC

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/TRC

Technical Data

Speed / acceleration	upon request
Material - permitted temperature °C, igumid NB	-40° up to +80°C
Flammability class, igumid NB	VDE 0304 IIC UL94-V2

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets and intermediate links:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 72 links	TRC.40.058.0
+ Mounting brackets	1 mounting bracket with strain relief	TR.40.01
+ 2 Intermediate links		TR.40.02

Order text: 1,0 m TRC.40.058.0 + TR.40.01 + TR40.02

Order key TRC.40.058.0

- Series / Closed design
- Width index Ø
- Bending radius *R*
- Standard color black

TRC - Closed design, dirt-resistant, with *Bi* 15/13 mm inner width and *R* 058 mm radius, color black = Part No. TRC.40.058.0

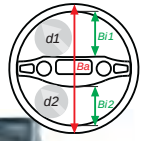
All triflex® R accessories like:

● Swivel bearings for smooth motion ● Protectors ● Gliding feed-throughs ● Strain relief systems: Quick exchange kit, Pivot bracket, triflex® R connection ● TRE.LOCK clips ● Back pull systems: RS triflex® R-Set the universal module and RSP the intelligent retraction system ● Fiber rod module & Installation kit ● Protective jackets.
More information ▶ from page1040



triflex® R | Series TRC | Product range

Robotic applications, closed, chip-resistant





triflex® R | Series TRC | Closed design, dirt-resistant

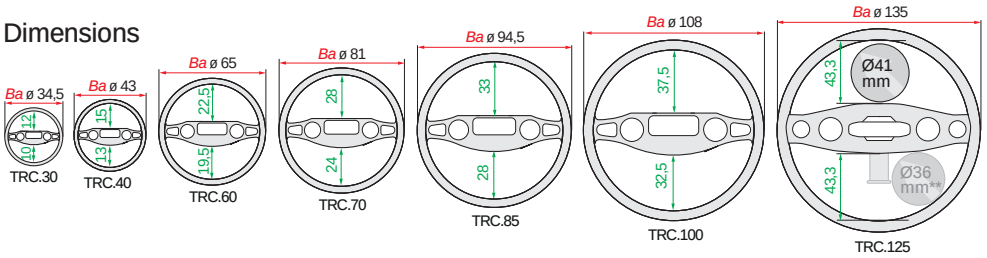
Series TRC "closed"	Bi 1 [mm]	Bi 2 [mm]	Ba [mm]	R [mm]	d1 [mm]	d2 [mm]	Pitch [mm]	Links/m	Weight [kg/m]
TRC.30. 050 .0	12	10	34,5	050	10	8	11,3	89	≈ 0,27
TRC.40. 058 .0[1)]	15	13	43	058	13	11	13,9	72	≈ 0,37
TRC.60. 087 .0[1)]	22,5	19,5	65	087	20,5	17,5	20,4	49	≈ 0,85
TRC.70. 110 .0[1)]	28	24	81	110	26	22	25,6	39	≈ 1,32
TRC.85. 135 .0	33	28	94,5	135	31	26	30,6	33	≈ 1,75
TRC.100.145 .0	37,5	32,5	108	145	35,5	30,5	34,5	29	≈ 2,38
TRC.125.182 .0[3)]	43,3	43,3	135	182	41	41 [2)]	44,6	23	≈ 4,70

1) Available as ESD-Version from stock

2) Max. cable diameter Ø 41 mm. Max. cable diameter changes to Ø 36 mm only, if shortening/lengthening of a filled triflex® R is required

3) **TRC.125: C-version is standard!**

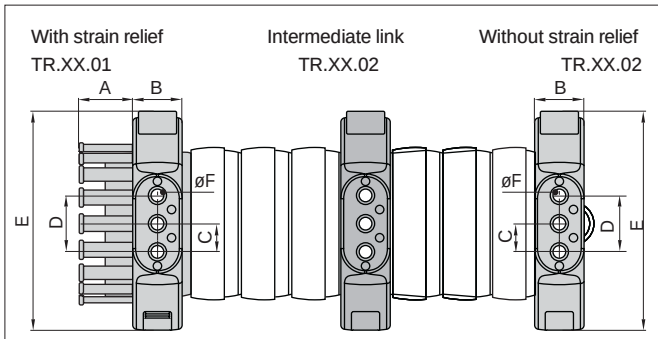
Dimensions



ESD/ATEX[1)] **permanently conductive e-chains®** - TRC several widths with delivery from stock: Outer widths *Ba* 43 - 135 mm, radii *R* 058 - 182 mm. Full ESD product range ► www.igus.eu/ESD

triflex® R | Series TRC | Accessories

Standard mounting bracket





- Standard for TRC/TRE, also compatible with TRL/TRLF
- Mounting bracket with strain relief and also available as intermediate link
- Light-Mounting bracket also available ►from page 1035

Standard | Quick and easy fixing onto the robot/machine

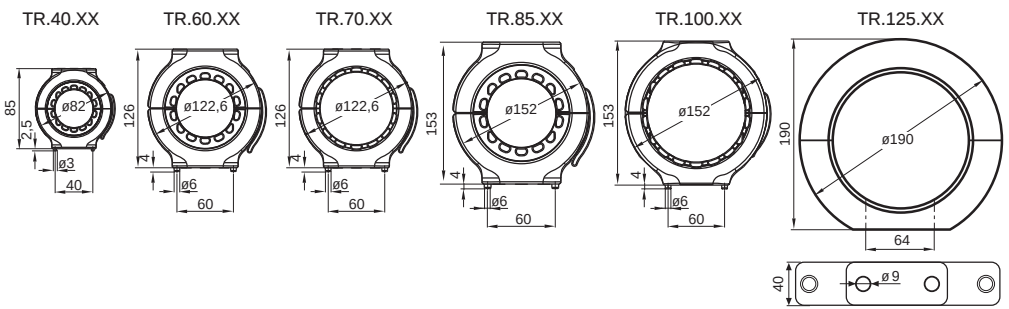
(Light-mounting brackets ►from page 1035)

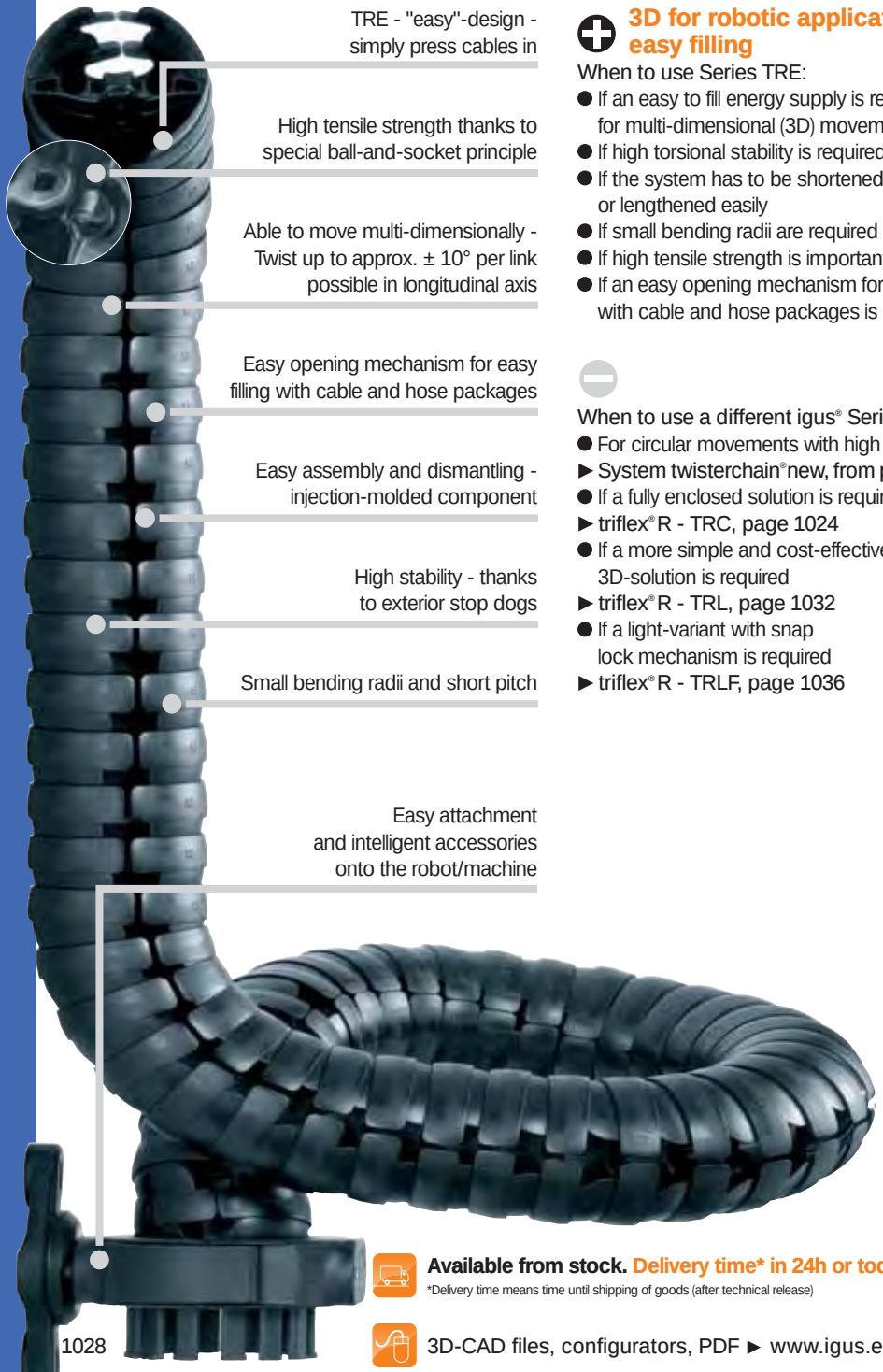
Width Index	Part No. **with strain relief**	Part No. **as intermediate link**	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]	Dim. F Ø [mm]
30. ►	Please use table for TL.30.01.XX		–	–	–	–	–	–
40. ►	TR.40.01. M6[1)]	TR.40.02. M6	17,8	21	13,5	27	85	6,5
60. ►	TR.60.01. M8[1)]	TR.60.02. M8	25	35	20	40	126	9
70. ►	TR.70.01. M8[1)]	TR.70.02. M8	25	35	20	40	126	9
85. ►	TR.85.01. M8	TR.85.02. M8	40	35	20	40	153	9
100. ►	TR.100.01.M8	TR.100.02.M8	38	35	20	40	153	9
125. ►	–	TR.125.02.M8	TR.125.XX - Dimensions please see drawing above					

1) Available as ESD-Version from stock

Strain relief is possible on the moving end and/or the fixed end.

Standard: Trough holes in Ø F - Option: with insert nuts, steel, M6/M8





3D for robotic applications, easy filling

When to use Series TRE:

- If an easy to fill energy supply is required for multi-dimensional (3D) movements
- If high torsional stability is required
- If the system has to be shortened or lengthened easily
- If small bending radii are required
- If high tensile strength is important
- If an easy opening mechanism for easy filling with cable and hose packages is needed

When to use a different igus® Series:

- For circular movements with high loads
- ▶ System twisterchain® new, from page 1082
- If a fully enclosed solution is required
- ▶ triflex® R - TRC, page 1024
- If a more simple and cost-effective 3D-solution is required
- ▶ triflex® R - TRL, page 1032
- If a light-variant with snap lock mechanism is required
- ▶ triflex® R - TRLF, page 1036

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/TRE

Technical Data

Speed / acceleration	upon request
Material - permitted temperature °C, igumid NB	-40° up to +80°C
Flammability class, igumid NB	VDE 0304 IIC UL94-V2

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets and intermediate links:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 72 links	TRE.40.058.0
+ Mounting brackets	1 mounting bracket with strain relief	TR.40.01
+ 1 Intermediate link		TR.40.02

Order text: 1,0 m TRE.40.058.0 + TR.40.01 + TR.40.02

Order key TRE.40.058.0.B

- Serie / "easy"-design
- Width index Ø
- Bending radius *R*
- Standard color black
- Optional B-/C-version

TRE - Series "TRE" - "easy"-design with *Bi* 15/13 mm inner width and *R* 058 mm radius, color black = Part No. TRE.40.058.0

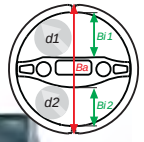
All triflex® R accessories like:

● Swivel bearings for smooth motion ● Protectors ● Gliding feed-throughs ● Strain relief systems: Quick exchange kit, Pivot bracket, triflex® R connection ● TRE.LOCK clips ● Back pull systems: RS triflex® R-Set the universal module and RSP the intelligent retraction system ● Fiber rod module & Installation kit ● Protective jackets.
More information ▶from page1040



triflex® R | Series TRE | Product range

Robotic applications, easy filling



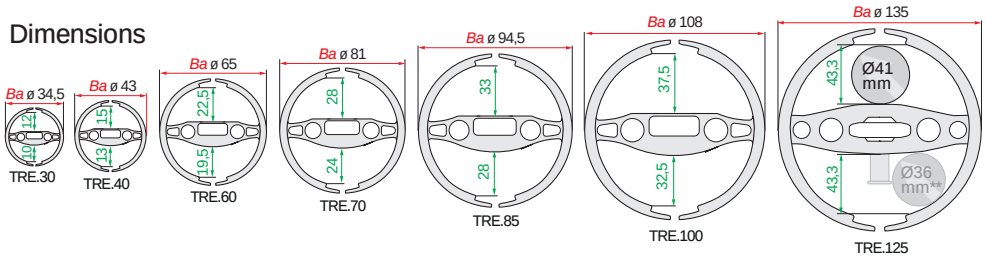


triflex® R | Series TRE | "easy"-design, simply press cables in

Series TRE "easy"-design	Series TRE B-Version	Series TRE C-Version	Bi 1 [mm]	Bi 2 [mm]	Ba [mm]	R [mm]	d1 1) [mm]	d2 1) [mm]	Pitch [mm]	Links/m	Weight [kg/m]
TRE.30. 050.0	–	–	12	10	34,5	050	10	8	11,3	89	≈ 0,26
TRE.40. 058.0	TRE.40. 058.0.B	–	15	13	43	058	13	11	13,9	72	≈ 0,36
TRE.60. 087.0	TRE.60. 087.0.B	–	22,5	19,5	65	087	20,5	17,5	20,4	49	≈ 0,83
TRE.70. 110.0	TRE.70. 110.0.B	–	28	24	81	110	26	22	25,6	39	≈ 1,30
TRE.85. 135.0	TRE.85. 135.0.B	–	33	28	94,5	135	31	26	30,6	33	≈ 1,67
TRE.100.145.0	TRE.100.145.0.B	TRE.100.145.0.C	37,5	32,5	108	145	35,5	30,5	34,5	29	≈ 2,35
TRE.125.182.0	–	X 3)	43,3	43,3	135	182	41	41 2)	44,6	23	≈ 4.40

1) For quick and easy insertion / removal of cables using the "easy"-design, we recommend a maximum cable diameter of 70% of the specified value.
2) Max. cable diameter Ø 41 mm. Max. cable diameter changes to Ø 36 mm only, if shortening/lengthening of a filled triflex® R is required
3) **TRE.125: C-version is standard!**

Dimensions



B-version | 4 x higher torsion forces



The advanced ball and socket connection now uses an additional arrester for even higher stability. Especially designed for Heavy-Duty applications and all back pull systems (RS and RSP) with high accelerations and top speeds. ● Up to 4 times stronger with improved bending radius strength ● Able to handle even higher torsion forces ● Made of only one single part per e-chain® link ► www.igus.eu/eu/triflexR-Bversion

C-version | Quick assembly, 50% higher forces

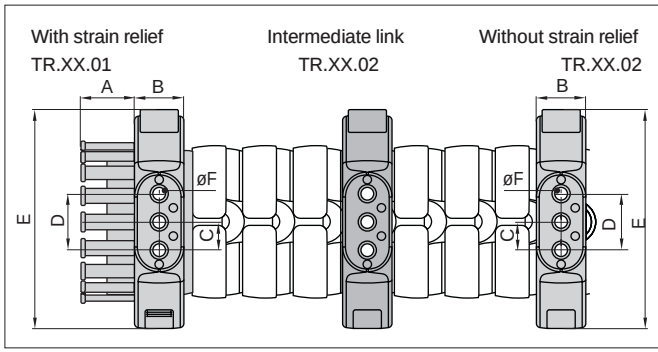


Now available with proven bolt connection for even faster assembly and disassembly ● Linear pull force capacity increased up to 4.000 N ● Up to 4 times stronger and improved bending radius strength ● C-version drastically reduces installation time ● Stronger lock for torsion limitation ● igubal® Spherical Bearing for non-slip traction

triflex® R | Series TRE | Accessories

Standard mounting bracket

Light
▶ 1035
▶ 1044





- Standard for TRC/TRE, also compatible with TRL/TRLF
- Mounting bracket with strain relief and also available as intermediate link
- Light-Mounting bracket also available ▶ from page 1035

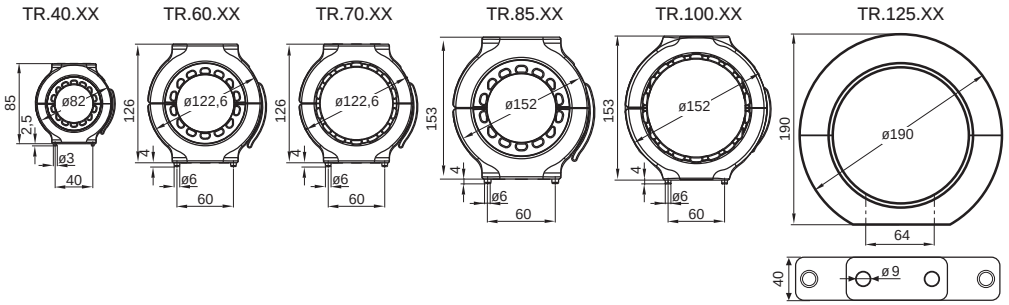
Standard | Quick and easy fixing onto the robot/machine

(Light-mounting brackets ▶ from page 1035)

Width Index	Part No. with strain relief	Part No. as intermediate link	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]	Dim. F Ø [mm]
30. ▶	Please use table for TL.30.01.XX		–	–	–	–	–	–
40. ▶	TR.40.01. M6	TR.40.02. M6	17,8	21	13,5	27	85	6,5
60. ▶	TR.60.01. M8	TR.60.02. M8	25	35	20	40	126	9
70. ▶	TR.70.01. M8	TR.70.02. M8	25	35	20	40	126	9
85. ▶	TR.85.01. M8	TR.85.02. M8	40	35	20	40	153	9
100. ▶	TR.100.01.M8	TR.100.02.M8	38	35	20	40	153	9
125. ▶	–	TR.125.02.M8	TR.125.XX - Dimensions please see drawing above					

Strain relief is possible on the moving end and/or the fixed end.

Standard: Trough holes in Ø F - Option: with insert nuts, steel, M6/M8





3D for robotic applications, light and cost-effective

When to use Series TRL:

- When an easy to fill, economical 3D e-chain® is needed
- When 3D e-chain® for easily manageable operating conditions is needed
- If the system has to be shortened or lengthened easily
- If small bending radii are required
- If an easy opening mechanism for easy filling with cable and hose packages is needed

When to use a different igus® Series:

- For circular movements with high loads
  ▶ System twisterchain® new, from page 1082
- If a fully enclosed solution is required
  ▶ triflex® R - TRC, page 1024
- When a rugged, easy to fill variant is needed
  ▶ triflex® R - TRE, page 1028
- If a light-variant with snap lock mechanism is required
  ▶ triflex® R - TRLF, page 1036

iF product design award
2007 igus® Series TRL

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/TRL

Technical Data

Speed / acceleration	upon request
Material - permitted temperature °C, igumid NB	-40° up to +80°C
Flammability class, igumid NB	VDE 0304 IIC UL94-V2

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 72 links	TRL.40.058.0
+ Light-mounting brackets	1 mounting bracket with strain relief	TL.40.01.Z1

Order text: 1,0 m TRL.40.058.0 + TL.40.01.Z1

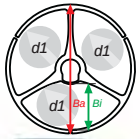
Order key **TRL.40.058.0**

- Series / "easy"-design
- Width index Ø
- Bending radius *R*
- Standard color black

TRL - The "light" variant of the "easy"-design with *Bi* 15 mm inner width and *R* 058 mm radius, color black = Part No. TRL.40.058.0

triflex® R | Series TRL | Product range

Robotic applications, light and economical



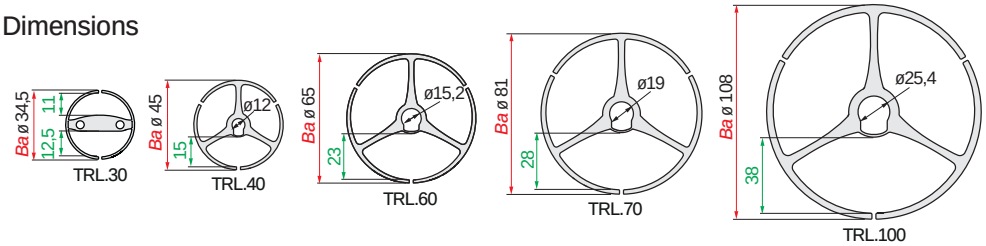


triflex® R | Series TRL | Light alternative with "easy"-design

Series TRL "light"	Bi 1 [mm]	Bi 2 [mm]	Ba [mm]	R mm	d1[1] mm	d2[1] mm	Pitch [mm]	Links/m	Weight [kg/m]
TRL. 30. 050 .0[2]	12,5	11	34,5	050	10	8	11,3	89	≈ 0,15
TRL. 40. 058 .0	15	–	45	058	13	–	13,9	72	≈ 0,20
TRL. 60. 087 .0	23	–	65	087	20,5	–	20,4	49	≈ 0,40
TRL. 70. 110 .0	28	–	81	110	26	–	25,6	39	≈ 0,70
TRL. 100. 145 .0	38	–	108	145	35,5	–	34,5	29	≈ 1,20

1) For quick and easy insertion / removal of cables using the "easy"-design, we recommend a maximum cable diameter of 70% of the specified value.
2) only with 2-chamber sytem

Dimensions



triflex® R | Series TRL | Accessories

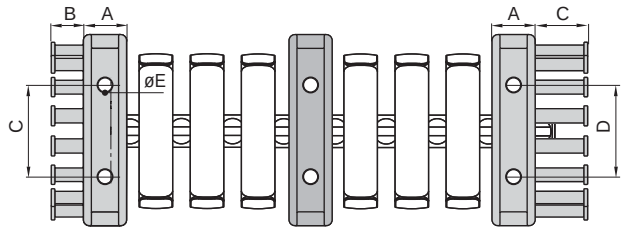
Light-mounting bracket

Standard
▶ 1027

Short strain relief
TL.XX.01.Z1

Intermediate link
TL.XX.01.Z0

Long strain relief
TL.XX.01.Z2





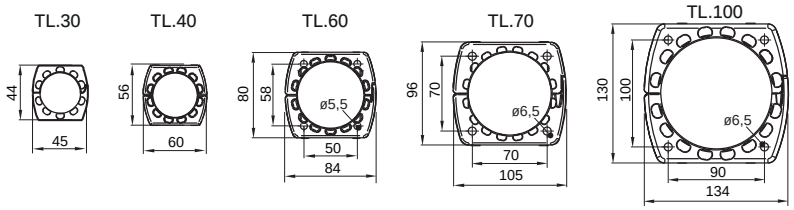
- Standard for TRL/TRLF, also compatible with TRC/TRE
- Light-mounting bracket with strain relief and available as intermediate link
- Standard mounting bracket also available ▶ page 1027

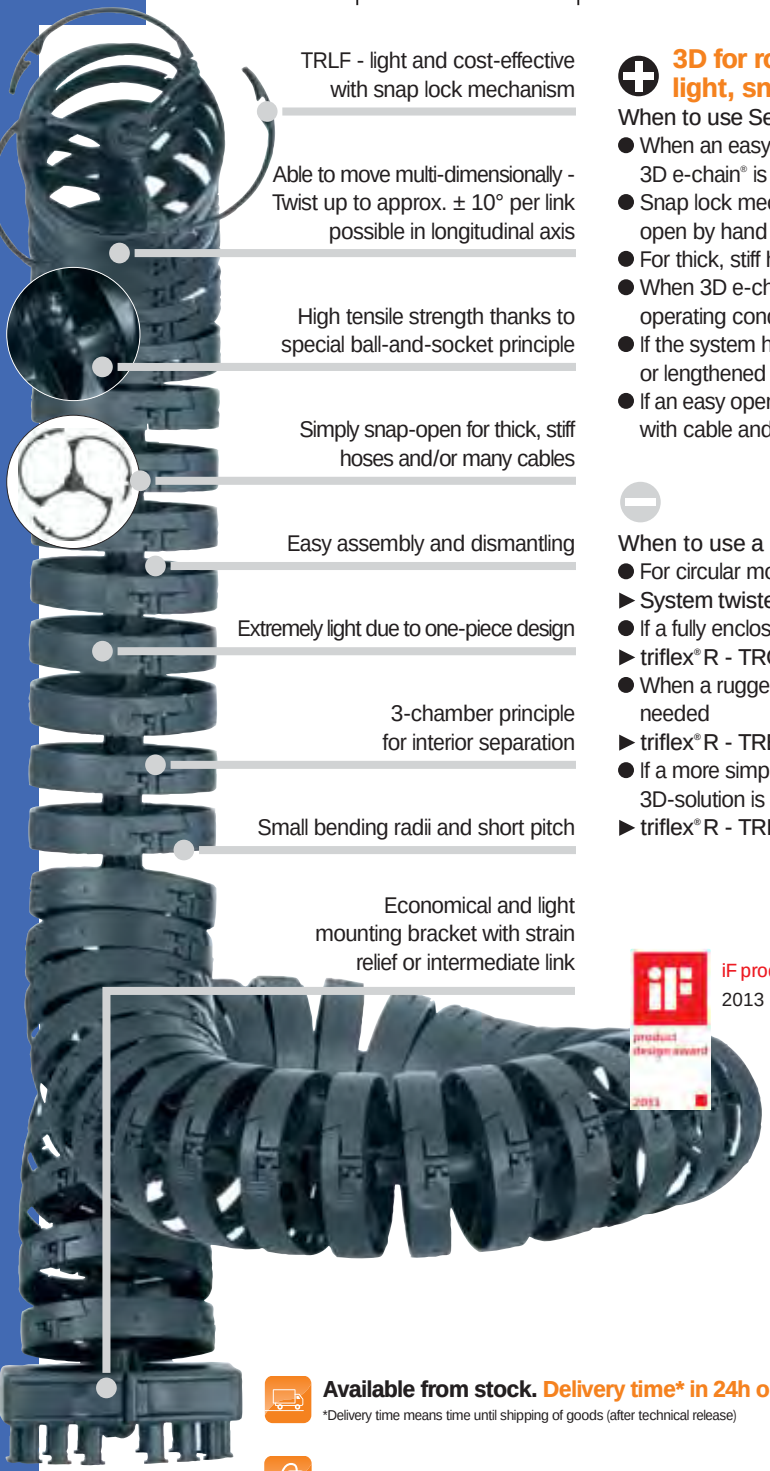
Light | Quick and easy fixing onto the robot/machine

(Standard-mounting brackets ▶from page 1027)

Width Index	Part No. **with short strain relief**	Part No. **with long strain relief**	Part No. **Intermediate link**	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E ø [mm]
30. ▶	TL.30.01 .Z1	–	TL.30.01 .Z0	13	12,5	–	24	4,5
40. ▶	TL.40.01 .Z1*	TL.40.01 .Z2	TL.40.01 .Z0	14	12,5	20	36	5,8
60. ▶	TL.60.01 .Z1*	TL.60.01 .Z2	TL.60.01 .Z0	20	17	27	48	5,8
70. ▶	TL.70.01 .Z1*	TL.70.01 .Z2	TL.70.01 .Z0	27	17,5	27,5	64	6,5
100. ▶	TL.100.01.Z1*	TL.100.01.Z2	TL.100.01.Z0	30	22,5	42,5	64	6,5

*For moving end (ball) suitable only Series TRL/TRLF





TRLF - light and cost-effective with snap lock mechanism

Able to move multi-dimensionally - Twist up to approx. ± 10° per link possible in longitudinal axis

High tensile strength thanks to special ball-and-socket principle

Simply snap-open for thick, stiff hoses and/or many cables

Easy assembly and dismantling

Extremely light due to one-piece design

3-chamber principle for interior separation

Small bending radii and short pitch

Economical and light mounting bracket with strain relief or intermediate link

3D for robotic applications, light, snap lock mechanism

When to use Series TRLF:

- When an easy to fill, economical 3D e-chain® is needed
- Snap lock mechanism to open by hand or screwdriver
- For thick, stiff hoses and/or many cables
- When 3D e-chain® for easily manageable operating conditions is needed
- If the system has to be shortened or lengthened easily
- If an easy opening mechanism for easy filling with cable and hose packages is needed

When to use a different igus® Series:

- For circular movements with high loads
  ▶ System twisterchain® new, from page 1082
- If a fully enclosed solution is required
  ▶ triflex® R - TRC, page 1024
- When a rugged, easy to fill variant is needed
  ▶ triflex® R - TRE, page 1028
- If a more simple and cost-effective 3D-solution is required
  ▶ triflex® R - TRL, page 1032

iF product design award
2013 igus® Series TRLF

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/TRLF

Technical Data

Speed / acceleration	upon request
Material - permitted temperature °C, igumid G	-40° up to +120°C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 29 links	TRLF.100.145.0
+ Light-mounting brackets	1 mounting bracket with strain relief	TL.100.01.Z1

Order text: 1,0 m TRLF.100.145.0 + TL.100.01.Z1

Order key TRLF.100.145.0

- TRLF: "Light-variant with snap lock mechanism
- 100: Width index ø
- 145: Bending radius *R*
- 0: Standard color black

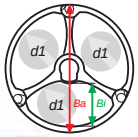
TRLF - Light-variant with snap lock mechanism with *Bi* 37,5 mm inner width and *R* 145 mm radius, color black = Part No. TRLF.100.145.0



triflex® R TRLF - easy to fill due snap lock mechanism. To open by hand or screwdriver video online ▶ www.igus.eu/eu/TRLF

triflex® R | Series TRLF | Product range | New in this catalog

Robotic applications, faster filling of even thicker hoses and cables

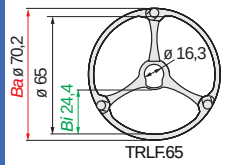




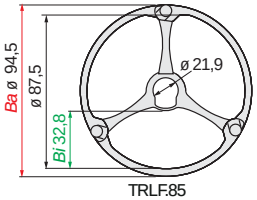
triflex® R | Series TRLF | Light-variant with snap lock mechanism

Series TRLF light with snap lock	Bi [mm]	Ba [mm]	R mm	d1 mm	Pitch [mm]	Links/m	Weight [kg/m]
TRLF. 65. 100 .0	24,4	70,2	100	22	23,1	44	≈ 0,79
TRLF. 85. 135 .0	32,8	94,5	135	30	31	33	≈ 1,45
TRLF. 100.145 .0	37,5	108	145	35,5	34,5	29	≈ 1,90

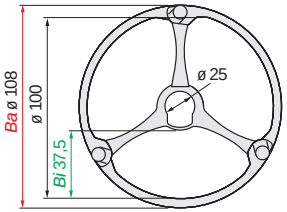
Dimensions



TRLF.65



TRLF.85



TRLF.100



Quickly filled 3D robot chain, now enclosed. triflex® TRCF

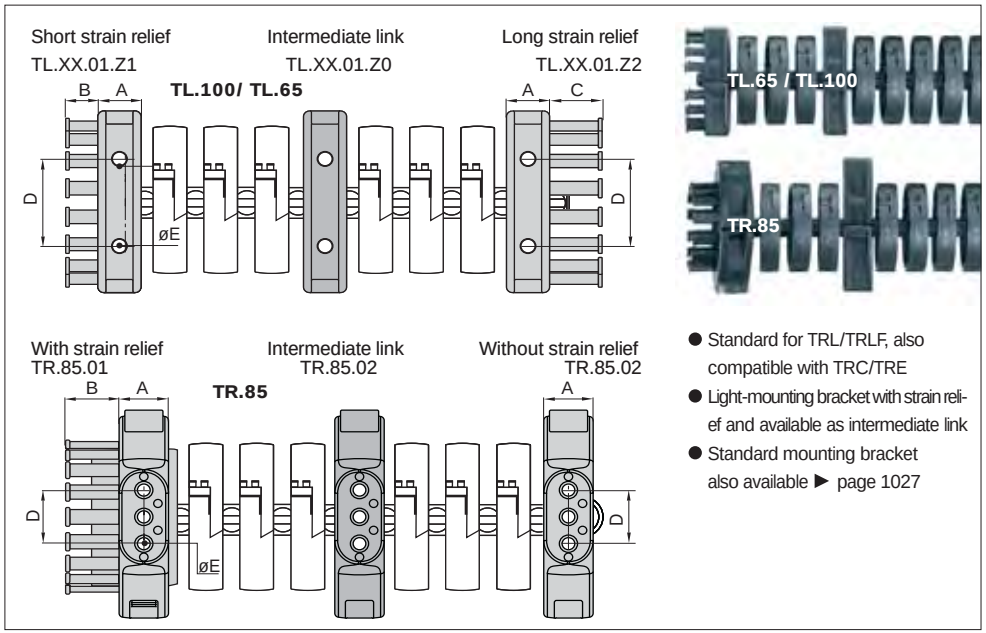
● e-chain® links are easily snapped open to insert large filling diameters ● Enclosed version, also for direct use with dirt and chip exposure ● Torsion of approx. ±10°/chain link possible ● 3 chamber design for ideal cable distribution and media separation ● Can be shortened and extended as needed ● Opened with a screw driver. More information ▶www.igus.eu/eu/TRCF



triflex® R | Series TRLF | Accessories

Light-mounting bracket

Standard ▶1027



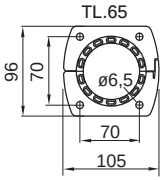
- Standard for TRL/TRLF, also compatible with TRC/TRE
- Light-mounting bracket with strain relief and available as intermediate link
- Standard mounting bracket also available ▶ page 1027

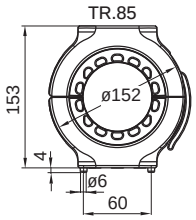
Light | Quick and easy fixing onto the robot/machine

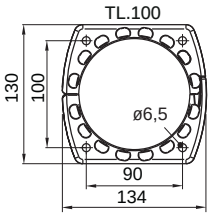
(Standard-mounting brackets ▶from page 1027)

Width Index	Part No. with short strain relief	Part No. with long strain relief	Part No. Intermediate link	Dim. A [mm]	Dim. B [mm] Z1	Dim. C [mm] Z2	Dim. D [mm]	Dim. E ø [mm]
65 ▶	TL.65.01.Z1**	–	TL.65.01.Z0	27	13,5	–	64	6,5
85. ▶	TR.85.01.M8*	–	TR.85.02.M8*	35	40	–	40	9
100. ▶	TL.100.01.Z1**	TL.100.01.Z2	TL.100.01.Z0	30	22,5	42,5	64	6,5

**For moving end (ball) suitable only Series TRL/TRLF *Option: with insert nuts, steel, M6/M8

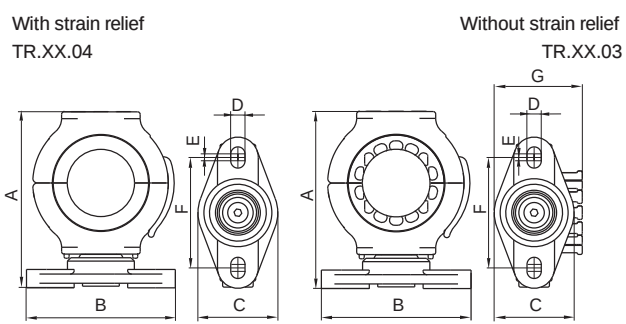






triflex® R | Series TRC/TRE/TRL/TRLF | Accessories

Swivel bearing, for smooth motion | Protectors





- Gentle motion sequence for extreme alternating torsion and bending stress
- With extremely sensitive bending radii
- Pivoted bearing with a maintenance-free igubal® ball-and-socket joint

Swivel bearing | Smooth motion for extreme alternating torsion stress | for TRC/TRE/TRL/TRLF

Width index	Part No. with strain relief	Part No. intermediate link	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]	Dim. F Ø [mm]	Dim. G* Ø [mm]
40. ▶	TR.40.03	TR.40.04	105	89	47	8,4	4,1	65	51,8
60. ▶	TR.60.03	TR.60.04	152	118	65	10,5	5,5	87,5	73,5
70. ▶	TR.70.03	TR.70.04	152	118	65	10,5	5,5	87,5	73,5
85.** ▶	TR.85.03	TR.85.04	179	118	65	10,5	5,5	87,5	88
100. ▶	TR.100.03	TR.100.04	179	118	65	10,5	5,5	87,5	88

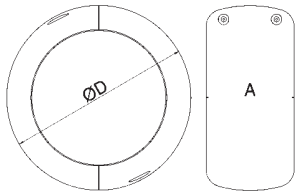
*only TR.XX.03

**Width 85. not for Series TRL

Protectors | High safety under extreme operating conditions | for TRC/TRE

● To achieve long life cycles under heavy loads resulting from impact or friction on the robot's e-chains®, optional protectors can be fitted at the contact points ● Easy assembly and quick replacement ● Abrasion-resistant TPU material ● Shock-resistant ● Light ● Easy gliding over edges ● Free positioning on any e-chain® link ● Protector with quick lock fastener available (Part No. TR.85.30 and TR.70.30)



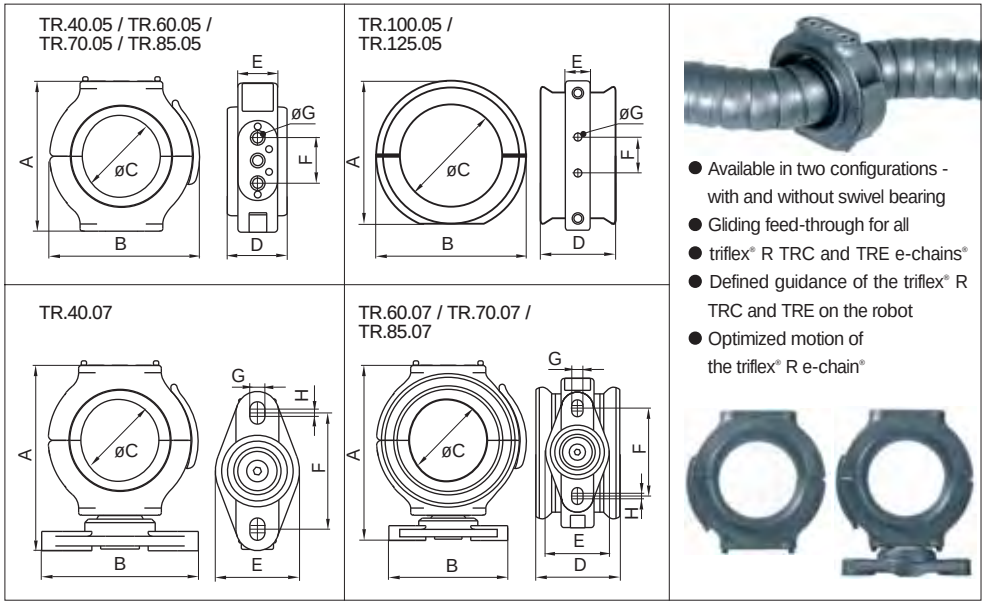


Width index	Part No. TR.XX.10	Part No. with quick lock	Ø D [mm]	A [mm]
40. ▶	TR.40.10	TR.40.30*	55	27
60. ▶	TR.60.10	TR.60.30*	80	40
70. ▶	TR.70.10	TR.70.30	102	50
85. ▶	TR.85.10	TR.85.30	118	59
100. ▶	TR.100.10	TR.100.30*	133	67
125. ▶	TR.125.10	TR.125.30*	170	82

*Available upon request, please consult igus® for delivery time!

triflex® R | Series TRC/TRE | Accessories | New in this catalog

Gliding feed-throughs, two configurations | With and without swivel bearing



- Available in two configurations - with and without swivel bearing
- Gliding feed-through for all
- triflex® R TRC and TRE e-chains®
- Defined guidance of the triflex® R TRC and TRE on the robot
- Optimized motion of the triflex® R e-chain®

Gliding feed-throughs | Without swivel bearing | for TRC/TRE

Width index	Part No. Gliding feed-throughs without swivel bearing	Dim. A [mm]	Dim. B [mm]	Dim. C Ø [mm]	Dim. D Ø [mm]	Dim. E Ø [mm]	Dim. F [mm]	Dim. G Ø [mm]
40. ▶	TR.40.05	85	84,5	46	32	21	27	6,5
60. ▶	TR.60.05	126	126	70	50	32	40	9
70. ▶	TR.70.05	153	155	86	70	35	40	9
85. ▶	TR.85.05	153	155	100	84	35	40	9
100. ▶	TR.100.05	162,5	169,5	115	85	28	40	8,5
125. ▶	TR.125.05	179	190	142	84	40	64	9

Gliding feed-throughs | With swivel bearing | for TRC/TRE

Width index	Part No. Gliding feed-throughs with swivel bearing	Dim. A [mm]	Dim. B [mm]	Dim. C Ø [mm]	Dim. D [mm]	Dim. E [mm]	Dim. F Ø [mm]	Dim. G [mm]	Dim. H [mm]
40. ▶	TR.40.07	108	89	46	32	47	65	8,4	4,1
60. ▶	TR.60.07	156	118	70	50	65	87,5	10,5	5,5
70. ▶	TR.70.07	183	118	86	70	65	87,5	10,5	5,5
85. ▶	TR.85.07	183	118	100	84	65	87,5	10,5	5,5

triflex® R TRE.LOCK clip | for TRE

- The TRE.XX.LOCK clip is used to ensure a secure fit for the mounting bracket on TRE versions
- TRE.XX.LOCK clips are automatically supplied with each mounting bracket - please use the following Part No. for reordering:

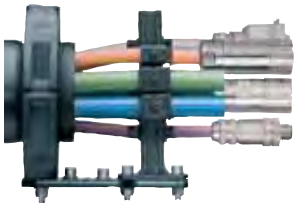


Width index		Part No. **TRE.LOCK clips***
.30	▶	TRE.30/40.LOCK
.40	▶	TRE.30/40.LOCK
.60	▶	TRE.60.LOCK
.70	▶	TRE.70.LOCK
.85	▶	TRE.70.LOCK
.100	▶	TRE.100.LOCK
.125	▶	TRE.125.LOCK

*not for Series TRC/TRL/TRLF

Strain relief systems with igus® chainfix clamps | for TRC/TRE

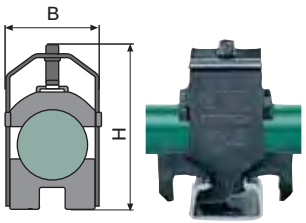
- Secure mounting of large cross sections with igus® chainfix clamps
- Available in 3 options per size
- Multiaxially adjustable, for ideal positioning
- Suits all additional axles: Ø 30 mm, Ø 32 mm, Ø 34 mm



CFX - Single clamp housing, incl. bottom saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B±2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B±2 [mm]	H [mm]
CFX12.1	CFX12.1.E	06 - 12	16	54	CFX26.1	CFX26.1.E	22 - 26	30	67
CFX14.1	CFX14.1.E	12 - 14	18	50	CFX30.1	CFX30.1.E	26 - 30	34	71
CFX16.1	CFX16.1.E	14 - 16	20	52	CFX34.1	CFX34.1.E	30 - 34	38	75
CFX18.1	CFX18.1.E	16 - 18	22	54	CFX38.1	CFX38.1.E	34 - 38	42	79
CFX20.1	CFX20.1.E	18 - 20	24	56	CFX42.1	CFX42.1.E	38 - 42	46	83
CFX22.1	CFX22.1.E	20 - 22	26	58					

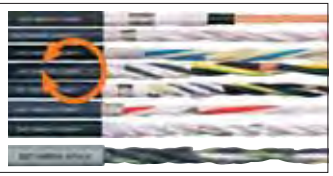
*Material stainless steel: 1.4301/AISI 304



Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

chainflex® robotic cables: CFROBOT & CF77.UL.D PUR control cable

CFROBOT: ● Available from stock ● UL and CSA certified ● From 1 m, no minimum requirements ● ±180° on 1 m ● 3.000.000 cycles tested
CF77.UL.D PUR control cable: ● Available from stock ● ± 180° twistable ● For twistable load requirements. More information ▶www.igus.eu/eu/chainflexnews



Quick exchange kit TR.60/70/85/100.22.XX | for TRC/TRE

- Ideal for triflex® R readychain®
- One-time-only alignment
- No repeat alignment upon exchange of readychain®
- Exchange of th triflex® R unit incl. cables without any tools



Width index		Part No. **Quick exchange kit**
60.**	▶	TR.60 .22. **30** / **32** / **34***
70.**	▶	TR.70 .22. **30** / **32** / **34***
85.**	▶	TR.85 .22. **30** / **32** / **34***
100.**	▶	TR.100.22. **30** / **32** / **34***

**not for Series TRL/TRLF

*Please add the appropriate index Ø 30, 32, 34 mm.Example: TR.100.22.**30**

Pivot bracket TR.60/70/85/100.21.XX | for TRC/TRE

- Available in 2 options per size (with/without strain relief)
- Safe and simple securing of the cables with cable ties
- Possible also without strain relief (Strain relief in the application)



Width index		Part No. **Pivot bracket with** strain relief	Part No. **Pivot bracket without** strain relief
60.**	▶	TR.60.21.01. **30** / **32** / **34***	TR.60.21.02. **30** / **32** / **34***
70.**	▶	TR.70.21.01. **30** / **32** / **34***	TR.70.21.02. **30** / **32** / **34***
85.**	▶	TR.85.21.01. **30** / **32** / **34***	TR.85.21.02. **30** / **32** / **34***
100.**	▶	TR.100.21.01.**30** / **32** / **34***	TR.100.21.02.**30** / **32** / **34***

**not for Series TRL/TRLF

*Please add the appropriate index Ø 30, 32, 34 mm.Example: TR.100.21.01.**30**

Connection TR.60/70/85/100/125.20.XX | for TRC/TRE

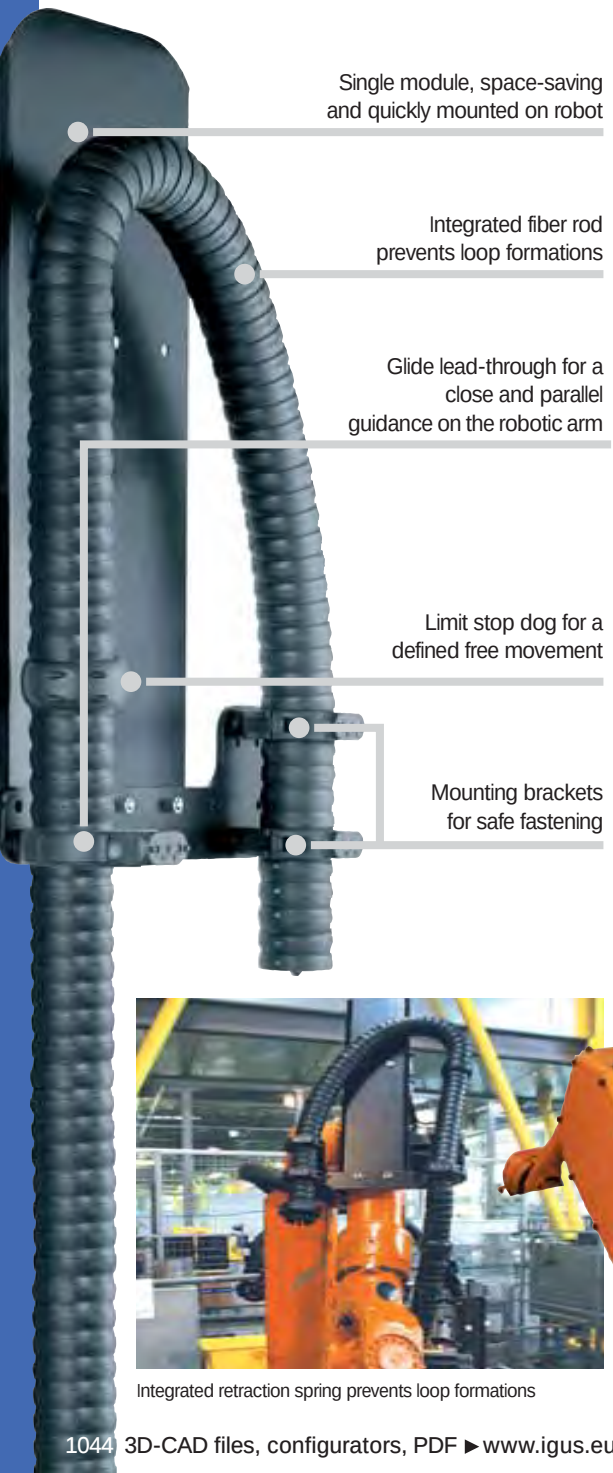
- For cables with large cross section, e.g. welding applications or in heavy hydraulic hoses, rugged strain relief in "heavy-duty" applications
- Double C-profile for igus® CFX clips
- igus® chainfix clamps made of stainless steel or steel can be used (see Table left)



Width index		Part No. **triflex® R connection**
60.**	▶	TR.60 .20. **30** / **32** / **34***
70.**	▶	TR.70 .20. **30** / **32** / **34***
85.**	▶	TR.85 .20. **30** / **32** / **34***
100.**	▶	TR.100.20. **30** / **32** / **34***
125.**	▶	TR.125.20. **30** / **32** / **34***

**not for Series TRL/TRLF

*Please add the appropriate index Ø 30, 32, 34 mm.Example: TR.100.20.**30**



Single module, space-saving and quickly mounted on robot

Integrated fiber rod prevents loop formations

Glide lead-through for a close and parallel guidance on the robotic arm

Limit stop dog for a defined free movement

Mounting brackets for safe fastening

RS - Universal module for any robotic motion

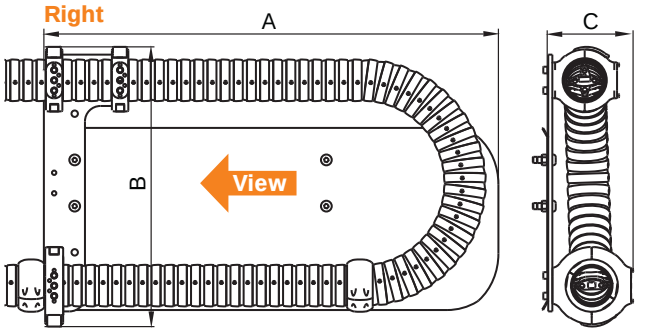
triflex® RS is a very compact universal module that can be attached to the fastening points on the robot. Applications in very limited space can be realized, thanks to the small installation height and to the fact that triflex® RS can be installed parallel to the robotic arm. triflex® RS with integrated spring mechanism allows efficient energy supply to the robotic head, without stress on the cables.

● Standard-package for all applications for immediate installation ● Integrated spring mechanism ● The first choice for robotic applications with limited space ● Saves space - small installation height and closely routed on the robotic arm ● Outstanding service life ● Universal installation

Integrated retraction spring prevents loop formations



RS with cover for the additional support of switch cabinets or valve terminals



Picture shows triflex® RS - Fastening point, right

triflex® RS - Fastening point, right

Width Index	Part No. TRC	Part No. TRE	A [mm]	B [mm]	C [mm]
40. ▶	TRC.RS.40.R	TRE.RS.40.R.B	620	301	95
60. ▶	TRC.RS.60.R	TRE.RS.60.R.B	885	528	150
70. ▶	TRC.RS.70.R	TRE.RS.70.R.B	885	545	167
85. ▶	TRC.RS.85.R	TRE.RS.85.R.B	885	565	167
100. ▶	TRC.RS.100.R	TRE.RS.100.R.B	912,5	614	167

triflex® RS - Fastening point, right, with cover

Width Index	Part No. TRC	Part No. TRE	A [mm]	B [mm]	C [mm]
40. ▶	TRC.RS.40.RC	TRE.RS.40.RC.B	620	301	95
60. ▶	TRC.RS.60.RC	TRE.RS.60.RC.B	885	528	150
70. ▶	TRC.RS.70.RC	TRE.RS.70.RC.B	885	545	167
85. ▶	TRC.RS.85.RC	TRE.RS.85.RC.B	885	565	167
100. ▶	TRC.RS.100.RC	TRE.RS.100.RC.B	912,5	614	167

triflex® RS - Fastening point, left

Width Index	Part No. TRC	Part No. TRE	A [mm]	B [mm]	C [mm]
40. ▶	TRC.RS.40.L	TRE.RS.40.L.B	620	301	95
60. ▶	TRC.RS.60.L	TRE.RS.60.L.B	885	528	150
70. ▶	TRC.RS.70.L	TRE.RS.70.L.B	885	545	167
85. ▶	TRC.RS.85.L	TRE.RS.85L.B	885	565	167
100. ▶	TRC.RS.100.L	TRE.RS.100.L.B	912,5	614	167

triflex® RS - Fastening point, left, with cover

Width Index	Part No. TRC	Part No. TRE	A [mm]	B [mm]	C [mm]
40. ▶	TRC.RS.40.LC	TRE.RS.40.LC.B	620	301	95
60. ▶	TRC.RS.60.LC	TRE.RS.60.LC.B	885	528	150
70. ▶	TRC.RS.70.LC	TRE.RS.70.LC.B	885	545	167
85. ▶	TRC.RS.85.LC	TRE.RS.85.LC.B	885	565	167
100. ▶	TRC.RS.100.LC	TRE.RS.100.LC.B	912,5	614	167

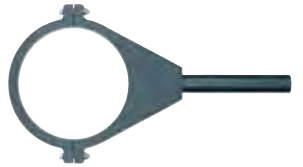
Further accessories



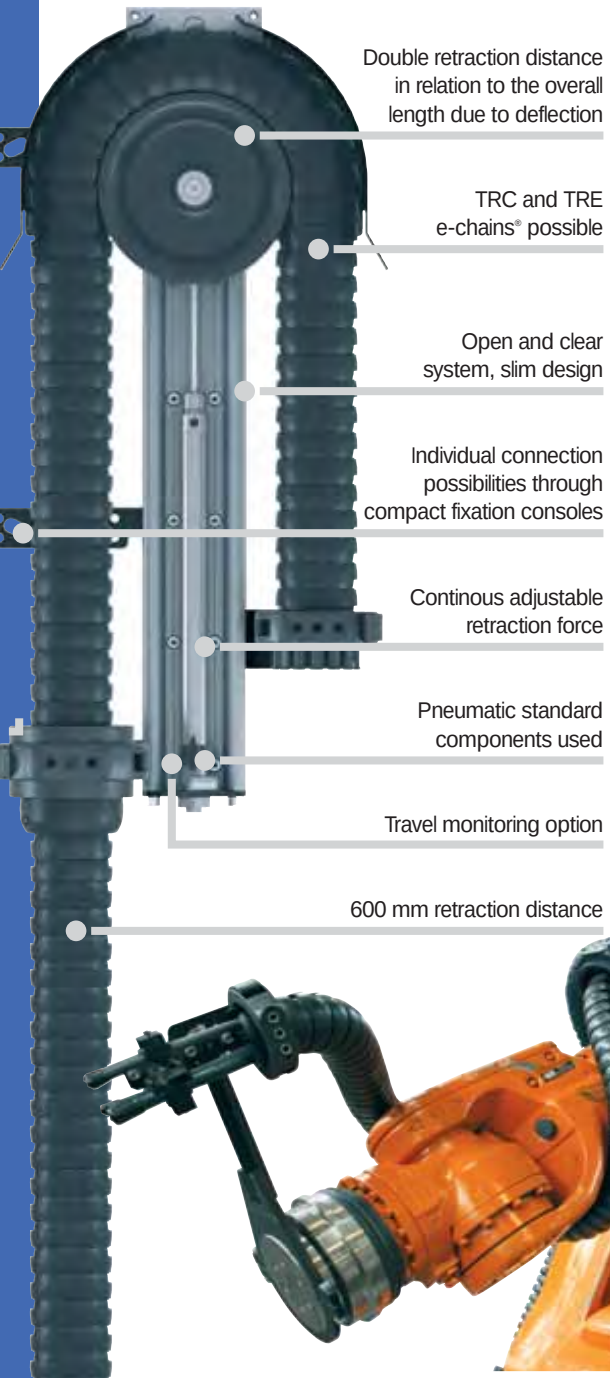
RS with cover (barrier)
● Creates more mounting space on robots - e.g. for switch cabinets or valve terminals ● For upside down applications ● Enables the use of RS in applications with extreme movements



43 Adapter brackets from stock
● 43 adapter bracket types for many different robots ● For all RS modules ● For assembly to the side or on top ● Free download of 3D CAD files for many brackets
► www.igus.eu/eu/triflexbrackets



triflex® R fixation to 6-axis
● One axis diameter (Ø30 mm) for all robots ● Easy and fast assembly ● For triflex® R mounting bracket with CFX clamps and tiewrap plates



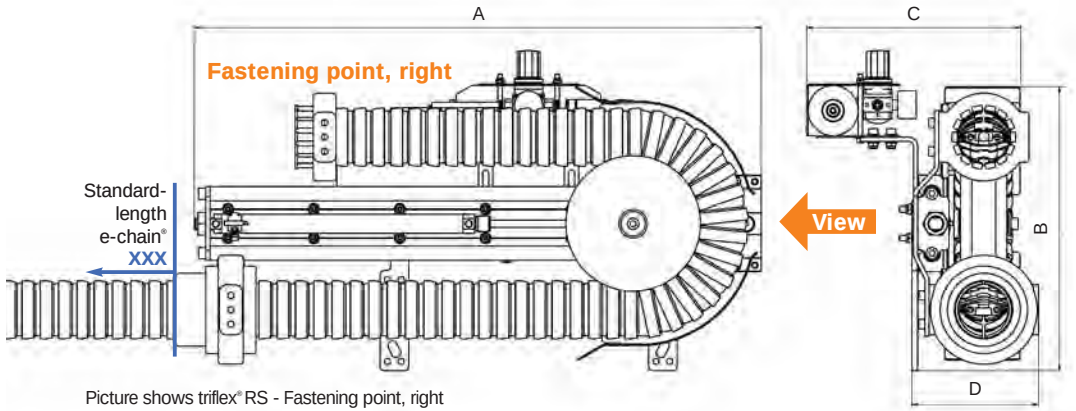
RSP - Intelligent retraction system

Prevent creation of loops on robot head - now with continuously adjustable retraction force: triflex® RSP

Intelligent retraction system for multi-axial robot applications. Expansion lengths of 600 mm enable a secure guidance of the cables and hoses, even with large arm diameters and very complex movements. The retraction forces can be adjusted with the help of a pneumatic cylinder. Whether light or heavy fi llings, long or short robot arms - with the igus® RSP retraction system the retraction force can always be adjusted to the individual application.

- Adjustable, variable retraction force with a pressure control valve
- Almost constant forth path over the complete travel, even with heavy fillings
- The end position can be monitored and thereby greater damages can be prevented in case of error
- Greater retraction forces than RS system
- Mounting options for numerous robot types and manufacturers
- 3-6 axis on industrial robots

triflex® RSP system mounted on a 6-axis robot



Picture shows triflex® RS - Fastening point, right

Product range - RSP pneumatic retraction system

Width Index	Part No. **RSP Right system***	Part No. **RSP Left system***	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]
60. ▶	TR.RSP.60.R	TR.RSP.60.L	792	396	324	177
70. ▶	TR.RSP.70.R	TR.RSP.70.L	792	396	324	177
85. ▶	TR.RSP.85.R	TR.RSP.85.L	843	444	363	216
100. ▶	TR.RSP.100.R	TR.RSP.100.L	843	444	363	216
125. ▶	TR.RSP.125.R	TR.RSP.125.L	1031	560	373	226

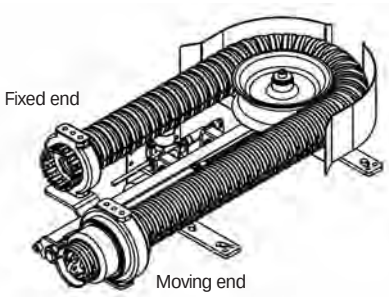
*RSP without triflex® R e-chain®

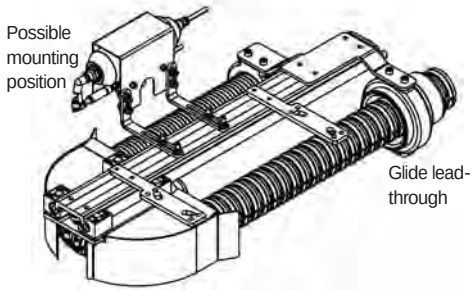
Product range - e-chain® for RSP

Width Index	Part No. **TRC Closed design**	Part No. **TRE "easy"-design**	e-chain® standard-length* [mm]			
60. ▶	TRC.RSP.60.087. **XXX**.0	TRE.RSP.60.087. **XXX**.0.B	**500**	**1000**	**1500**	**2000**
70. ▶	TRC.RSP.70.110. **XXX**.0	TRE.RSP.70.110. **XXX**.0.B	**500**	**1000**	**1500**	**2000**
85. ▶	TRC.RSP.85.135. **XXX**.0	TRE.RSP.85.135. **XXX**.0.B	**500**	**1000**	**1500**	**2000**
100. ▶	TRC.RSP.100.145.**XXX**.0	TRE.RSP.100.145.**XXX**.0.B	**500**	**1000**	**1500**	**2000**
125. ▶	TRC.RSP.125.182.**XXX**.0	TRE.RSP.125.182.**XXX**.0.B	**500**	**1000**	**1500**	**2000**

*Standard lengths (exceeded length from glide lead-through - outside of the system)

Please add the standard-length (measured from the glide lead-through). Example: TRC.RSP.60.087.**500**.0





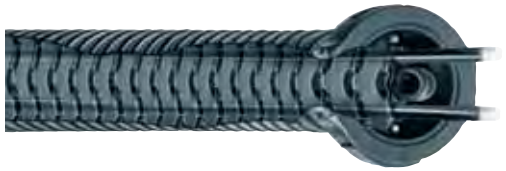
triflex® R | Series TRC/TRE | Accessories

Fiber rod module | Installation kit | For special applications

Fiber rod module | for TRC/TRE

Fiber rod module, for applications where too much flexibility is not desired, intelligent problem solution through directed pretension





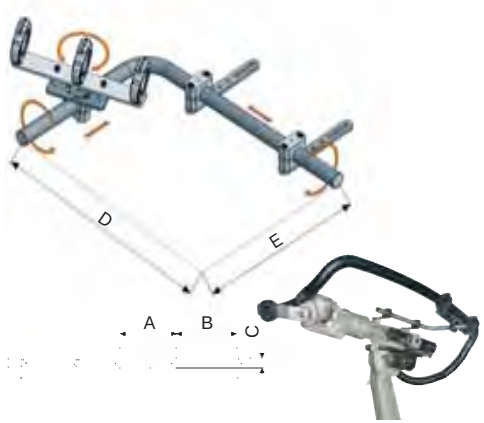
Product range - Fiber rods

	Part No. TRC/TRE with mounted fiber rods	Length ca. [m]
triflex® R 40	TRC.F.40.1000.1.0/TRE.F.40.1000.1.0	1,0
	TRC.F.40.0900.1.0/TRE.F.40.0900.1.0	0,9
	TRC.F.40.0800.1.0/TRE.F.40.0800.1.0*	0,8
	TRC.F.40.0700.1.0/TRE.F.40.0700.1.0	0,7
	TRC.F.40.0600.1.0/TRE.F.40.0600.1.0	0,6
	TRC.F.40.0500.1.0/TRE.F.40.0500.1.0	0,5
	TRC.F.40.0400.1.0/TRE.F.40.0400.1.0	0,4
triflex® R 60	TRC.F.60.1400.1.0/TRE.F.60.1400.1.0	1,4
	TRC.F.60.1200.1.0/TRE.F.60.1200.1.0	1,2
	TRC.F.60.1000.1.0/TRE.F.60.1000.1.0*	1,0
	TRC.F.60.0800.1.0/TRE.F.60.0800.1.0	0,8
	TRC.F.60.0600.1.0/TRE.F.60.0600.1.0	0,6
	TRC.F.60.0400.1.0/TRE.F.60.0400.1.0	0,4
triflex® R 70	TRC.F.70.1800.1.0/TRE.F.70.1800.1.0	1,8
	TRC.F.70.1600.1.0/TRE.F.70.1600.1.0	1,6
	TRC.F.70.1400.1.0/TRE.F.70.1400.1.0	1,4
	TRC.F.70.1200.1.0/TRE.F.70.1200.1.0*	1,2
	TRC.F.70.1000.1.0/TRE.F.70.1000.1.0	1,0
	TRC.F.70.0800.1.0/TRE.F.70.0800.1.0	0,8
triflex® R 85	TRC.F.85.2000.1.0/TRE.F.85.2000.1.0	2,0
	TRC.F.85.1800.1.0/TRE.F.85.1800.1.0	1,8
	TRC.F.85.1600.1.0/TRE.F.85.1600.1.0	1,6
	TRC.F.85.1400.1.0/TRE.F.85.1400.1.0*	1,4
	TRC.F.85.1200.1.0/TRE.F.85.1200.1.0	1,2
	TRC.F.85.1000.1.0/TRE.F.85.1000.1.0	1,0
	TRC.F.85.0800.1.0/TRE.F.85.0800.1.0	0,8
triflex® R 100	TRC.F.100.2000.1.0/TRE.F.100.2000.1.0	2,0
	TRC.F.100.1800.1.0/TRE.F.100.1800.1.0	1,8
	TRC.F.100.1400.1.0/TRE.F.100.1400.1.0*	1,4
	TRC.F.100.1600.1.0/TRE.F.100.1600.1.0	1,6
	TRC.F.100.1200.1.0/TRE.F.100.1200.1.0	1,2
	TRC.F.100.1000.1.0/TRE.F.100.1000.1.0	1,0
triflex® R 125	TRC.F.125.2000.1.0/TRE.F.125.2000.1.0	2,0
	TRC.F.125.1800.1.0/TRE.F.125.1800.1.0*	1,8
	TRC.F.125.1400.1.0/TRE.F.125.1400.1.0	1,4
	TRC.F.125.1600.1.0/TRE.F.125.1600.1.0	1,6
	TRC.F.125.1200.1.0/TRE.F.125.1200.1.0	1,2
	TRC.F.125.1000.1.0/TRE.F.125.1000.1.0	1,0

*Recommended lengths of the fiber rods

Universal installation kit | for TRC/TRE

Universal installation kit allows the attachment of fiber rod modules in any given position, relative to the robotic arm, easy engineering



Product range - Universal installation kit

Width index	Part No. kit for Series	A [mm]	B [mm]	D [mm]	E [mm]	C [mm]
.40	TR.40.80	40	30	475	325	8,4
.60	TR.60.80	40	30	475	325	8,4
.70	TR.70.80	75	80	875	575	12,5
.85	TR.85.80	75	80	875	575	12,5
.100	TR.100.80	75	80	875	575	12,5

Width 125 available upon request, please consult igus® for delivery time

triflex® R | Series TRC/TRE/TRL/TRLF | Accessories

Protective jackets

Standard protective jacket | TR.XX.16 | for TRC/TRE/TRL/TRLF

● Temperature up to room temp. ● Base support: Fabric ● Coating: None
● Easy to replace via longitudinally positioned velcro fastenings ● Elastic sealing strips
● Silicon-free ● Standard lengths available ex stock

Width index	Part No. TR.XX.16	Standard lengths** [mm]			
40. ▶	TR.40.16. YY*	500	1000	1500	2000
60. ▶	TR.60.16. YY*	500	1000	1500	2000
70. ▶	TR.70.16. YY*	500	1000	1500	2000
85. ▶	TR.85.16. YY*	500	1000	1500	2000
100. ▶	TR.100.16.YY*	500	1000	1500	2000
125. ▶	TR.125.16.YY*	500	1000	1500	2000

**Special lengths upon request

*Please add the jacket length. Example: TR.60.16.**500**



Heat shield protective jacket | TR.XX.18 | for TRC/TRE/TRL/TRLF

● Made from heat resistant, abrasion resistant Kevlar weave ● With aluminum laminate ● With zip-closure ● Velcro fasteners at the beginning and end ● Heavy-duty (thick) design ● Protects from perspiration and metal splatter briefly up to 540°C ● Easy to exchange or retrofit ● Silicone-free ● Asbestos-free ● Standard lengths from stock ● High abrasion resistance ● Very tight ● For heavy-duty environments

Width index	Part No. TR.XX.18	Standard lengths** [mm]			
40. ▶	TR.40.18. YY*	500	1000	1500	2000
60. ▶	TR.60.18. YY*	500	1000	1500	2000
70. ▶	TR.70.18. YY*	500	1000	1500	2000
85. ▶	TR.85.18. YY*	500	1000	1500	2000
100. ▶	TR.100.18.YY*	500	1000	1500	2000
125. ▶	TR.125.18.YY*	500	1000	1500	2000

**Special lengths upon request

*Please add the jacket length. Example: TR.60.18.**500**



Wear-resistant shield | TR.XX.19 | for TRC/TRE/TRL/TRLF

● Black leather material with zip-closure ● Velcro fasteners at the beginning and end
● Extremely high abrasion resistance ● For use in temperatures from -40°C to + 100°C ● Silicone-free
● Asbestos-free ● Standard lengths from stock ● Very flexible ● Easy to exchange or retrofit

Width index	Part No. TR.XX.19	Standard lengths** [mm]			
40. ▶	TR.40.19. YY*	500	1000	1500	2000
60. ▶	TR.60.19. YY*	500	1000	1500	2000
70. ▶	TR.70.19. YY*	500	1000	1500	2000
85. ▶	TR.85.19. YY*	500	1000	1500	2000
100. ▶	TR.100.19.YY*	500	1000	1500	2000
125. ▶	TR.125.19.YY*	500	1000	1500	2000

**Special lengths upon request

*Please add the jacket length. Example: TR.60.19.**500**



triflex® R | Series TRC/TRE/TRL/TRLF | Filling

Interior separation configurator



1. Select cables, hoses and lengths



2. Select e-chain® and size



3. Filling of the e-chain® with cables and hoses



4. Result: Order list, price and drawings

triflex® R interior separations Configure e-chains® easily

Easy and quick creation of interior separations for the triflex® R systems. After selecting the cables, they can be added by drag & drop to the chain cross section. The shelving configurator creates a parts list of the e-chain® and the cables contained in the configuration. The configurations can be saved and reloaded. The entire configuration can be transferred to the shopping cart by a click.

- Quick and easy shelving configuration
- Consideration of the max. filling cross sections and cable diameter
- Creation of parts lists
- Easy enquiry and ordering

Interior separation configurator

▶ www.igus.eu/triflexR-IA

triflex® R | Series TRC/TRE/TRL/TRLF | Cables

Special cables for robotic and torsion applications

Customer-specific special cable for robotic and torsion applications

● Control, motor, servo, bus and data cables ● Shielded and unshielded ● Outer jacket material: PVC, PUR, TPE ● Special cables from 500 m ● Torsion area according to requirement ● Sectors: Robotic and 3D-applications

The service life of cables in torsion applications depend disproportionately on the exact progression of the angle of torsion and the cable length of the exact application. As a single test facility is often insufficient, chainflex® cables are tested on various constructional systems. Your torsion cables are tested as realistic as possible for your application. For this purpose, igus® uses up to 8 different test facilities in the in-house laboratory.



chainflex® robotic cables CFROBOT - twistable cables for robots available from stock

The proven CFROBOT cable family that is available from stock is now UL and CSA certified. All deliveries from 05/2011 are manufactured with the approvals.

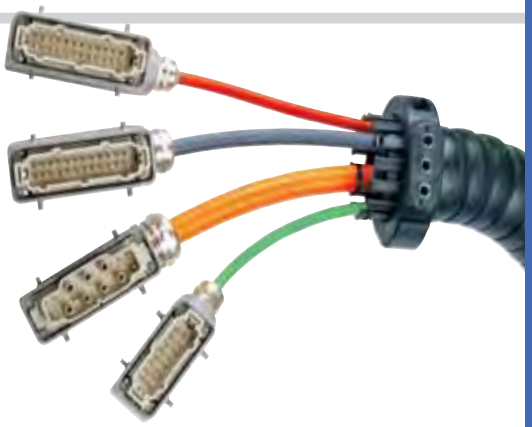
- From 1 m, no minimum requirements
- ±180° on 1 m
- 3.000.000 cycles tested

More information ▶ www.igus.eu/eu/chainflex

CF77.UL.D - chainflex® PUR control cable, ± 180° twistable

- For twistable load requirements

More information ▶ www.igus.eu/eu/chainflex



triflex® R - readychain® cable packages for robots

High component holding times and low downtimes are of the highest priority in manufacturing plants. With a triflex® R readychain® we design and develop a customized readychain® system for you, consisting of the "construction kits" triflex® R, chainflex® and igus® connectors. An installation can of course be executed by our triflex® R instalation engineers on your site. Your advantages: ● Reduces your storage costs to zero for cables, e-chain® and connectors ● Cuts your running time by half ● Responds flexibly to order variations ● Minimize machine downtimes ● Reduce the number of suppliers and orders by 75%.

igus®
easy triflex®

e-chains® for simple
3D-applications



e-chains® for simple 3D-applications - easy triflex®

The easy triflex® Series was developed to realize safe energy supply in the case of multi-dimensional movements. In doing so the flexibility of a hose was combined with the stability of an e-chain® and its defined radii. With the easy triflex® the installation of cables, wires and hoses is very easy. In case of flexible crossbars the cables are now simply pushed into the e-chain® from above or below. The unique modular program allows you to follow very complex movements. For Example: Combine 1-axis, 2-axis and 3-axis movement links in one e-chain®.

Typical industries and applications

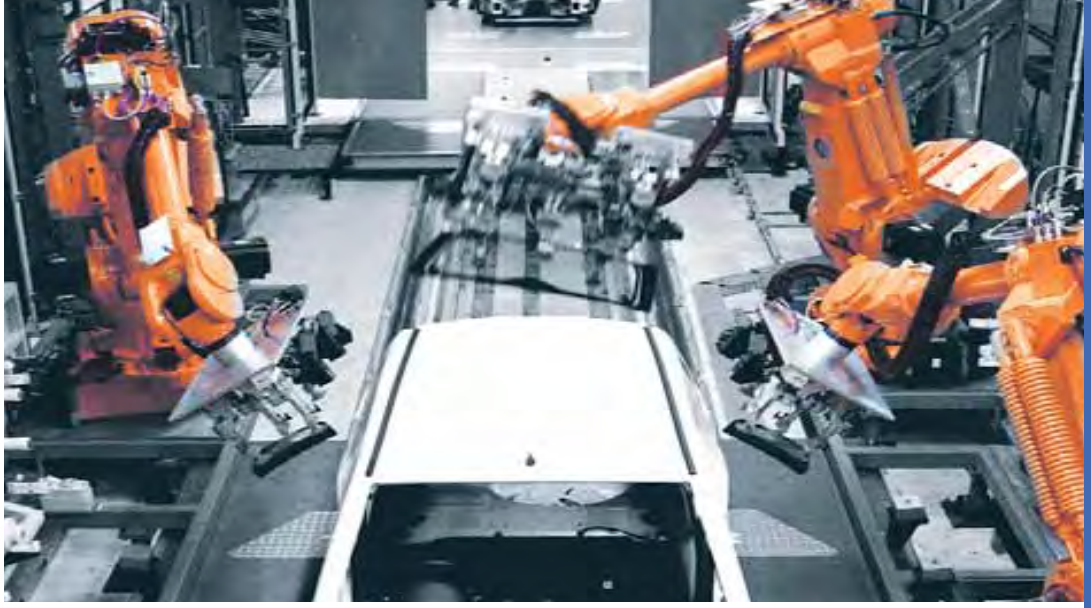
● Machine tools ● Robots ● Handling equipment ● Material handling ● Plastics machinery ● Construction machines ● Vehicles ● Machinery of all kinds ● Medical equipment ● Office furniture

iF product design award
2000 igus® easy triflex®

Torsional motion possible

UL94-V2 classifications





Robots with igus® easy triflex® e-chains® on an assembly line



easy triflex® e-chains® for multi-dimensional movements on a production line



easy triflex® e-chains® also for easy applications - here an aesthetic application for office furniture

Contents, selection table and assembly instructions ► next page

Series	Inner height *Bi 1*/*Bi 2* [mm]	Inner width *Bi 3* [mm]	Outer width/ height *Ba* [mm]	Bending radii *R* [mm]	Pitch [mm]	Page
						
			Single-axis movement For 3D-applications, easy filling from 2 sides			
E332.25	13	25	34	048 - 200	14,5	1060
E332.32	17	32	50	075 - 250	25	1060
E332.50	26	50	68	100 - 250	30	1060
E332.75	38,5	75	96	140 - 300	36	1060
						
			Double-axis movement For 3D-applications, easy filling from 2 sides			
E332.25	13	25	34	048 - 200	14,5	1061
E332.32	17	32	50	075 - 250	25	1061
E332.50	26	50	68	100 - 250	30	1061
E332.75	38,5	75	96	140 - 300	36	1061
						
			Triple-axis movement For 3D-applications, easy filling from 2 sides			
E333.25	13	25	34	048 - 200	14,5	1062
E333.32	17	32	50	075 - 250	25	1062
E333.50	26	50	68	100 - 250	30	1062
E333.75	38,5	75	96	140 - 300	36	1062

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

1



Joining is accomplished by simply joining the e-chain® links and clicking the pins in place

2



Very easy filling. Simply press cable in - to remove the filling ust pull out the cable

3



Separate easily by levering open the triflex® e-chains® side plate with a screwdriver

4



Shorten and lengthen at any given point

Assembly video available online at ►www.igus.eu/eu/video



Split KMA:
Mounting bracket with integrated strain relief

Flexible:
Shorten and lengthen at any given point

Robust:
Patented "push-button-principle"

Simple:
easy filling from 2 sides with "easy"-design

Easy:
Simply press in cable along the inner or outer radius

Customizable:
Different bending radii and directions can be combined

Movable:
3-Axis motions in machinery of all kinds

iF product design award
2000 igus® easy triflex®

Simple 3D-applications, filling with "easy"-design

When to use Series E332/E333:

- If easy filling with "easy"-Design for complex movements is required
- If easy filling from both sides is required
- For repair and supplementation of existing triflex® Systems

When to use a different igus® Series:

- If complex robotics applications are required
  ▶ triflex® R - TRE, from page 1028
- For circular movements with high loads
  ▶ System twisterchain®, from page 1082
- If chip protection is necessary
  ▶ System triflex®, from page 1066

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Technical Data

Speed / acceleration	upon request
Material - permitted temperature °C, igumid NB	-40° up to +80°C
Flammability class, igumid NB	VDE 0304 IIC UL94-V2

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 27 links	E333.75.200/200.0
+ Mounting brackets	1 set mounting bracket with strain relief	333.75.12PZ

Order text: 1,0 m E333.75.200/200.0 + 333.75.12PZ

Order key E332.75.2.200.0

Series
Width index
Bending radius *R*
Standard color black

Single-axis movement
Series E332 for easy filling from 2 sides with *Bi* 75 mm inner width and *R* 200 mm radius, color black
= Part No. E332.75.2.200.0

Order key E332.75.2.200/200.0

Series
Width index
Bending radius *R*
Bending radius *RBR*
Standard color black

Double-axis movement
Series E332 for easy filling from 2 sides with *Bi* 75 mm inner width and *R* 200 mm radius, *RBR* 200 mm, color black
= Part No. E332.75.2.200/200.0

Order key E333.75.200/200.0

Series
Width index
Bending radius *R*
Bending radius *RBR*
Standard color black

Triple-axis movement
Seies E333 for easy filling from 2 sides with *Bi* 75 mm inner width and *R* 200 mm radius, *RBR* 200 mm, color black
= Part No. E332.75.200/200.0

easy triflex® | Series E332 | Product range

Single-axis movement | For 3D-applications, easy filling from 2 sides

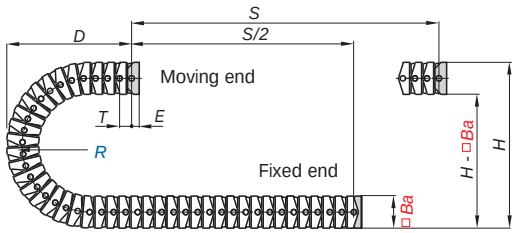


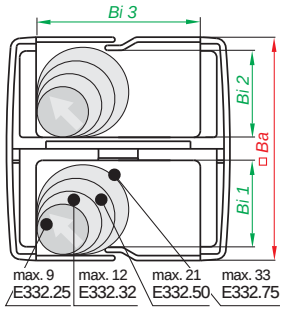
Series E332 | Single-axis movement

easy filling from 2 sides	Bi1/Bi2 [mm]	Bi3 [mm]	Ba [mm]	R Bending radii [mm]	Pitch [mm]	Weight [kg/m]
E332.25.2.R.0	13	25	34	| 048 | 075 | 100 | 125 | 150 | 175 | 200	14,5	≈ 0,70
E332.32.2.R.0	17	32	50	| 075 | 100 | 125 | 150 | 200 | 250	25	≈ 0,90
E332.50.2.R.0	26	50	68	| 100 | 125 | 150 | 200 | 250	30	≈ 1,40
E332.75.2.R.0	38,5	75	96	| 140 | 175 | 200 | 250 | 300	36	≈ 2,35

Supplement Part No. with required radius (R) Example: E332.75.2.200.0

Dimensions





E332.25.2	R	048	075	100	125	150	175	200
	H	130	185	235	285	335	385	435
	D	095	125	150	175	200	225	250
	K	195	280	360	440	515	595	675
E332.32.2	R	075	100	125	150	200	250	
	H	200	250	300	350	450	550	
	D	130	155	180	205	255	305	
	K	305	385	465	545	700	865	
E332.50.2	R	100	125	150	200	250		
	H	270	320	375	470	570		
	D	195	220	245	295	345		
	K	435	520	590	750	910		
E332.75.2	R	140	175	200	250	300		
	H	380	450	500	600	700		
	D	240	275	300	350	400		
	K	550	660	740	900	1060		

Series E332.25.2.		Series E332.32.2.	
Ba	34 mm	Ba	50 mm
Pitch T	14,5 mm/link	Pitch T	25 mm/link
Links/m	69 (1000,5 mm)	Links/m	40 (1000 mm)
Dim. E	10 mm	Dim. E	20 mm
Chain length	S/2 + K	Chain length	S/2 + K

Series E332.50.2.		Series E332.75.2.	
Ba	68 mm	Ba	96 mm
Pitch T	30 mm/link	Pitch T	36 mm/link
Links/m	34 (1020 mm)	Links/m	28 (1008 mm)
Dim. E	25 mm	Dim. E	25 mm
Chain length	S/2 + K	Chain length	S/2 + K

easy triflex® | Series E332 | Product range

Double-axis movement | For 3D-applications, easy filling from 2 sides

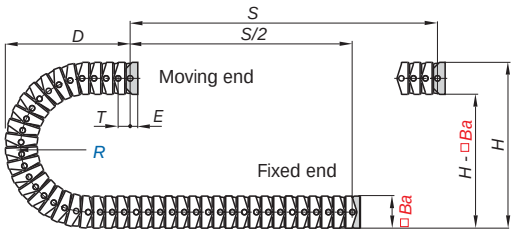


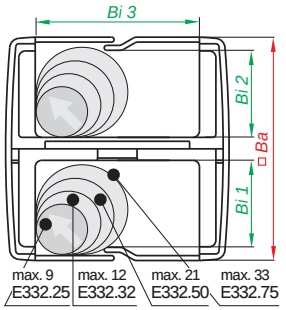
Series E332 | Double-axis movement | With RBR (Reversal Bending Radius)

easy filling from 2 sides	Bi1/Bi2 [mm]	Bi3 [mm]	Ba [mm]	R Bending radii [mm]	Pitch [mm]	Weight [kg/m]
E332.25.2.R/R.0	13	25	34	| 048 | 075 | 100 | 125 | 150 | 175 | 200	14,5	≈ 0,70
E332.32.2.R/R.0	17	32	50	| 075 | 100 | 125 | 150 | 200 | 250	25	≈ 0,90
E332.50.2.R/R.0	26	50	68	| 100 | 125 | 150 | 200 | 250	30	≈ 1,40
E332.75.2.R/R.0	38,5	75	96	| 140 | 175 | 200 | 250 | 300	36	≈ 2,35

Supplement Part No. with required radius (R) Example: E332.75.2.200/200.0

Dimensions





E332.25.2	R	048	075	100	125	150	175	200
	H	130	185	235	285	335	385	435
	D	095	125	150	175	200	225	250
	K	195	280	360	440	515	595	675
E332.32.2	R	075	100	125	150	200	250	
	H	200	250	300	350	450	550	
	D	130	155	180	205	255	305	
	K	305	385	465	545	700	865	
E332.50.2	R	100	125	150	200	250		
	H	270	320	375	470	570		
	D	195	220	245	295	345		
	K	435	520	590	750	910		
E332.75.2	R	140	175	200	250	300		
	H	380	450	500	600	700		
	D	240	275	300	350	400		
	K	550	660	740	900	1060		

Series E332.25.2.		Series E332.32.2.	
Ba	34 mm	Ba	50 mm
Pitch T	14,5 mm/link	Pitch T	25 mm/link
Links/m	69 (1000,5 mm)	Links/m	40 (1000 mm)
Dim. E	10 mm	Dim. E	20 mm
Chain length	S/2 + K	Chain length	S/2 + K

Series E332.50.2.		Series E332.75.2.	
Ba	68 mm	Ba	96 mm
Pitch T	30 mm/link	Pitch T	36 mm/link
Links/m	34 (1020 mm)	Links/m	28 (1008 mm)
Dim. E	25 mm	Dim. E	25 mm
Chain length	S/2 + K	Chain length	S/2 + K

easy triflex® | Series E333 | Product range

Triple-axis movementt | For 3D-applications, easy filling from 2 sides



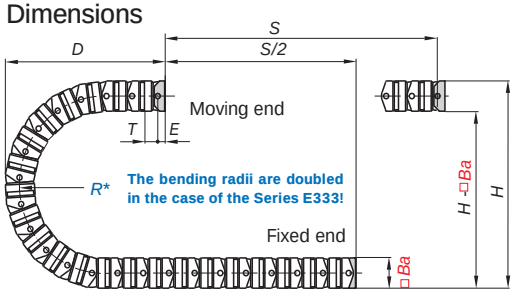
Series E333 | Triple-axis movement | With *RBR* (Reversal Bending Radius)

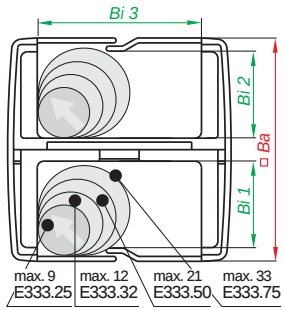
easy filling from 2 sides	*Bi1/Bi2* [mm]	*Bi3* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Pitch [mm]	Weight [kg/m]
E333.25.*R*/*R*.0	13	25	34	| 048 | 075 | 100 | 125 | 150 | 175 | 200	14,5	≈ 0,70
E333.32.*R*/*R*.0	17	32	50	| 075 | 100 | 125 | 150 | 200 | 250	25	≈ 0,90
E333.50.*R*/*R*.0	26	50	68	| 100 | 125 | 150 | 200 | 250	30	≈ 1,40
E333.75.*R*/*R*.0	38,5	75	96	| 140 | 175 | 200 | 250 | 300	36	≈ 2,35

The bending radii are doubled in the case of the Series E333 !

Supplement Part No. with required radius *(R)* Example: E333.75.200/200.0

Dimensions





E333.25.	*R*	048	075	100	125	150	175	200
	H	230	335	435	535	635	735	835
	D	145	200	250	300	350	400	450
	K	350	515	675	830	990	1150	1300
E333.32.	*R*	075	100	125	150	200	250	
	H	350	450	550	650	850	1050	
	D	205	255	305	355	455	555	
	K	545	700	860	1020	1300	1605	
E333.50.	*R*	100	125	150	200	250		
	H	470	570	670	870	1070		
	D	295	345	395	495	595		
	K	750	910	1070	1380	1690		
E333.75.	*R*	140	175	200	250	300		
	H	660	800	900	1100	1300		
	D	380	450	500	600	700		
	K	990	1210	1400	1700	2000		

Series E333.25

Ba	34 mm
Pitch *T*	14,5 mm/link
Links/m	69 (1000,5 mm)
Dim. *E*	10 mm
Chain length	$S/2 + K$

Series E333.32

Ba	50 mm
Pitch *T*	25 mm/link
Links/m	40 (1000 mm)
Dim. *E*	20 mm
Chain length	$S/2 + K$

Series E333.50

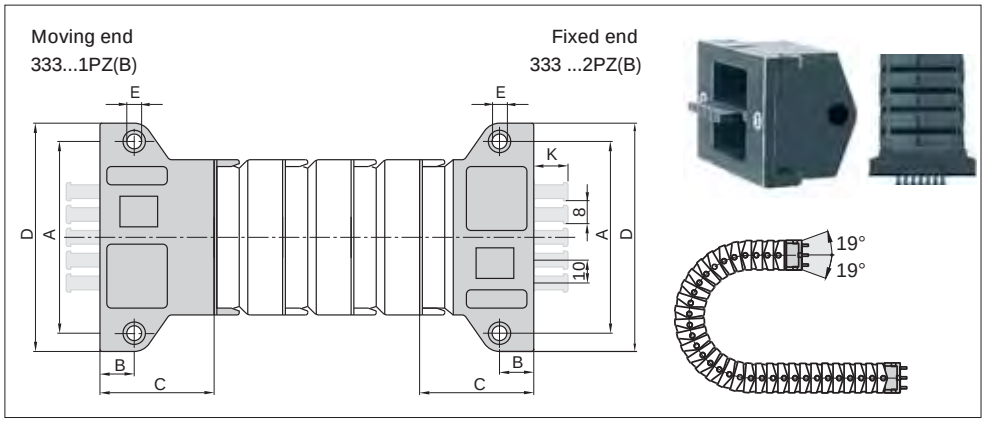
Ba	68 mm
Pitch *T*	30 mm/link
Links/m	34 (1020 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

Series E333.75

Ba	96 mm
Pitch *T*	36 mm/link
Links/m	28 (1008 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

easy triflex® | Series E332·E333 | Accessories

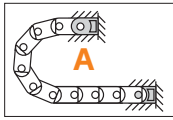
KMA mounting brackets | All-sides attachment | one side pivoting



KMA, one side pivoting

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim A [mm]	Dim B [mm]	Dim C [mm]	Dim D [mm]	Dim E [mm]	Dim F [mm]	Number of teeth
25.2 / 25. ▶	–	333.25.12PZ	43	7	22	52	4,5	-	-
32.2 / 32. ▶	333.32.12PZB	333.32.12PZ	66	15	46	82	6,5	15	3
50.2 / 50. ▶	333.50.12PZB	333.50.12PZ	84	15	50	100	6,5	15	5
75.2 / 75. ▶	333.75.12PZB	333.75.12PZ	109	15	55	125	6,5	15	7

(KMA = Polymer Metal Mounting Bracket)



These attachment types are triggered automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**.

Part No. structure

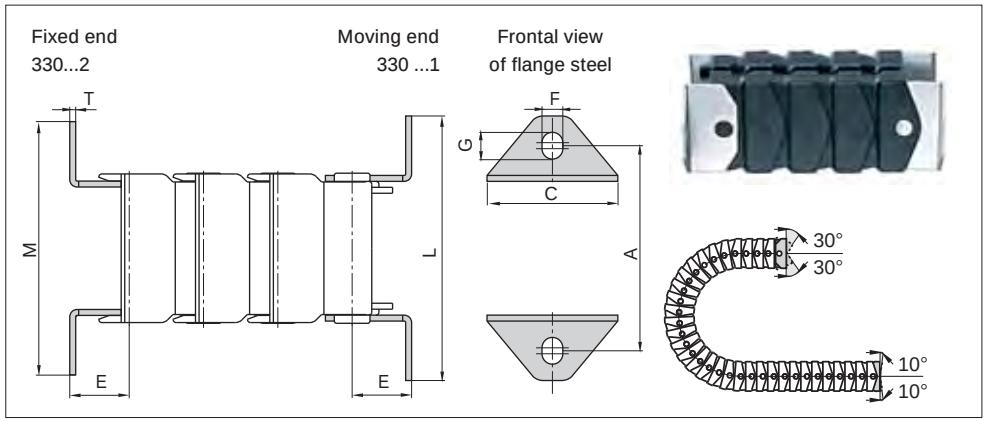
333.75.12PZB**A**

- A…must be indicated on preassembled configurations
- With assembled strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected e-chain® type

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ► from page 1148

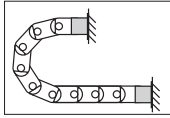
easy triflex® | Series E332·E333 | Accessories

Mounting brackets, flange steel | pivoting



Flange steel | pivoting

Width Index	Part No. full set	Dim A [mm]	Dim M [mm]	Dim C [mm]	Dim L [mm]	Dim T [mm]	Dim E [mm]	Dim F [mm]	Dim G [mm]
25.2 / 25. ▶	330.25.12	44	55	29	55	1,5	10,5	6,5	9
32.2 / 32. ▶	330.32.12	66	84	44	88	2	20	7	9
50.2 / 50. ▶	330.50.12	84	102	62	106	2	25	7	9
75.2 / 75. ▶	330.75.12	109	127	90	131	2	25	7	9



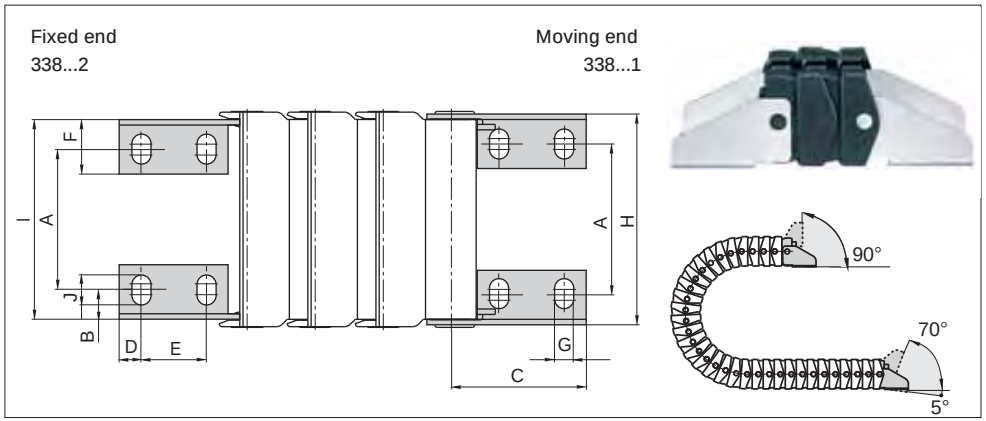
Frontal attachment option in the case of steel flange mounting brackets.
For the preassembled mode please add index **A**.

Part No. structure

330. 75. 12 **A**

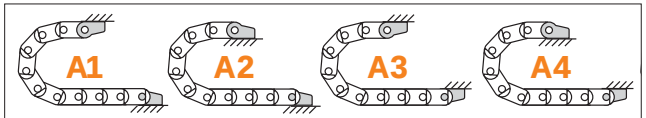
- A…must be indicated on preassembled configurations
- Full set = 12
- Width
- Mounting brackets for selected e-chain® type

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148



Angled steel bracket | pivoting

Width Index	Part No. full set	Dim A [mm]	Dim B [mm]	Dim C [mm]	Dim D [mm]	Dim E [mm]	Dim F [mm]	Dim G [mm]	Dim H [mm]	Dim I [mm]	Dim J [mm]
25.2 / 25. ▶	338.25.12	17	6,25	28	6	16	14	5,5	33,8	31	8,5
32.2 / 32. ▶	338.32.12	24	5,5	47	8	24	20	7	49	45	11
50.2 / 50. ▶	338.50.12	42	5,5	77	12	35	24	9	67	62	15
75.2 / 75. ▶	338.75.12	65	5,5	77	12	35	24	9	95	90	15



Possible installation conditions for assembled mounting brackets.
For the preassembled mode please add index **A1**... **A4**.

Part No. structure

338. 75. 12 **A**

- A…must be indicated on preassembled configurations
- Full set = 12
- Width
- Mounting brackets for selected e-chain® type

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

igus®
triflex®

enclosed for simple
3D-applications



Enclosed for simple 3D-applications - triflex®

triflex® - e-chain® for 3D-motion. The triflex® Series was developed to realize safe energy supply in the case of multi-dimensional movements. In doing so the flexibility of a hose was combined with the stability of an e-chain® and its defined radii. The unique modular program allows you to follow very complex movements. For example: Combine 1-axis, 2-axis and 3-axis movement links in one e-chain®.

Typical industries and applications

● Machine tools ● Robots ● Handling equipment ● Material handling ● Plastics machinery ● Construction machines ● Vehicles ● Machinery of all kinds ● Medical equipment ● Office furniture

iF product design award
1992 igus® Series triflex®

Torsional motion possible

UL94-V2 classifications



Various triflex® e-tubes on the inside of a machining center



triflex® for 3 movement directions combined with triflex® for 1 movement direction



triflex® 332 as unsupported link from machines to control desk

Contents, selection table and assembly instructions ► next page

Series	Inner width/height ☐ *Bi* [mm]	Outer width/height ☐ *Ba* [mm]	Bending radii *R* [mm]	Pitch [mm]	Page
			**Single-axis movement** For 3D-applications, Series 332 fully enclosed - protection against dirt and chips. *Series 352 snap-open		
332.16	16	26	038 - 100	13,3	1074
332.32	32	50	075 - 250	25	1074
332.50	50	68	100 - 250	30	1074
332.75	75	96	140 - 300	36	1074
352.50*	50	68	100 - 250	30	1074
			**Double-axis movement** For 3D-applications, Series 332 fully enclosed - protection against dirt and chips. *Series 352 snap-open		
332.16	16	26	038 - 100	13,3	1076
332.32	32	50	075 - 250	25	1076
332.50	50	68	100 - 250	30	1076
332.75	75	96	140 - 300	36	1076
352.50*	50	68	100 - 250	30	1076
			**Triple-axis movement** For 3D-applications, Series 333 fully enclosed - protection against dirt and chips. *Series 353 snap-open		
333.16	16	26	038 - 100	13,3	1077
333.32	32	50	075 - 250	25	1077
333.50	50	68	100 - 250	30	1077
333.75	75	96	140 - 300	36	1077
353.50*	50	68	100 - 250	30	1077

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Joining is accomplished by simply joining the e-chain® links and clicking the pins in place



Separate easily by levering open the triflex® e-chains® side plate with a screwdriver...

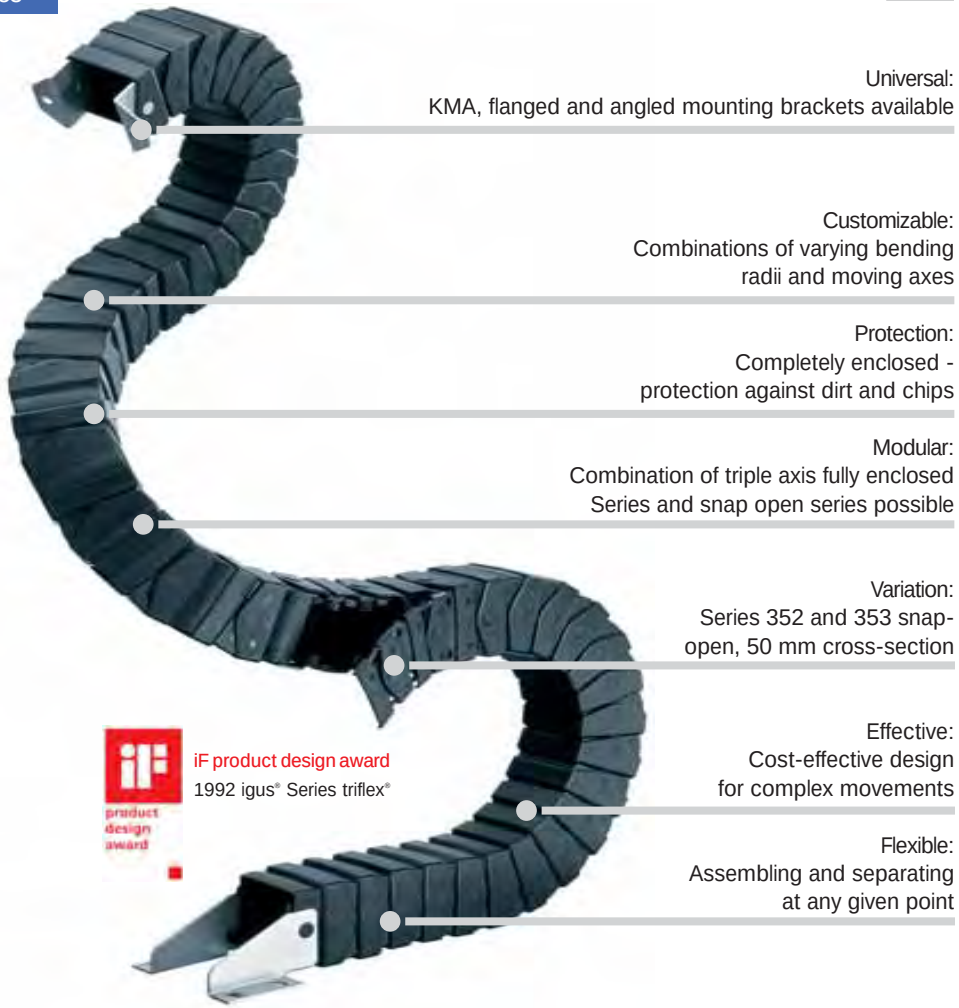


... then twist and remove e-chain®



To open the snap-open 352 and 353 series - insert the screwdriver into the openings and then lever the lid out

Assembly video available online at ►www.igus.eu/eu/video



iF product design award
1992 igus® Series triflex®

Simple 3D-applications, encolsed

When to use Series 332/333/352/353:
- For applications that move within two or three axes (combined rotary and circular movements)
- If chip protection is required
- Where rectangular shapes are in demand

When to use a different igus® Series:
- If complex robotics applications are required
  ▶ triflex® R - TRC, from page 1224
- For circular movements with high loads
  ▶ System twisterchain®, from page 1082

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/triflex

Technical Data

Speed / acceleration	upon request
Material - permitted temperature °C, igumid G	-40° up to +120°C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

Order example | Order key and color options

Order example for complete e-chain® (1,0 m), color black, with mounting brackets:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 28 links	332.75.200/200.0
+ Mounting brackets	1 set mounting bracket with strain relief	333.75.12PZ
+ Interior separation	with 2 separators assembled every 2nd link	351

Order text: 1,0 m 333.75.200/200.0 + 333.75.12PZ + 351

Order key
332.75.200.0
352.50.200.0
Series
Width index
Bending radius *R*
Standard color black

Single-axis movement
Series 332 fully enclosed
with *Bi* 75 mm inner width and *R* 200 mm radius, color black = Part No. 332.75.200.0
Series 352 snap-open
with *Bi* 50 mm inner width and *R* 200 mm radius, color black = Part No. 352.50.200.0

Order key
332.75.200/200.0
352.75.200/200.0
Series
Width index
Bending radius *R*
Bending radius *RBR*
Standard color black

Double-axis movement
Series 332 fully enclosed
with *Bi* 75 mm inner width and *R* 200 mm radius, *RBR* 200 mm, color black = Part No. 332.75.200/200.0
Series 352 snap-open
with *Bi* 50 mm inner width and *R* 200 mm radius, *RBR* 200 mm, color black = Part No. 352.50.200/200.0

Order key
333.75.200/200.0
353.75.200/200.0
Series
Width index
Bending radius *R*
Bending radius *RBR*
Standard color black

Triple-axis movement
Series 333 fully enclosed
with *Bi* 75 mm inner width and *R* 200 mm radius, *RBR* 200 mm, color black = Part No. 333.75.200/200.0
Series 353 snap-open
with *Bi* 50 mm inner width and *R* 200 mm radius, *RBR* 200 mm, color black = Part No. 353.50.200/200.0

triflex® | Series 332·352 | Product range

Single-axis movement | 332 fully enclosed | 352 snap-open

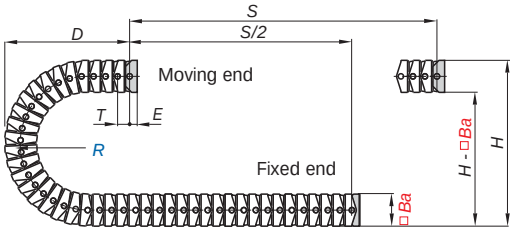


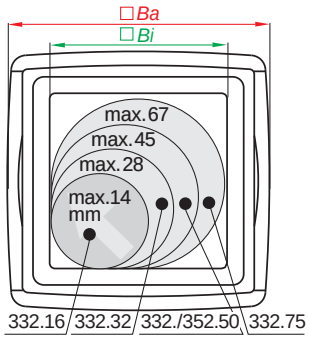
Series 332 | 352 | Single-axis movement

Series 332 Fully enclosed	Series 352 Snap-open	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Pitch [mm]	Weight [kg/m]
332.16.*R*.0	–	16	26	| 038 | 048 | 075 | 100	13,3	0,33
332.32.*R*.0	–	32	50	| 075 | 100 | 125 | 150 | 200 | 250	25	0,90
332.50.*R*.0	352.50.*R*.0	50	68	| 100 | 125 | 150 | 200 | 250	30	1,40
332.75.*R*.0	–	75	96	| 140 | 175 | 200 | 250 | 300	36	2,35

Supplement Part No. with required radius *(R)* Example: 332.75.200.0

Dimensions





332.16	*R*	038	048	075	100		
	H	105	125	180	230		
	D	070	080	105	130		
	K	200	230	315	400		
332.32	*R*	075	100	125	150	200	250
	H	200	250	300	350	450	550
	D	130	155	180	205	255	305
	K	305	385	465	545	700	865
332.50/352.50	*R*	100	125	150	200	250	
	H	270	320	375	470	570	
	D	195	220	245	295	345	
	K	435	520	590	750	910	
332.75	*R*	140	175	200	250	300	
	H	380	450	500	600	700	
	D	240	275	300	350	400	
	K	550	660	740	900	1060	

Series 332.16

Ba	26 mm
Pitch *T*	13,3 mm/link
Links/m	76 (1011 mm)
Dim. *E*	10 mm
Chain length	$S/2 + K$

Series 332.32

Ba	50 mm
Pitch *T*	25 mm/link
Links/m	40 (1000 mm)
Dim. *E*	20 mm
Chain length	$S/2 + K$

Series 332.50/352.50

Ba	68 mm
Pitch *T*	30 mm/link
Links/m	34 (1020 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

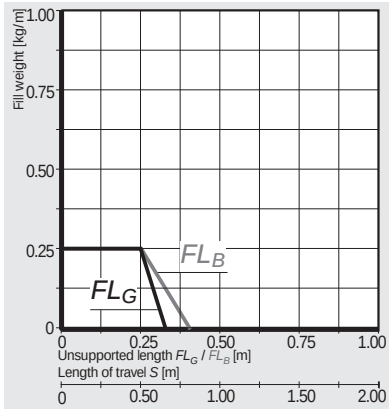
Series 332.75

Ba	96 mm
Pitch *T*	36 mm/link
Links/m	28 (1008 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

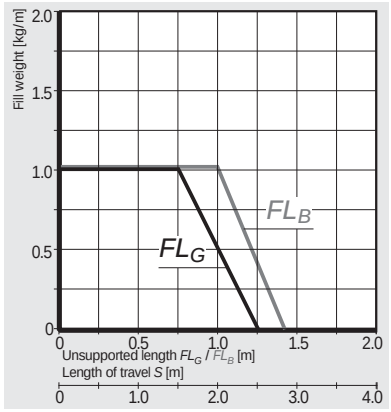
triflex® | Series 332·352 | Dimensions

Unsupported applications | Short travels - for single axis only!

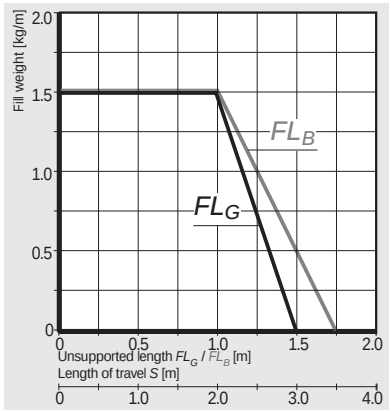
Unsupported length 332.16



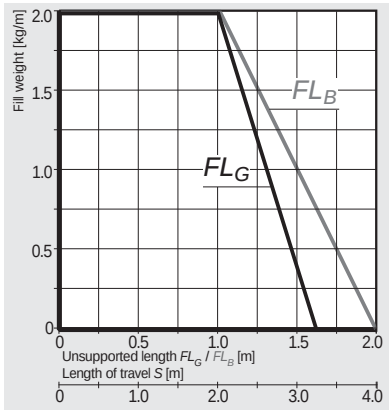
Unsupported length 332.32



Unsupported length 332.50/352.50



Unsupported length 332.75



triflex® | Series 332·352 | Product range

Double-axis movement | 332 fully enclosed | 352 snap-open

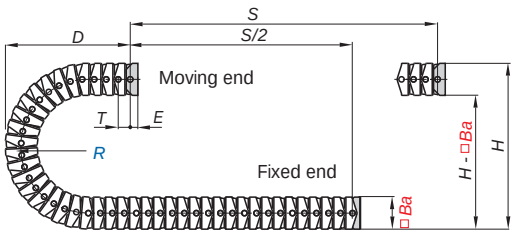


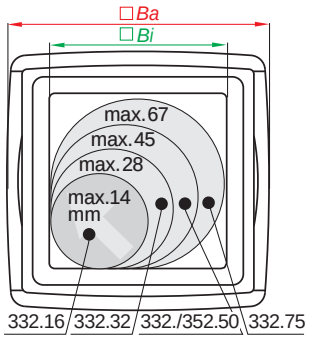
Series 332 | 352 | Double-axis movement | With *RBR* (Reversal Bending Radius)

Series 332 Fully enclosed	Series 352 Snap-open	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Pitch [mm]	Weight [kg/m]
332.16.*R*/*R*.0	-	16	26	| 038 | 048 | 075 | 100	13,3	0,33
332.32.*R*/*R*.0	-	32	50	| 075 | 100 | 125 | 150 | 200 | 250	25	0,90
332.50.*R*/*R*.0	352.50.*R*/*R*.0	50	68	| 100 | 125 | 150 | 200 | 250	30	1,40
332.75.*R*/*R*.0	-	75	96	| 140 | 175 | 200 | 250 | 300	36	2,35

Supplement Part No. with required radius *(R)* Example: 332.75.200/200.0

Dimensions





332.16	*R*	038	048	075	100		
	H	105	125	180	230		
	D	070	080	105	130		
	K	200	230	315	400		
332.32	*R*	075	100	125	150	200	250
	H	200	250	300	350	450	550
	D	130	155	180	205	255	305
	K	305	385	465	545	700	865
332.50/352.50	*R*	100	125	150	200	250	
	H	270	320	375	470	570	
	D	195	220	245	295	345	
	K	435	520	590	750	910	
332.75	*R*	140	175	200	250	300	
	H	380	450	500	600	700	
	D	240	275	300	350	400	
	K	550	660	740	900	1060	

Series 332.16

Ba	26 mm
Pitch *T*	13,3 mm/link
Links/m	76 (1011 mm)
Dim. *E*	10 mm
Chain length	$S/2 + K$

Series 332.32

Ba	50 mm
Pitch *T*	25 mm/link
Links/m	40 (1000 mm)
Dim. *E*	20 mm
Chain length	$S/2 + K$

Series 332.50/352.50

Ba	68 mm
Pitch *T*	30 mm/link
Links/m	34 (1020 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

Series 332.75

Ba	96 mm
Pitch *T*	36 mm/link
Links/m	28 (1008 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

triflex® | Series 333 ·353 | Product range

Triple-axis movementt | 333 fully enclosed | 353 snap-open



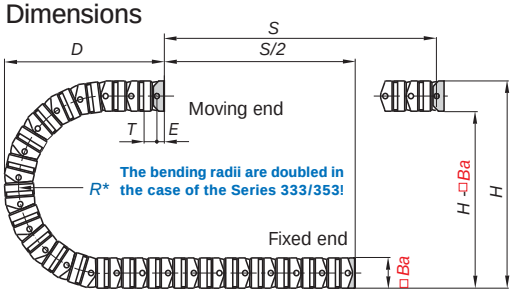
Series 333 | 353 | Triple-axis movement | With *RBR* (Reversal Bending Radius)

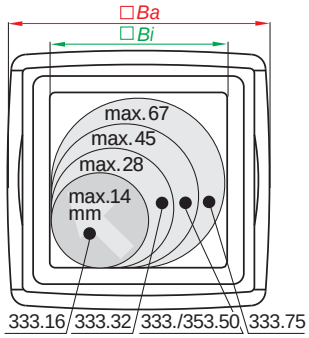
Series 332 Fully enclosed	Series 353 Snap-open	*Bi* [mm]	*Ba* [mm]	*R* Bending radii [mm]	Pitch [mm]	Weight [kg/m]
333.16.*R*/*R*.0	-	16	26	| 038 | 048 | 075 | 100	13,3	0,33
333.32.*R*/*R*.0	-	32	50	| 075 | 100 | 125 | 150 | 200 | 250	25	0,90
333.50.*R*/*R*.0	353.50.*R*/*R*.0	50	68	| 100 | 125 | 150 | 200 | 250	30	1,40
333.75.*R*/*R*.0	-	75	96	| 140 | 175 | 200 | 250 | 300	36	2,35

The bending radii are doubled in the case of the Series 333 !

Supplement Part No. with required radius *(R)* Example: 333.75.200/200.0

Dimensions





333.16.	*R*	038	048	075	100		
	H	180	220	330	430		
	D	105	125	180	230		
	K	320	380	550	710		
333.32.	*R*	075	100	125	150	200	250
	H	350	450	550	650	850	1050
	D	205	255	305	355	455	555
	K	545	700	860	1020	1300	1605
333.50./353.50.	*R*	100	125	150	200	250	
	H	470	570	670	870	1070	
	D	295	345	395	495	595	
	K	750	910	1070	1380	1690	
333.75.	*R*	140	175	200	250	300	
	H	660	800	900	1100	1300	
	D	380	450	500	600	700	
	K	990	1210	1400	1700	2000	

Series E333.16.

Ba	26 mm
Pitch *T*	13,3 mm/link
Links/m	76 (1011 mm)
Dim. *E*	10 mm
Chain length	$S/2 + K$

Series E333.32.

Ba	50 mm
Pitch *T*	25 mm/link
Links/m	40 (1000 mm)
Dim. *E*	20 mm
Chain length	$S/2 + K$

Series 333.50/353.50.

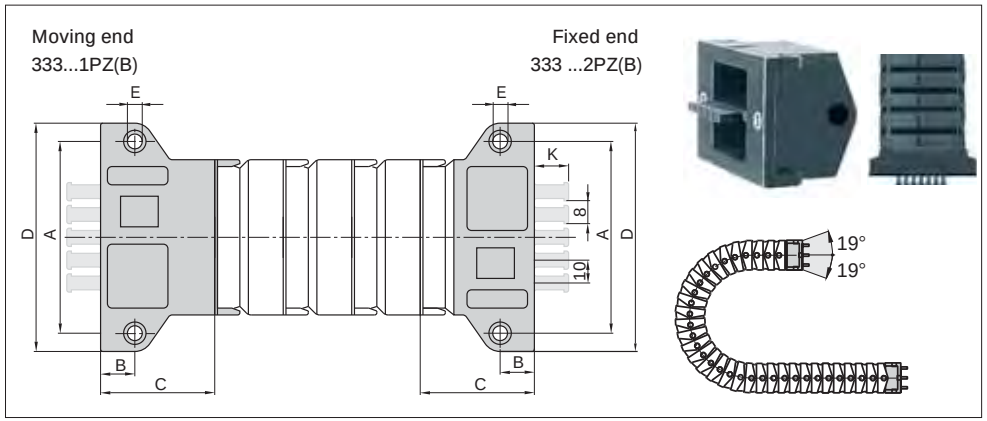
Ba	68 mm
Pitch *T*	30 mm/link
Links/m	34 (1020 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

Series E333.75.

Ba	96 mm
Pitch *T*	36 mm/link
Links/m	28 (1008 mm)
Dim. *E*	25 mm
Chain length	$S/2 + K$

triflex® | Series 332·333·352·353 | Accessories

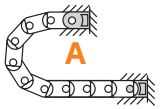
KMA mounting brackets | All-sides attachment | one side pivoting



KMA, one side pivoting

Width Index	Part No. full set **with** tiewrap plates	Part No. full set **without** tiewrap plates	Dim A [mm]	Dim B [mm]	Dim C [mm]	Dim D [mm]	Dim E [mm]	Dim K [mm]	Number of teeth
32. ▶	333.32.12PZB	333.32.12PZ	66	15	46	82	6,5	15	3
50. ▶	333.50.12PZB	333.50.12PZ	84	15	50	100	6,5	15	5
75. ▶	333.75.12PZB	333.75.12PZ	109	15	55	125	6,5	15	7

(KMA = Polymer Metal Mounting Bracket)



These attachment types are triggered automatically in the choice of the KMA mounting bracket.
For the preassembled mode please add index **A**.

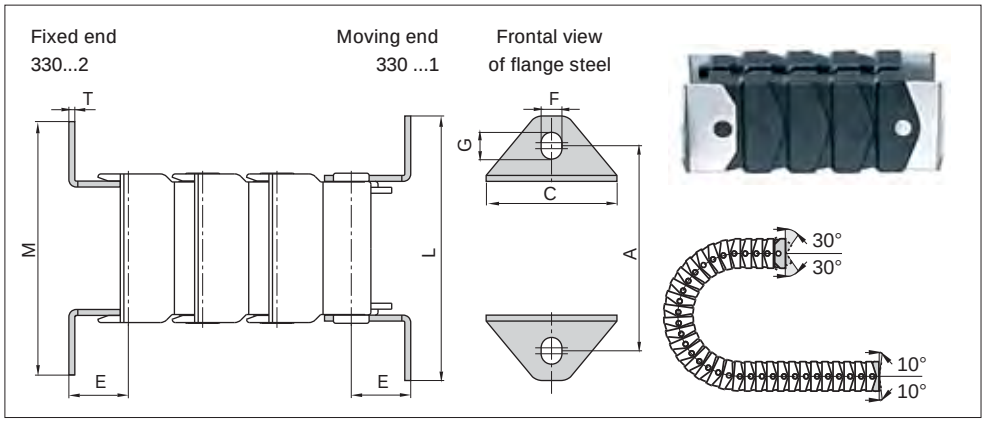
Part No. structure
333.75. 12 PZB**A**

- A…must be indicated on preassembled configurations
- With assembled strain relief tiewrap plates
- Full set = 12
- Mounting brackets for selected e-chain® type

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148

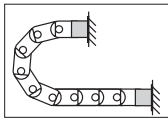
triflex® | Series 332·333·352·353 | Accessories

Mounting brackets, flange steel | pivoting



Flange steel, pivoting

Width Index	Part No. full set	Dim A [mm]	Dim M [mm]	Dim C [mm]	Dim L [mm]	Dim T [mm]	Dim E [mm]	Dim F [mm]	Dim G [mm]
16. ▶	330.16.12	35	53	21	57	1	10	4,5	6
32. ▶	330.32.12	66	84	44	88	2	20	7	9
50. ▶	330.50.12	84	102	62	106	2	25	7	9
75. ▶	330.75.12	109	127	90	131	2	25	7	9

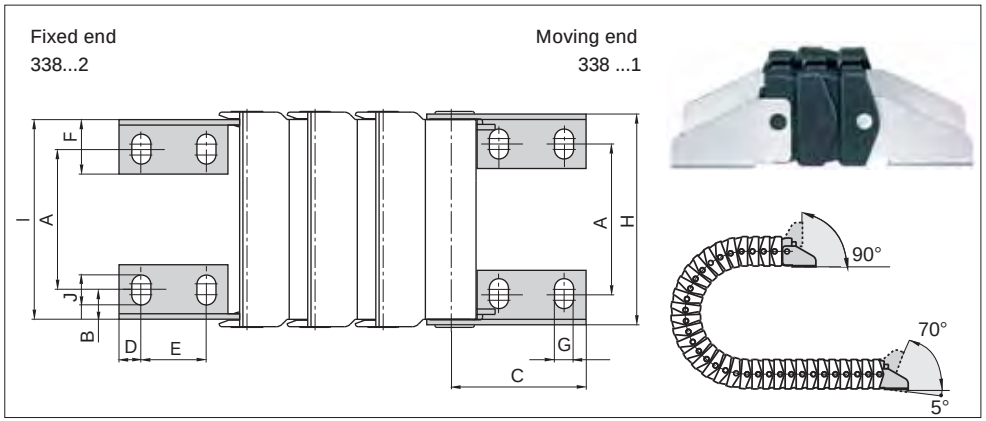


Frontal attachment option in the case of steel flange mounting brackets.
For the preassembled mode please add index **A**.

Part No. structure
330. 75. 12 **A**

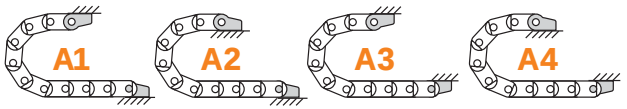
- A…must be indicated on preassembled configurations
- Full set = 12
- Width
- Mounting brackets for selected e-chain® type

Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148



Angled steel bracket | pivoting

Width Index	Part No. full set	Dim A [mm]	Dim B [mm]	Dim C [mm]	Dim D [mm]	Dim E [mm]	Dim F [mm]	Dim G [mm]	Dim H [mm]	Dim I [mm]	Dim J [mm]
16. ▶	338.16.12	12	3	25	5	10	11	4,5	25	23	6
32. ▶	338.32.12	24	5,5	47	8	24	20	7	49	45	11
50. ▶	338.50.12	42	5,5	77	12	35	24	9	67	62	15
75. ▶	338.75.12	65	5,5	77	12	35	24	9	95	90	15



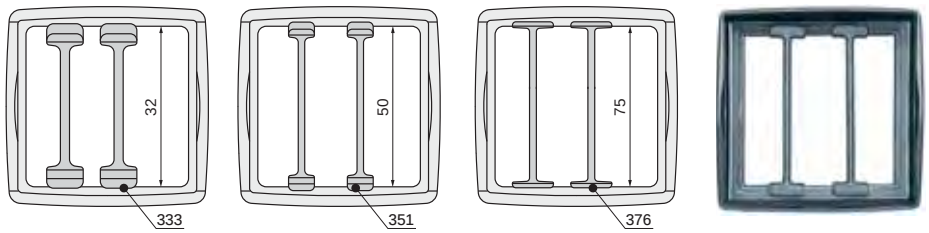
Possible installation conditions for assembled mounting brackets.
For the preassembled mode please add index **A1**... **A4**.

Part No. structure

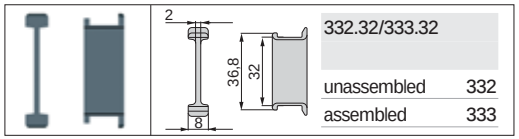
338. 75. 12 **A**

- A…must be indicated on preassembled configurations
- Full set = 12
- Width
- Mounting brackets for selected e-chain® type

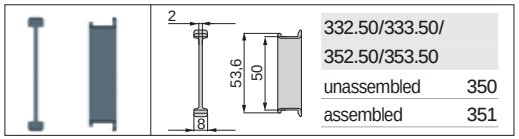
Strain relief e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ▶from page 1148



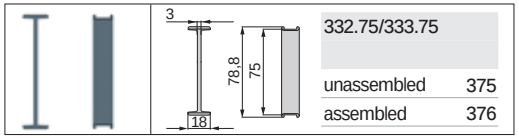
In the standard configuration separators are assembled every 2nd e-chain® link.



332.32/333.32	
unassembled	332
assembled	333



332.50/333.50/ 352.50/353.50	
unassembled	350
assembled	351



332.75/333.75	
unassembled	375
assembled	376

Vertical Separators

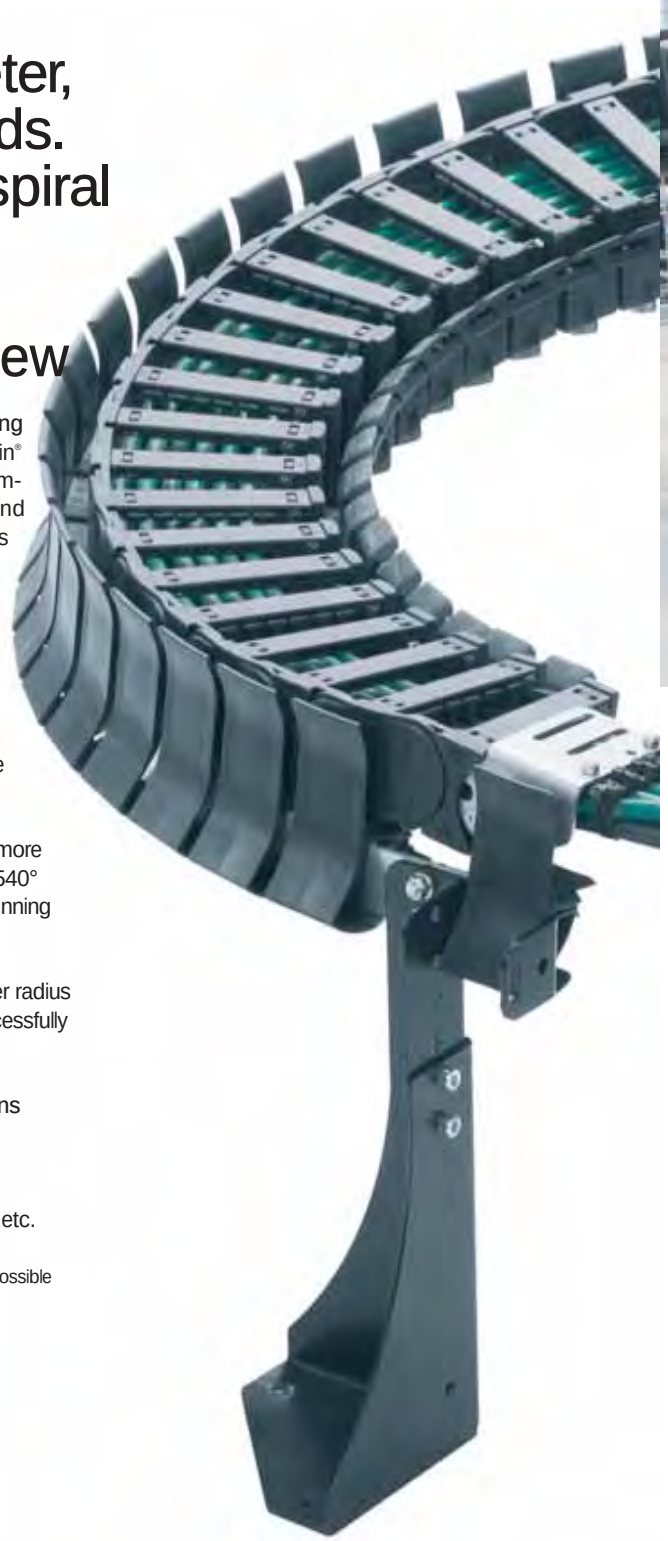
Modular separators are available as interior separation for the igus® triflex® System. They can be used for both vertical and horizontal subdivision. If the separators are assembled every other link and turned 90°, the e-tube can be subdivided into four segments. We recommend ordering the e-tube preassembled, as subsequent assembly of separators is only possible after dismantling the e-tube. Please note that assembled separators have a different part number than unassembled separators.



New generation twisterchain®

Rugged, quieter, for higher loads.
Circular and spiral
movements up to 540°

Rugged, quieter, for higher loads. Circular and spiral movements up to 540°- twisterchain® new



Higher loads and smoother running igus® new generation of twisterchain® new circular e-chains® significantly improved smoothness, stability and strength. The twisterchain® new has a modular construction for width, height and radius and therefore provides very flexible use in applications where rotating movements up to 540° are required.

- Sturdier through intermediate link - more additional load possible
- 25% less weight than existing twisterchain®
- Rotary speeds up to 1 m/s and more
- Rotary/Spiral movements up to 540°
- Highly dynamic and smoother running (with a new guide trough)
- Cable-friendly, smooth interior
- Crossbars snap-open along inner radius
- Over 1 million cycles tested successfully in the igus® laboratory (03/2010)

Typical industries and applications

- Robots, handling machines
- Packaging machines
- Glass machines
- General mechanical engineering etc.

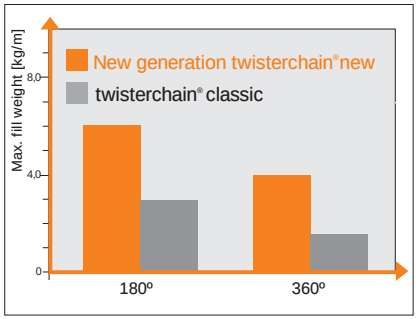
Circular movements up to 540° possible (with special attachments)

UL94-V0 classifications upon request

New guide trough system available



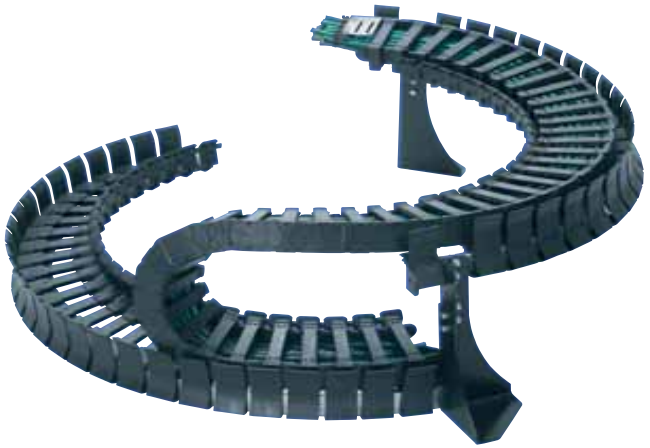
igus® twisterchain® new - over 1 million cycles tested successfully in the igus® laboratory (03/2010)



100% more additional loads with the new generation of igus® twisterchain® new



The cable-optimized intermediate link increases the stability of twisterchain® new several times. It also serves as interior separaton and divides the filling space into two chambers



twisterchain® new
for circular movements up to 540°, crossbars snap-open along inner radius

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height [mm]	Bending Radii *R* [mm]	Circular radii *AR* [mm]	Page
TC32	32	87,5 - 150	108,5 - 171	54	100 - 250	400 - 600	1092
TC42	42	87,5 - 200	110,5 - 223	64	100 - 250	400 - 850	1094
TC56	56	125 - 200	155 - 230	84	150 - 400	650 - 850	1096

Quickly generate complete twisterchain® models with guide trough and accessories ►www.igus.eu/twisterconfigurator



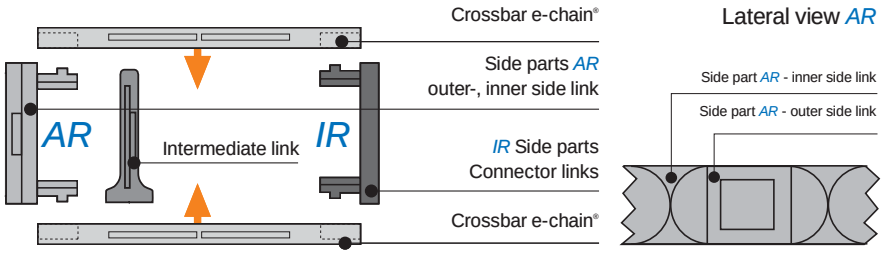
- Preparing of 3D-models only with input of chosen e-chain® radii and installation area
- Free positioning of the e-chain® moving end along the travel lengths
- Generation of twisterchain® optionally as single part or with guide trough and base support
- Fast download of the CAD files without registration
- CAD models in 11 different 3D CAD formats and 8 different 2D CAD formats

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Technical Data - System twisterchain® new

Speed / acceleration	►see page 1091
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

Part No. of e-chain® links as single parts - System twisterchain® new

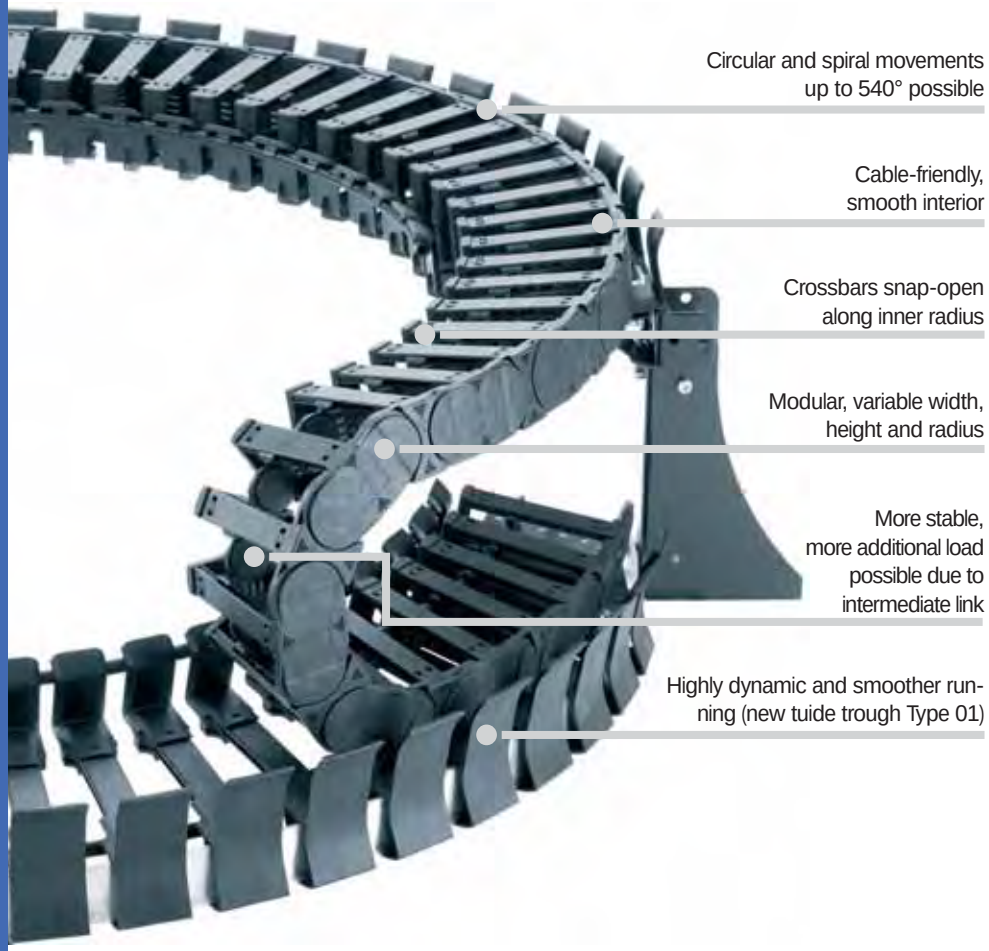


Series	Crossbar e-chain® 1)	Side parts *AR* outer side link 2)	Side parts *AR* inner side link 3)	Side parts *IR* Connector links	Intermediate link
TC32	385.*Bi*	E4.32.01	TC32.02.*R*.*AR*	2808.03	TC32.04
TC42	385.*Bi*	E4.42.01	TC42.02.*R*.*AR*	3808.03	TC42.04
TC56	450.*Bi*	E4.56.01	TC56.02.*R*.*AR*	4008.03	TC56.04

No linking possible in combination with QuickLock crossbars!

1) Supplement Part No. of crossbar with required width index (*Bi*) e.g. 450.15
2) Outer side link - fit for each radius (only for outer radius *AR*)
3) Inner side link - supplement Part No. with required radius (*R*)
e.g. TC56.02.100.AR (only for outer radius *AR*)

Assembly video available online at ► www.igus.eu/circleload



New design, higher loads, circular movements up to 540°

When to use the System twisterchain®:

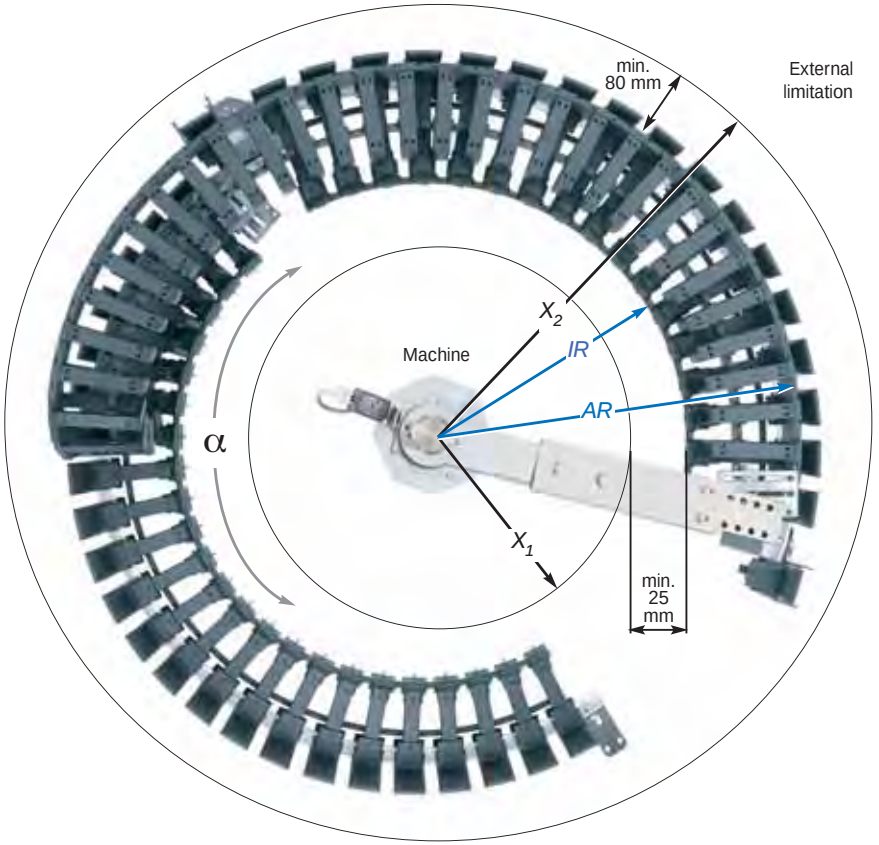
- If a robust, low-noise system is required, appropriate for high loads
- Rotatory speeds up to 1 m/s and more
- At rotatory/spiral movements up to 540°
- If a variable interior separation is desired
- If two-sided opening is desired

When to use a different igus® Series:

- For larger rotations
- ►igus® RBR-solutions, Design, page 118
- For rotation angles higher than 360°, please consult igus®

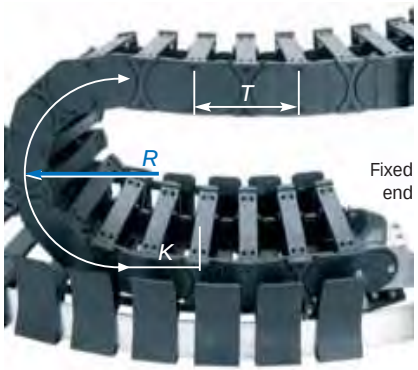
Available from stock. Delivery time* in 24h or today!

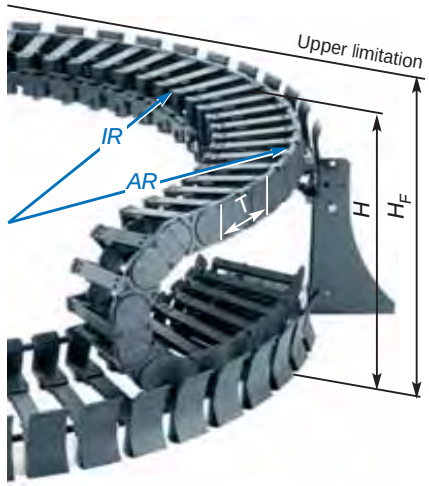
*Delivery time means time until shipping of goods (after technical release)



twisterchain® definition

In the case of machine elements which both move to the left and to the right following a circular path, the rotation angle can be determined by adding the two angles!





AR = Outer radius, e-chain®
IR = Inner radius, e-chain®
R = Bending radius
X_1 = Inner machine construction space
X_2 = Outer radius *AR*, incl. clearance
T = Pitch
H_F = Height incl. 50 mm clearance
H = Nominal clearance height
K = Add-on for bending radius
hi = Inner height e-chain®
ha = Outer height e-chain®
α = Rotation angle

Example: Guidance on the interpretation of twisterchain® new

If you would like us to design your twisterchain® application, simply supply us with your requirements. Please use the igus® system design form at the end of this chapter. If you would like to specify the e-chain® and the guide trough yourself, please work through the following points and enter the results on the calculation sheet at the end of the chapter.

1. Determine the series and e-chain® width - Example of client data:

● Available construction space outer radius = 592 mm ● inner radius = 311 mm
● α Rotation angle = 220° ● Installation height = 466 mm ● max. Ø cable of client = 22 mm (7,5xd)
Estimate the dimensions of the e-chain® by means of the internal separation with filling and select the series, or verify the max. cable diameter and select the series using the next larger permissible Ø. (For the inner height, we recommend the consideration of a cable clearance of approximately 20% of the chain's inner height and width.)
Max. Ø cable twisterchain®: TC32 = 25 mm | TC42 = 39 mm | TC56 = 53 mm
Example: max. Ø cable of client 22 mm **=>** Series TC32 (next larger)

2. Specify the outer radius *AR*

Select the next smaller X_2 of the e-chain® from the available installation space of the outer radius.
From the dimension X_2 please subtract 80 mm, which results in the necessary outer radius AR.
Selection of the chain outer radii, see table; dimension X_2 of the corresponding series
Formula: **AR = X_2 - 80 mm**
Example: 1. Available construction space outer radius 592 mm **=>** 580 mm (X_2)
2. X_2 580 mm - 80 mm **=>** *AR* 500 mm (next smaller selected)

3. Specify the inner radius *IR*

Add the allowance of 25 mm to the available installation space of the inner radius and select the next larger X_1 of the e-chain®. The maximum width *Bi* results from the selected value.
Selection from the table of the corresponding series
Formula: **IR_{min} = X_1 + 25 mm**
Example: Available installation space inner radius 311 mm + 25 mm = 336 mm **=>** X_1 350 mm = *Bi* 11 (108 mm)

4. Specify the bending radius *R*

Basically, the chain's bending radius *R* is determined by the smallest bending radius of the cables.
Selection from the table of the corresponding series
Example: 1. Ø 22 mm (7,5xd) **=>** 22 mm x 7,5 = 165 mm cable's bending radius min.
2. 165 **=>** *R* 175 mm (next higher selected) ► results **=>** Part No. TC32.11.175/500

5. Specify the required installation height *H*

An allowance of 170 mm is added to twice the value of the selected chain's bending radius *R*.
Example: *R* 175 mm x 2 + 170 mm = *H* 520 mm

6. Calculate the required number of links

Formula: $$n = \frac{\pi \times AR \times \alpha}{360° \times T} + \frac{K}{T}$$

Please note: The resulting number of links must always be rounded up! The mounting brackets may be attached only to the outside plates of the twisterchain®. Consequently, the number of links must always be rounded up to the next higher odd number! Definition: In the case of machine elements which both move to the left and to the right following a circular path, the rotation angle can be determined by adding the two angles!

For the rapid generation of complete twisterchain® Systems please use our
►**www.igus.eu/twisterconfigurator**

twisterchain® new | TC32·TC42·TC56 | Selection

TC32
TC42
TC56

Recommendations for design without additional components

Series	*AR* [mm]	$FZ_{max.}$ [kg/m] α 0°- 180°	$FZ_{max.}$ [kg/m] α 180°- 360°	*v* an *AR* permitted [m/s]	*a* an *AR* max. [m/s²]
TC32	400	4,0	2,0	1,0	2,0
	500	4,0	2,0	1,0	2,0
	600	4,0	2,0	1,0	2,0
TC42	400	6,0	3,6	1,0	2,0
	500	6,0	3,6	1,0	2,0
	600	6,0	3,6	1,0	2,0
	650	5,0	2,7	1,0	1,5
	750	4,0	1,8	1,0	1,0
	850	4,0	1,8	1,0	1,0
TC56	650	8,0	5,0	1,0	2,0
	750	8,0	5,0	1,0	2,0
	850	8,0	5,0	1,0	2,0

If your calculations exceed our recommendations, please talk to us. We offer special solutions and many additional components!

Quickly generate complete twisterchain® models with guide trough and accessories
►www.igus.eu/twisterconfigurator



- Preparing of 3D-models only with input of chosen e-chain® radii and installation area
- Free positioning of the e-chain® moving end along the travel lengths
- Generation of twisterchain® optionally as single part or with guide trough and base support
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AR = Outer radius
IR = Inner radius
R = Bending radius
X_1 = Inner machine construction space
X_2 = Outer radius *AR*, incl. clearance
T = Pitch
H_F = Height incl. 50 mm clearance
H = Nominal clearance height
K = Add-on for bending radius
hi = Inner height
ha = Outer height
α = Rotation angle
a = Acceleration
n = Number of links
FZ_{max} = Max. additional load

Series TC32 | Snap-open along inner radius from both sides

AR [mm]	Bi [mm]	Ba [mm]	X_2 [mm]	X_1 [mm]	R 100 [mm] TC32...	R 125 [mm] TC32...	R 150 [mm] TC32...	R 175 [mm] TC32...	R 200 [mm] TC32...	R 250 [mm] TC32...	Weight [kg/m]
400	87,5	108,5	480	270	087.100/400	087.125/400	087.150/400	087.175/400	087.200/400	087.250/400	≈ 1,82
400	100	121	480	250	–	–	10. 150/400	10. 175/400	10. 200/400	10. 250/400	≈ 1,90
400	108	129	480	250	–	–	–	11. 175/400	11. 200/400	11. 250/400	≈ 1,95
400	125	146	480	220	–	–	–	12. 175/400	12. 200/400	12. 250/400	≈ 2,05
400	137,5	158,5	480	210	–	–	–	–	–	137.250/400	≈ 2,13
400	150	171	480	200	–	–	–	–	–	15. 250/400	≈ 2,21
500	100	121	580	350	.10. 100/500	10. 125/500	10. 150/500	10. 175/500	10. 200/500	10. 250/500	≈ 1,90
500	108	129	580	350	–	11. 125/500	11. 150/500	11. 175/500	11. 200/500	11. 250/500	≈ 1,95
500	125	146	580	320	–	12. 125/500	12. 150/500	12. 175/500	12. 200/500	12. 250/500	≈ 2,05
500	137,5	158,5	580	310	–	–	137.150/500	137.175/500	137.200/500	137.250/500	≈ 2,13
500	150	171	580	300	–	–	15. 150/500	15. 175/500	15. 200/500	15. 250/500	≈ 2,21
600	108	129	680	450	.11. 100/600	11. 125/600	11. 150/600	–	–	–	≈ 1,95
600	125	146	680	420	–	12. 125/600	12. 150/600	12. 175/600	12. 200/600	12. 250/600	≈ 2,05
600	137,5	158,5	680	410	–	137.125/600	137.150/600	137.175/600	137.200/600	137.250/600	≈ 2,13
600	150	171	680	400	–	–	15. 150/600	15. 175/600	15. 200/600	15. 250/600	≈ 2,21

R	100	125	150	175	200	250
H^{+20}_{0}	254	304	354	404	454	554
K	465	550	620	700	780	940

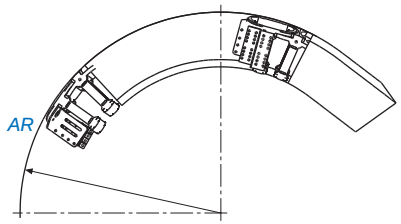
Pitch *T* = 56 mm/link
Links/m = 18 (1008 mm)

twisterchain® new | Series TC32 | Product range

Dimension A1 depending on outer radius *AR*

AR [mm]	R 100 A1 [mm]	R 125 A1 [mm]	R 150 A1 [mm]	R 175 A1 [mm]	R 200 A1 [mm]	R 250 A1 [mm]
400	51	51	52	53	53	58
500	65	65	66	67	69	71
600	79	80	81	81	82	85

Dimension A1 always with tolerance of ± 2,5 mm



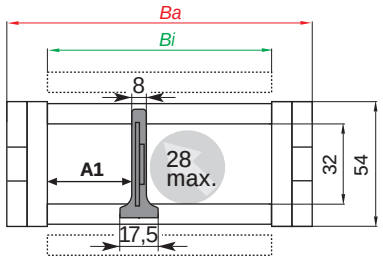
Note: Outer radius *AR* (see drawing) determines **dimension A1**!

Order key

TC32.10.150/400.0

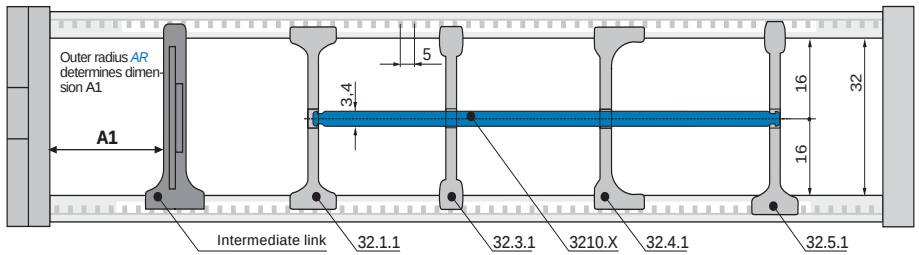
- Standard color black
- Outer radius *AR*
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series

Dimensioning



TC32.10.150/400.0 = e-chain® snap-open along inner radius from both sides
Bi 100 mm inner width, *R* 150 mm bending radius / *AR* 400 mm outer radius, color black

Series TC32 | Interior separation | Standard



For this Series the interior separation elements of Series E4.32 may be used (except side-plates) ▶ from page 652

AR = Outer radius
R = Bending radius
X_1 = Inner machine construction space
X_2 = Outer radius *AR*, incl. clearance
Ba = Outer width
Bi = Inner width
H = Nominal clearance height
K = Add-on for bending radius
A1 = Distance intermediate link
T = Pitch

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Series TC42 | Snap-open along inner radius from both sides

AR [mm]	Bi [mm]	Ba [mm]	X_2 [mm]	X_1 [mm]	R 100 [mm] TC42...	R 125 [mm] TC42...	R 150 [mm] TC42...	R 175 [mm] TC42...	R 200 [mm] TC42...	R 250 [mm] TC42...	Weight [kg/m]
400	87,5	110,5	480	270	087.100/400	087.125/400	087.150/400	087.175/400	087.200/400	087.250/400	≈ 1,97
400	100	123	480	250	10. 100/400	10. 125/400	10. 150/400	10. 175/400	10. 200/400	10. 250/400	≈ 2,03
400	108	131	480	250	–	11. 125/400	11. 150/400	11. 175/400	11. 200/400	11. 250/400	≈ 2,07
400	125	148	480	220	–	12. 125/400	12. 150/400	12. 175/400	12. 200/400	12. 250/400	≈ 2,16
400	137,5	160,5	480	210	–	137.125/400	137.150/400	137.175/400	137.200/400	137.250/400	≈ 2,22
400	150	173	480	200	–	–	–	15. 175/400	15. 200/400	15. 250/400	≈ 2,29
400	162,5	185,5	480	190	–	–	–	–	162.200/400	162.250/400	≈ 2,35
400	168	191	480	190	–	–	–	–	–	17. 250/400	≈ 2,38
400	175	198	480	180	–	–	–	–	–	18. 250/400	≈ 2,41
500	100	123	580	350	10. 100/500	10. 125/500	10. 150/500	10. 175/500	10. 200/500	10. 250/500	≈ 2,03
500	108	131	580	350	–	11. 125/500	11. 150/500	11. 175/500	11. 200/500	11. 250/500	≈ 2,07
500	125	148	580	320	–	12. 125/500	12. 150/500	12. 175/500	12. 200/500	12. 250/500	≈ 2,16
500	137,5	160,5	580	310	–	–	137.150/500	137.175/500	137.200/500	137.250/500	≈ 2,22
500	150	173	580	300	–	–	15. 150/500	15. 175/500	15. 200/500	15. 250/500	≈ 2,29
500	162,5	185,5	580	290	–	–	162.150/500	162.175/500	162.200/500	162.250/500	≈ 2,35
500	168	191	580	290	–	–	–	17. 175/500	17. 200/500	17. 250/500	≈ 2,38
500	175	198	580	280	–	–	–	–	18. 200/500	18. 250/500	≈ 2,41
500	187,5	210,5	580	280	–	–	–	–	187.200/500	187.250/500	≈ 2,48
500	200	223	580	250	–	–	–	–	20. 200/500	20. 250/500	≈ 2,54
600	108	131	680	450	11. 100/600	11. 125/600	11. 150/600	11. 175/600	11. 200/600	–	≈ 2,07
600	125	148	680	420	12. 100/600	12. 125/600	12. 150/600	12. 175/600	12. 200/600	12. 250/600	≈ 2,16
600	137,5	160,5	680	410	137.100/600	137.125/600	137.150/600	137.175/600	137.200/600	137.250/600	≈ 2,22
600	150	173	680	400	15. 100/600	15. 125/600	15. 150/600	15. 175/600	15. 200/600	15. 250/600	≈ 2,29
600	162,5	185,5	680	390	–	162.125/600	162.150/600	162.175/600	162.200/600	162.250/600	≈ 2,35
600	168	191	680	390	–	–	17. 150/600	17. 175/600	17. 200/600	17. 250/600	≈ 2,38
600	175	198	680	380	–	–	18. 150/600	18. 175/600	18. 200/600	18. 250/600	≈ 2,41
600	187,5	210,5	680	380	–	–	187.150/600	187.175/600	187.200/600	187.250/600	≈ 2,48
600	200	223	680	350	–	–	20. 150/600	20. 175/600	20. 200/600	20. 250/600	≈ 2,54
650	125	148	730	470	12. 100/650	12. 125/650	12. 150/650	12. 175/650	12. 200/650	12. 250/650	≈ 2,16
650	137,5	160,5	730	460	137.100/650	137.125/650	137.150/650	137.175/650	137.200/650	137.250/650	≈ 2,22
650	150	173	730	450	15. 100/650	15. 125/650	15. 150/650	15. 175/650	15. 200/650	15. 250/650	≈ 2,29
650	162,5	185,5	730	440	–	162.125/650	162.150/650	162.175/650	162.200/650	162.250/650	≈ 2,35
650	168	191	730	430	–	17. 125/650	17. 150/650	17. 175/650	17. 200/650	17. 250/650	≈ 2,38
650	175	198	730	430	–	–	18. 150/650	18. 175/650	18. 200/650	18. 250/650	≈ 2,41
650	187,5	210,5	730	420	–	–	187.150/650	187.175/650	187.200/650	187.250/650	≈ 2,48
650	200	223	730	400	–	–	20. 150/650	20. 175/650	20. 200/650	20. 250/650	≈ 2,54
750	137,5	160,5	830	560	137.100/750	137.125/750	137.150/750	137.175/750	137.200/750	137.250/750	≈ 2,22
750	150	173	830	550	15. 100/750	15. 125/750	15. 150/750	15. 175/750	15. 200/750	15. 250/750	≈ 2,29
750	162,5	185,5	830	540	–	162.125/750	162.150/750	162.175/750	162.200/750	162.250/750	≈ 2,35
750	168	191	830	540	–	17. 125/750	17. 150/750	17. 175/750	17. 200/750	17. 250/750	≈ 2,38
750	175	198	830	530	–	18. 125/750	18. 150/750	18. 175/750	18. 200/750	18. 250/750	≈ 2,41
750	187,5	210,5	830	520	–	187.125/750	187.150/750	187.175/750	187.200/750	187.250/750	≈ 2,48
750	200	223	830	500	–	20. 125/750	20. 150/750	20. 175/750	20. 200/750	20. 250/750	≈ 2,54
850	150	173	930	650	15. 100/850	15. 125/850	15. 150/850	15. 175/850	15. 200/850	15. 250/850	≈ 2,29
850	162,5	185,5	930	640	162.100/850	162.125/850	162.150/850	162.175/850	162.200/850	162.250/850	≈ 2,35
850	168	191	930	630	17. 100/850	17. 125/850	17. 150/850	17. 175/850	17. 200/850	17. 250/850	≈ 2,38
850	175	198	930	630	–	18. 125/850	18. 150/850	18. 175/850	18. 200/850	18. 250/850	≈ 2,41
850	187,5	210,5	930	620	–	187.125/850	187.150/850	187.175/850	187.200/850	187.250/850	≈ 2,48
850	200	223	930	600	–	20. 125/850	20. 150/850	20. 175/850	20. 200/850	20. 250/850	≈ 2,54

R	100	125	150	175	200	250
H^{-0}_{+25}	264	314	364	414	464	564
K	500	650	725	800	875	1050

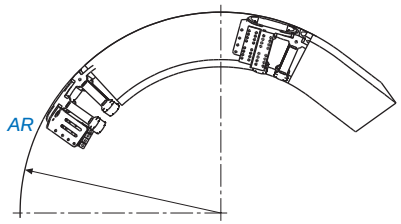
Pitch T = 67 mm/link
Links/m = 15 (1005 mm)

1094 3D-CAD files, configurators, PDF ▶ www.igus.eu/eu/TC42

Dimension A1 depending on outer radius AR

AR [mm]	R 100 A1 [mm]	R 125 A1 [mm]	R 150 A1 [mm]	R 175 A1 [mm]	R 200 A1 [mm]	R 250 A1 [mm]
400	49	50	51	53	54	58
500	64	65	66	67	68	71
600	79	79	80	81	82	85
650	86	87	87	88	89	92
750	101	101	102	103	104	106
850	116	116	117	118	118	120

Dimension A1 always with tolerance of ± 2,5 mm



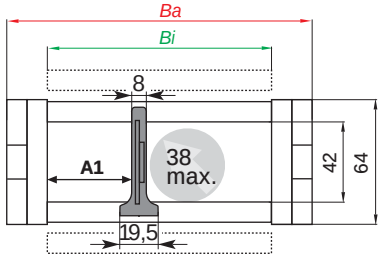
Note: Outer radius *AR* (see drawing) determines **dimension A1**!

Order key

TC42.10.250/400.0

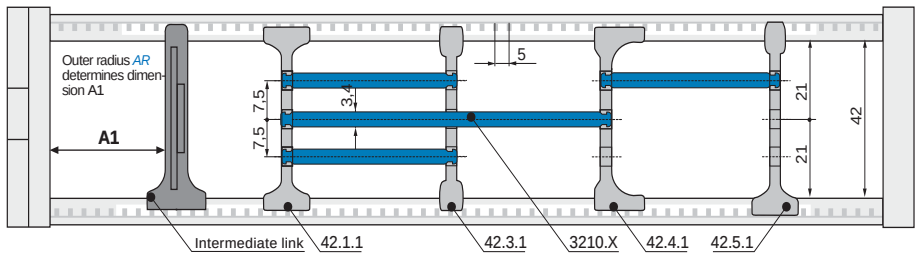
- Standard color black
- Outer radius *AR*
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series

Dimensioning



TC42.10.250/400.0 = e-chain® snap-open along inner radius from both sides
Bi 100 mm inner width, *R* 250 mm bending radius / *AR* 400 mm outer radius, color black

Series TC42 | Interior separation | Standard



For this Series the interior separation elements of Series E4.42 may be used (except side-plates) ▶ from page 668

AR = Outer radius *R* = Bending radius X_1 = Inner machine construction space X_2 = Outer radius *AR*, incl. clearance *Ba* = Outer width *Bi* = Inner width *H* = Nominal clearance height *K* = Add-on for bending radius A1 = Distance intermediate link *T* = Pitch

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Series TC56 | Snap-open along inner radius from both sides

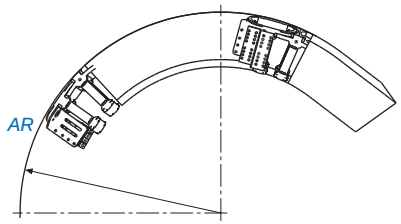
AR [mm]	Bi [mm]	Ba [mm]	X_2 [mm]	X_1 [mm]	R 150 [mm] TC56...	R 200 [mm] TC56...	R 250 [mm] TC56...	R 300 [mm] TC56...	R 400 [mm] TC56...	Weight [kg/m]
650	125	155	730	470	12. 150/650	12. 200/650	12. 250/650	12. 300/650	–	≈ 3,45
650	137,5	168	730	460	–	13. 200/650	13. 250/650	13. 300/650	13. 400/650	≈ 3,54
650	150	180	730	450	–	–	15. 250/650	15. 300/650	15. 400/650	≈ 3,62
650	162,5	193	730	440	–	–	16. 250/650	16. 300/650	16. 400/650	≈ 3,7
650	175	205	730	430	–	–	–	17. 300/650	17. 400/650	≈ 3,78
650	187,5	218	730	420	–	–	–	18. 300/650	18. 400/650	≈ 3,87
650	200	230	730	400	–	–	–	–	20. 400/650	≈ 3,95
750	137,5	168	830	560	.13. 150/750	.13. 200/750	.13. 250/750	.13. 300/750	–	≈ 3,54
750	150	180	830	550	–	.15. 200/750	.15. 250/750	.15. 300/750	.15. 400/750	≈ 3,62
750	162,5	193	830	540	–	.16. 200/750	.16. 250/750	.16. 300/750	.16. 400/750	≈ 3,7
750	175	205	830	530	–	–	.17. 250/750	.17. 300/750	.17. 400/750	≈ 3,78
750	187,5	218	830	520	–	–	.18. 250/750	.18. 300/750	.18. 400/750	≈ 3,87
750	200	230	830	500	–	–	.20. 250/750	.20. 300/750	.20. 400/750	≈ 3,95
850	150	180	930	650	15. 150/850	15. 200/850	15. 250/850	15. 300/850	15. 400/850	≈ 3,62
850	162,5	193	930	640	16. 150/850	16. 200/850	16. 250/850	16. 300/850	16. 400/850	≈ 3,7
850	175	205	930	630	17. 150/850	17. 200/850	17. 250/850	17. 300/850	17. 400/850	≈ 3,78
850	187,5	218	930	620	–	18. 200/850	18. 250/850	18. 300/850	18. 400/850	≈ 3,87
850	200	230	930	600	–	–	20. 250/850	20. 300/850	20. 400/850	≈ 3,95

R	150	200	250	300	400
H^{-0}_{+25}	384	484	584	684	884
K	750	900	1050	1225	1450

Pitch T = 91 mm/link
Links/m = 11 (1001 mm)

AR [mm]	R 150 A1 [mm]	R 200 A1 [mm]	R 250 A1 [mm]	R 300 A1 [mm]	R 400 A1 [mm]
650	83	85	88	90	97
750	98	101	102	103	110
850	113	116	117	118	124

Dimension A1 always with tolerance of ± 2,5 mm



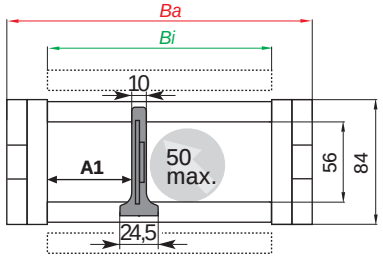
Note: Outer radius *AR* (see drawing) determines **dimension A1**!

Order key

TC56.12.250/650.0

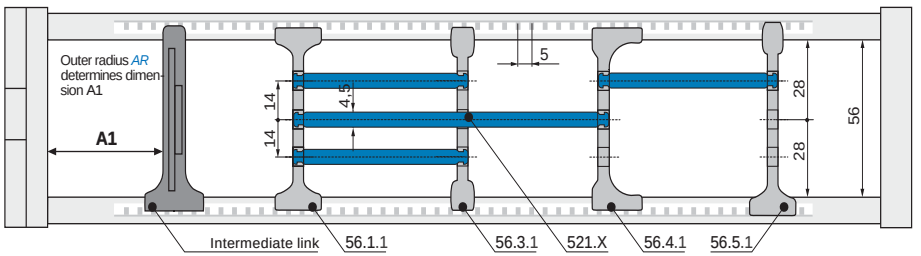
- Standard color black
- Outer radius *AR*
- Bending radius *R*
- Width index (depends on *Bi*)
- Inner height
- Series

Dimensioning



TC56.12.250/650.0 = e-chain® snap-open along inner radius from both sides
Bi 125 mm inner width, *R* 250 mm bending radius / *AR* 650 mm outer radius, color black

Series TC56 | Interior separation | Standard



For this Series the interior separation elements of Series E4.56 may be used (except side-plates) ▶ from page 684

AR = Outer radius *R* = Bending radius X_1 = Inner machine construction space X_2 = Outer radius *AR*, incl. clearance *Ba* = Outer width *Bi* = Inner width *H* = Nominal clearance height *K* = Add-on for bending radius A1 = Distance intermediate link *T* = Pitch

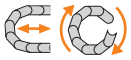
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



Position 1 Position 2

Steel, one-piece | Recommended for unsupported and rotatory applications

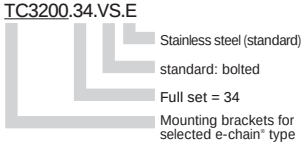
For Series	Part No. full set	Part No. position 1	Part No. position 2
TC32 ▶	TC3200.34.VS.E	TC3200.30.VS.E	TC3200.40.VS.E
TC42 ▶	TC4200.34.VS.E	TC4200.30.VS.E	TC4200.40.VS.E
TC56 ▶	TC5600.34.VS.E	TC5600.30.VS.E	TC5600.40.VS.E



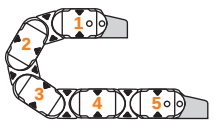
- One part for all e-chain® widths
- Electrically conductive
- Universal use
- Material: Stainless steel: 1.4301

The guide trough must be mounted at the fixed point of the twisterchain®.
The following bolted connections are permitted:
● Bore Hole: 4 x Ø 6,6 - 7 mm ● Mounting only with bolts: 4 x bolts M6
Other connection dimensions for mounting
the guide trough Type 01 ▶ from page 1100

Part No. structure
TC3200.34.VS.E



Note: twisterchain® e-chains® must always end with an outer side link. At the moving end an outer side link always forms the first e-chain® link. Please note when calculating!

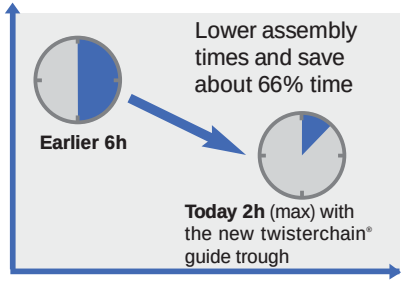


Single-part order
Position 1
TC3200.30.VS.E
Position 2
TC3200.40.VS.E

Save assembly time and costs - Better guidance for circular motion - increase cycle life!

New guide trough system - Type 01 ▶ from page 1100

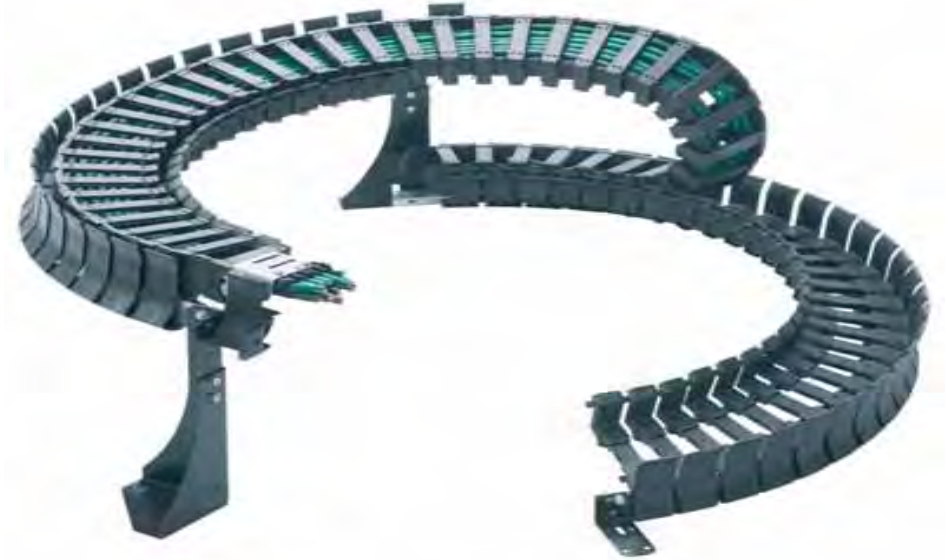




With the new twisterchain® trough, the previously complex adjustment work is clearly minimized. Assembly time is reduced from 6h to 2h. While reducing noise levels, travel speed and service life can be increased, thanks to an almost all-plastic design ▶ www.igus.eu/eu/TCtroughnew

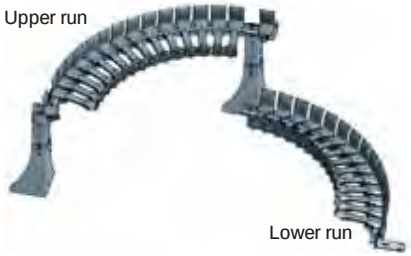
Guide trough Type 02 - continues to be available for special applications.
Product range ▶ page 1126 or at ▶ www.igus.eu/eu/TCtroughclassic

New generation of twisterchain® guide troughs - Save assembly time and costs - increase cycle life!



With the new twisterchain® trough type 01, the previously complex adjustment work is clearly minimized. Assembly time is reduced from 6 h to 2 h. While reducing noise levels, travel speed and service life can be increased, thanks to an almost all-plastic design. Available for all twisterchain® of the new and previous range.

- Suitable for high dynamics, because of the full and all-side guidance of the twisterchain®
- Much smoother and quieter motion of the twisterchain® in the trough due to continuous guidance of upper run
- Upper run guided in the new polymer trough over the full width
- Preassembled delivery possible
- Easy adjustment and alignment and handling
- Assembly time reduced from 6 hours to 2 hours



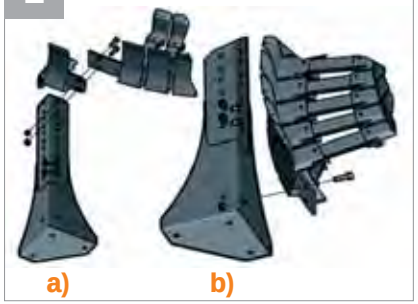
Less parts, easier handling - Illustration shows a 180° application



Easy adjustment and alignment on the robot, predefined angles and predrilled mounting holes for height fixation

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

1



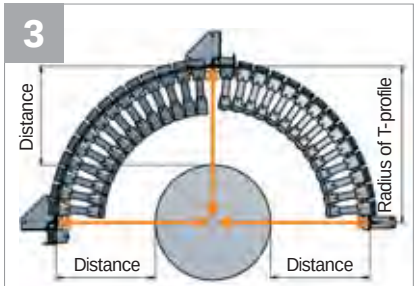
Check order for completeness. Screw together individual parts according to instructions...

2



...then assemble the complete guide trough with upper run and lower run

3



The T-profile should have 3 points equidistant from the pivot point

Align trough on the pivot point and then screw on

4



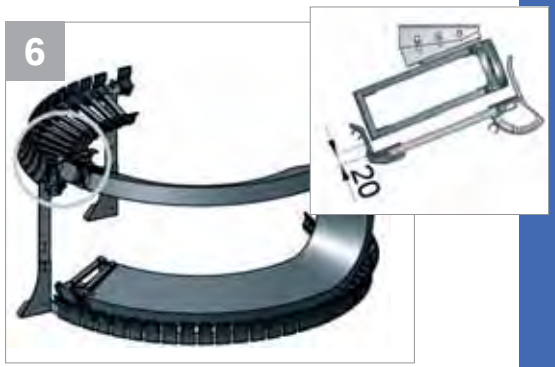
Alignment by defined angular and hole matrix for easy height fixing

5



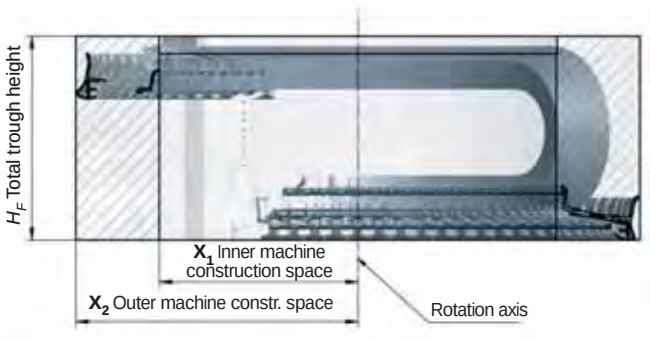
twisterchain® installation in the trough - screw the fixed end of e-chain® onto the trough

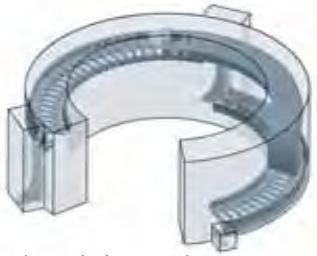
6



Attachment of the e-chain® on the customer's moving end arm by screwing (moving arm provided by customer)

Guide trough Type 02 - continues to be available for special applications.
Product range ►page 1126 or at ►www.igus.eu/eu/TCtroughclassic





Min. required construction space of twisterchain® guide trough system

Guide trough machine construction space: X_1 = inner / X_2 = outer

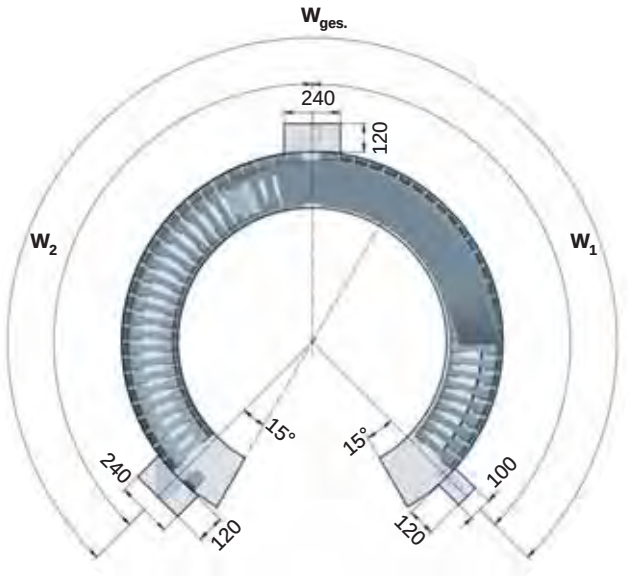
AR [mm]	X_2 mm	X_1 [mm] depending on *Bi* [mm]													
TC32		87,5	100	108	125	137,5	150								
400	480	270	250	250	220	210	200								
500	580	–	350	350	320	310	300								
600	680	–	–	450	420	410	400								
TC42		87,5	100	108	125	137,5	150	162,5	168	175	187,5	200			
400	480	270	250	250	220	210	200	190	190	180	–	–			
500	580	–	350	350	320	310	300	290	290	280	280	250			
600	680	–	–	450	420	410	400	390	390	380	380	350			
650	730	–	–	–	470	460	450	440	440	430	420	400			
750	830	–	–	–	–	560	550	540	540	530	520	500			
850	930	–	–	–	–	–	650	640	640	630	620	600			
TC56			–	–	125	137,5	150	162,5	–	175	187	200			
650	730	–	–	–	470	460	450	440	–	430	420	400			
750	830	–	–	–	–	560	550	540	–	530	520	500			
850	930	–	–	–	–	–	650	640	–	630	620	600			
2808		50	68	75	87,5	100	108	125	137,5	150					
400	480	290	280	270	270	250	250	220	210	200					
500	580	390	380	370	370	350	350	320	310	300					
600	680	490	480	470	470	450	450	420	410	400					
3808		50	68	75	87,5	100	108	125	137,5	150	162,5	168	175	187,5	200
400	480	290	280	270	270	250	250	220	210	200	190	190	180	180	150
500	580	390	380	370	370	350	350	320	310	300	290	290	280	280	250
600	680	490	480	470	470	450	450	420	410	400	390	390	380	380	350
4008		50	65	75	100	112	125	137,5	150	162,5	175	187,5	200		
650	730	540	530	520	500	490	470	460	450	440	430	420	400		
750	830	640	630	620	600	590	570	560	550	540	530	520	500		

Construction height | H_F depending on bending radius of twisterchain® guide trough

R [mm] Series	100	125	150	175	200	250	300	400
	H_F Construction height [mm]							
TC32	370	420	470	520	570	670	–	–
TC42	380	430	480	530	580	680	–	–
TC56	–	–	500	–	600	700	800	1000
2808	370	420	470	520	570	670	–	–
3808	380	430	480	–	580	680	–	–
4008	–	–	500	–	600	700	800	1000

Rotation angle for 360° | W_2 angle of upper run [°] twisterchain® guide trough

AR [mm]	Series	*R* [mm]	100	125	150	175	200	250	300	400
			W_2 Rotation angle [°]							
400	TC32/TC42/2808/3808		90°	90°	90°	90°	90°	90°	90°	90°
500	TC32/TC42/2808/3808		90°	90°	90°	90°	90°	90°	90°	90°
600	TC32/TC42/2808/3808		135°	135°	135°	135°	90°	90°	90°	90°
650	TC42/TC56/4008		135°	135°	135°	135°	90°	90°	90°	90°
750	TC42/TC56/4008		135°	135°	135°	135°	135°	135°	90°	90°
850	TC42/TC56/4008		135°	135°	135°	135°	135°	135°	135°	135°



Rotation angle | $W_1 + W_{ges.}$

$W_{ges.}$ rotation angle System [°]	W_1 rotation angle of lower run trough [°]
90°	45°
180°	90°
270°	135°
360°	180°

AR = Outer radius e-chain®
IR = Inner radius e-chain®
R = Bending radius
X_1 = Inner machine construction space
X_2 = Outer radius *AR*, incl. clearance
H_F = Total trough height
W_1 = Angle of lower run
W_2 = Angle of upper run
$W_{ges.}$ = Rotation angle of system

twisterchain® guide trough options



9XXX.31
Complete troughs
(with base support, height adjustment and attachement angles)

9XXX.32
Upper and lower run trough
(without base support and height adjustment)
Special variant: Customer builds base support

9XXX.30
Lower run trough
(with attachement angles)
Special variant: Customer builds upper run trough

Product range | twisterchain® guide troughs Type 01

Part No. Series	Outer radius *AR* [mm]	Rotation angle from-up to α [°]	Standard Part No. complete trough	Part No. upper/lower run trough	Part No. lower run trough
TC32 / TC42 / 2808 / 3808	400	0 - 90°	9XXX.31.90 .400/*Bi.R*	9XXX.32.90 .400/*Bi.R*	9XXX.30.90 .400/*Bi.R*
		90° - 180°	9XXX.31.180.400/*Bi.R*	9XXX.32.180.400/*Bi.R*	9XXX.30.180.400/*Bi.R*
		180° - 270°	9XXX.31.270.400/*Bi.R*	9XXX.32.270.400/*Bi.R*	9XXX.30.270.400/*Bi.R*
		270° - 360°	9XXX.31.360.400/*Bi.R*	9XXX.32.360.400/*Bi.R*	9XXX.30.360.400/*Bi.R*
	500	0 - 90°	9XXX.31.90 .500/*Bi.R*	9XXX.32.90 .500/*Bi.R*	9XXX.30.90 .500/*Bi.R*
		90° - 180°	9XXX.31.180.500/*Bi.R*	9XXX.32.180.500/*Bi.R*	9XXX.30.180.500/*Bi.R*
		180° - 270°	9XXX.31.270.500/*Bi.R*	9XXX.32.270.500/*Bi.R*	9XXX.30.270.500/*Bi.R*
		270° - 360°	9XXX.31.360.500/*Bi.R*	9XXX.32.360.500/*Bi.R*	9XXX.30.360.500/*Bi.R*
	600	0 - 90°	9XXX.31.90 .600/*Bi.R*	9XXX.32.90 .600/*Bi.R*	9XXX.30.90 .600/*Bi.R*
		90° - 180°	9XXX.31.180.600/*Bi.R*	9XXX.32.180.600/*Bi.R*	9XXX.30.180.600/*Bi.R*
		180° - 270°	9XXX.31.270.600/*Bi.R*	9XXX.32.270.600/*Bi.R*	9XXX.30.270.600/*Bi.R*
		270° - 360°	9XXX.31.360.600/*Bi.R*	9XXX.32.360.600/*Bi.R*	9XXX.30.360.600/*Bi.R*
TC42 / TC56 / 4008	650	0 - 90°	9XXX.31.90 .650/*Bi.R*	9XXX.32.90 .650/*Bi.R*	9XXX.30.90 .650/*Bi.R*
		90° - 180°	9XXX.31.180.650/*Bi.R*	9XXX.32.180.650/*Bi.R*	9XXX.30.180.650/*Bi.R*
		180° - 270°	9XXX.31.270.650/*Bi.R*	9XXX.32.270.650/*Bi.R*	9XXX.30.270.650/*Bi.R*
		270° - 360°	9XXX.31.360.650/*Bi.R*	9XXX.32.360.650/*Bi.R*	9XXX.30.360.650/*Bi.R*
	750	0 - 90°	9XXX.31.90 .750/*Bi.R*	9XXX.32.90 .750/*Bi.R*	9XXX.30.90 .750/*Bi.R*
		90° - 180°	9XXX.31.180.750/*Bi.R*	9XXX.32.180.750/*Bi.R*	9XXX.30.180.750/*Bi.R*
		180° - 270°	9XXX.31.270.750/*Bi.R*	9XXX.32.270.750/*Bi.R*	9XXX.30.270.750/*Bi.R*
		270° - 360°	9XXX.31.360.750/*Bi.R*	9XXX.32.360.750/*Bi.R*	9XXX.30.360.750/*Bi.R*
	850	0 - 90°	9XXX.31.90 .850/*Bi.R*	9XXX.32.90 .850/*Bi.R*	9XXX.30.90 .850/*Bi.R*
		90° - 180°	9XXX.31.180.850/*Bi.R*	9XXX.32.180.850/*Bi.R*	9XXX.30.180.850/*Bi.R*
		180° - 270°	9XXX.31.270.850/*Bi.R*	9XXX.32.270.850/*Bi.R*	9XXX.30.270.850/*Bi.R*
		270° - 360°	9XXX.31.360.850/*Bi.R*	9XXX.32.360.850/*Bi.R*	9XXX.30.360.850/*Bi.R*

Supplement Part No. 9XXX with required Series (TC32, TC42, TC56, 2808, 3808, 4008), value *Bi* and required bending radius *R* ▶ 9XXX.31.180.600/06.250

twisterchain® | Guide Troughs Type 01 | Accessories

9TC32.31.180.600/12.250
9XXXX.31.180.600/*Bi*. *R*

Order key
Guide trough

R - Bending radius, please add appropriate value
Bi - Width index, please add appropriate value
Outer radius e-chain®
Rotation angle of application (90°, 180°, 270°, 360°)
Trough version
Guide trough of selected Series

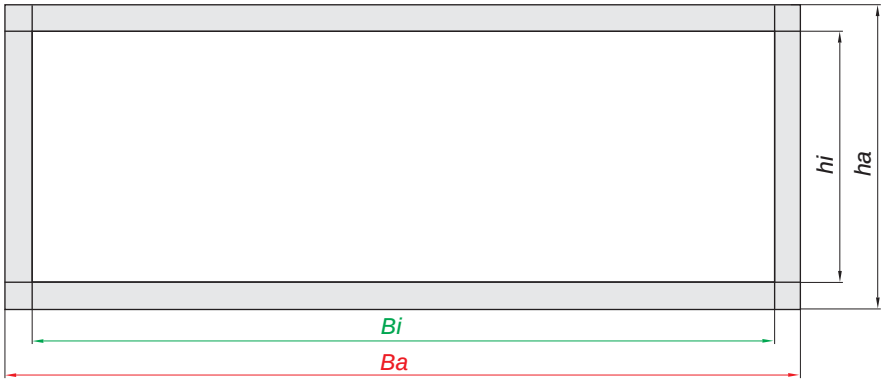
More order examples

● Complete trough	Part No. 94008.31.180.600/12.250
● Lower run trough only	Part No. 94008.30.180.600/12.250
● Upper and lower run trough without base support	Part No. 94008.32.180.600/12.250



twisterchain® in a guide trough for rotary movements on an articulated robot - long service life and robust: more than 1.000.000 cycles tested successfully with prototype (issue 04/2009)

This calculation sheet should help you to select
the right igus® twisterchain® System for your application.



Rotation angle

Please sketch the cable and hose layout within the e-chain®. Note: To find the correct Series, refer to the thickest cable diameter, plus cable clearance of approx. 20% of the e-chain® interior.

twisterchain® Series

☐ TC32 ☐ TC42 ☐ TC56

Existing installation space

X_1 max..... X_2 max..... H_F max.....

e-chain® data

Outer radius *AR* ..... Inner radius *IR* .....

Bending radius *R* ..... Rotation angle [°] .....

Guide trough

☐ yes ☐ no

Part No. trough Type 01 9TC_ _ ._ ._ _ _ . _ _ _ / _ _ . _ _ _

Order example 9TC32.31.180.600/06.250

Supporting structure necessary

☐ yes ☐ no

The guide trough part number includes all the necessary elements for proper operation. The rotation angle is dependent upon support for the upper run and should be assembled on-site. If on-site assembly is not possible. we will deliver a supporting structure which can be assembled on the floor and is based on the height of the lower trough run. If necessary, we will design a supporting structure specially adapted to your installation!

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Please supply us with your application data. We will then send you a full analysis with cable/layout suggestion and a quotation immediately. Please consult igus® should you have any questions.

Individual components

☐ twisterchain® new ☐ chainflex® high-flex cables ☐ Guide trough ☐ Preassembled

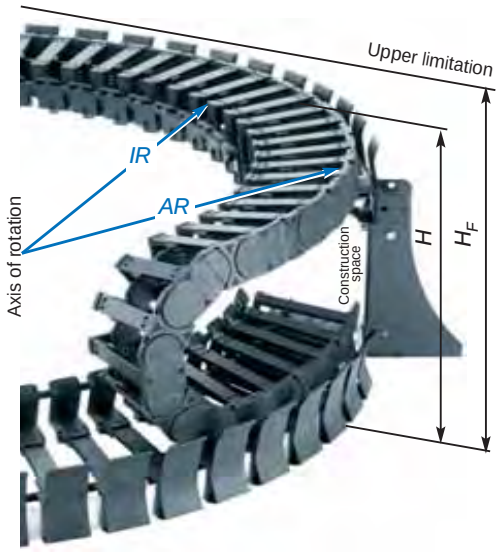
Filling - twisterchain® new

Number	Type	Ø [mm]	Weight [kg/m]	Permitted bending radius *R* [mm]

Dimensions

X_1 [mm] .....
X_2 [mm] .....
H_F [mm] .....
Rotation angle α* [°] .....

* On machine elements which move to the left and to the right following a circular path, the rotation angle can be determined by adding the two angles



Operating data

Rotations/day .....
Days/year .....
Speed [°/s] .....
Acceleration [°/s²] .....

Environment

Temperature [°C] .....

Moisture ☐ yes ☐ no



First generation twisterchain®

Circular and spiral movements up to 540°

For new designs we recommend:
TC32, TC42. TC56 ► from page 1082

Circular and spiral movements - twisterchain® classic

The first generation of twisterchain® classic have proven themselves worldwide for years in many applications. They safely supply their robots in the rotary axis with energy and air. For new designs we recommend twisterchain® new ►from page 1082.

- Circular, spiral motions up to 540°
- Fast cable replacement
- Modular, rugged design - variable widths
- Cable-friendly interior
- Crossbars snap open on both sides
- New guide troughs Type 01 and Type 02 (up to 360° motion) available from stock
- Variable interior separation
- Applicable in rotational speeds of up to 4 m/s
- With steel mounting brackets (electrically conductive)

Typical industries and applications

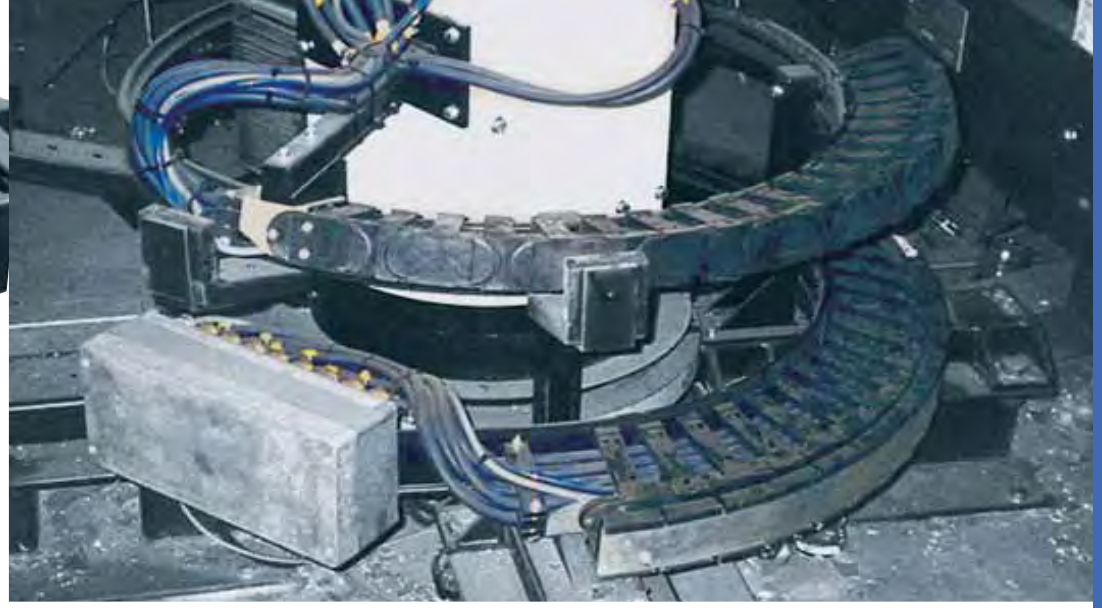
- Robots
- Handling machines
- Packaging machines
- Glass machines
- General mechanical engineering, etc



Circular movements up to 540° possible (with special attachments)

UL94-V0 classifications upon request

Two different types of guide trough systems available



Combined spiral and rotary movement - igus® twisterchain® classic



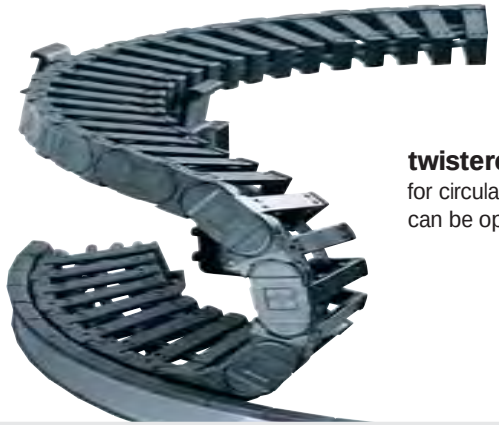
twisterchain® classic for continuous industrial operation on a buckling arm robot (rotary movement 420°)



The robust link design also allows safe work in a dirty environment

Contents, selection table ►next page

For new designs we recommend: TC32, TC42. TC56 ► from page 1082



twisterchain® classic
for circular movements,
can be opened from both sides

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height [mm]	Bending Radii *R* [mm]	Circular radii *AR* [mm]	Page
2208.	28	52,5 - 112,5	80 - 140	42	055 - 150	300	1117
2808.*	32	50 - 150	81 - 181	54	100 - 250	400 - 600	1118
3808.*	42	50 - 200	85 - 235	64	100 - 250	400 - 600	1120
4008.*	56	50 - 200	93 - 243	84	150 - 400	650 - 850	1122

*For new designs we recommend: TC32, TC42. TC56

Quickly generate complete twisterchain® models with guide trough and accessories ►www.igus.eu/twisterconfigurator



- Preparing of 3D-models only with input of chosen e-chain® radii and installation area
- Free positioning of the e-chain® moving end along the travel lengths
- Generation of twisterchain® optionally as single part or with guide trough and base support
- Fast download of the CAD files without registration
- CAD models in 11 different 3D CAD formats and 8 different 2D CAD formats

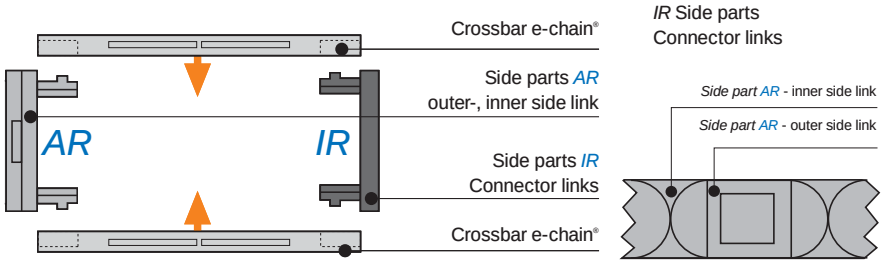
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Technical Data | e-chain® links as single parts

Technical Data - System twisterchain® classic

Speed / acceleration	►see page 1116
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

Part No. of e-chain® links as single parts - System twisterchain® classic



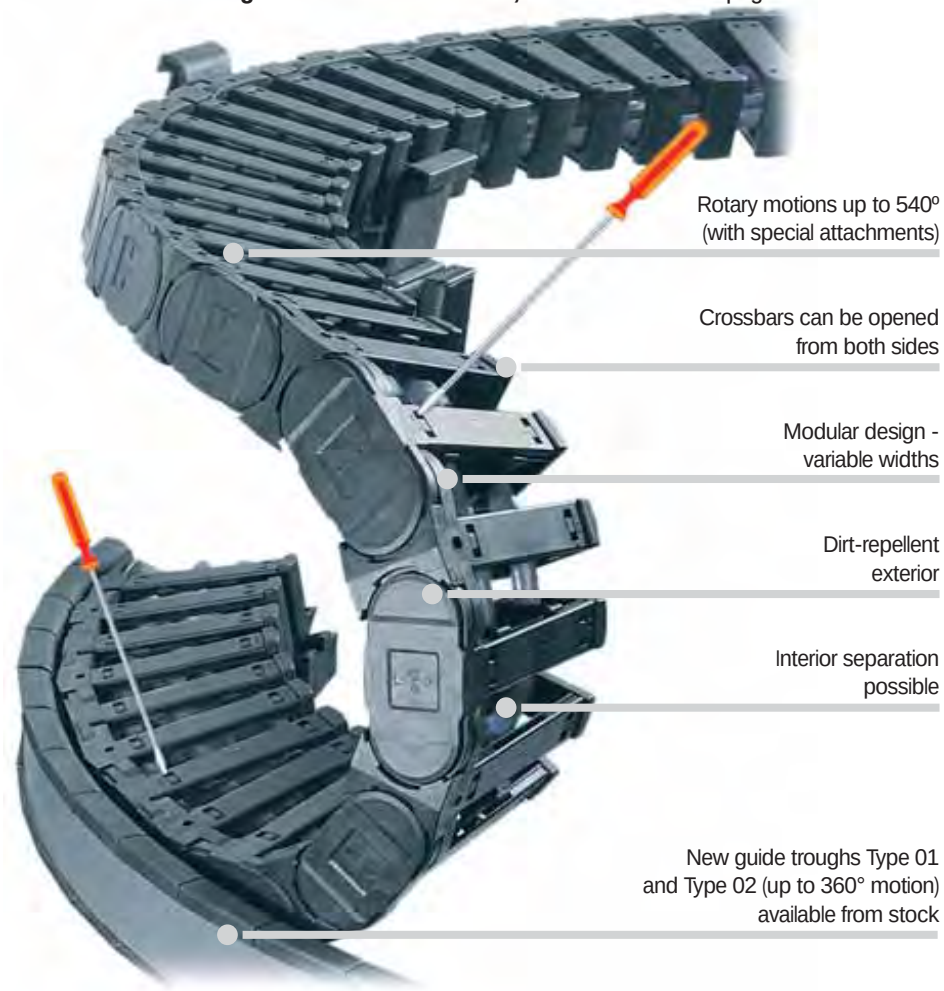
Series	e-chain® crossbar [1]	Side parts *AR* Outer side link [2]	Side parts *AR* Inner side link [3]	Side parts *IR* Connector links [4]
2208	225.*Bi*	2208.01	2208.02.*R*	2208.03
2808	385.*Bi*	2808.01	2808.02.*R*	2808.03
3808	385.*Bi*	3808.01	3808.02.*R*	3808.03
4008	450.*Bi*	4008.01	4008.02.*R*	4008.03

No linking possible in combination with QuickLock crossbars!

1) Supplement Part No. of crossbar with required width index (*Bi*) e.g. 450.15
2) Outer side link - fit for each radius (not for outer radius *AR*)
3) Inner side link - supplement Part No. of crossbar with required width index (*Bi*) and required radius (*R*) e.g. 4008.02.100 (only for outer radius *AR*)
4) Connector link - Part No. e.g. 4008.03 (only for inner radius *IR*)

Assembly video available online at ► www.igus.eu/eu/twister_assembly

For new designs we recommend: TC32, TC42. TC56 ► from page 1082



Circular movements up to 540°

When to use the
System twisterchain® classic:

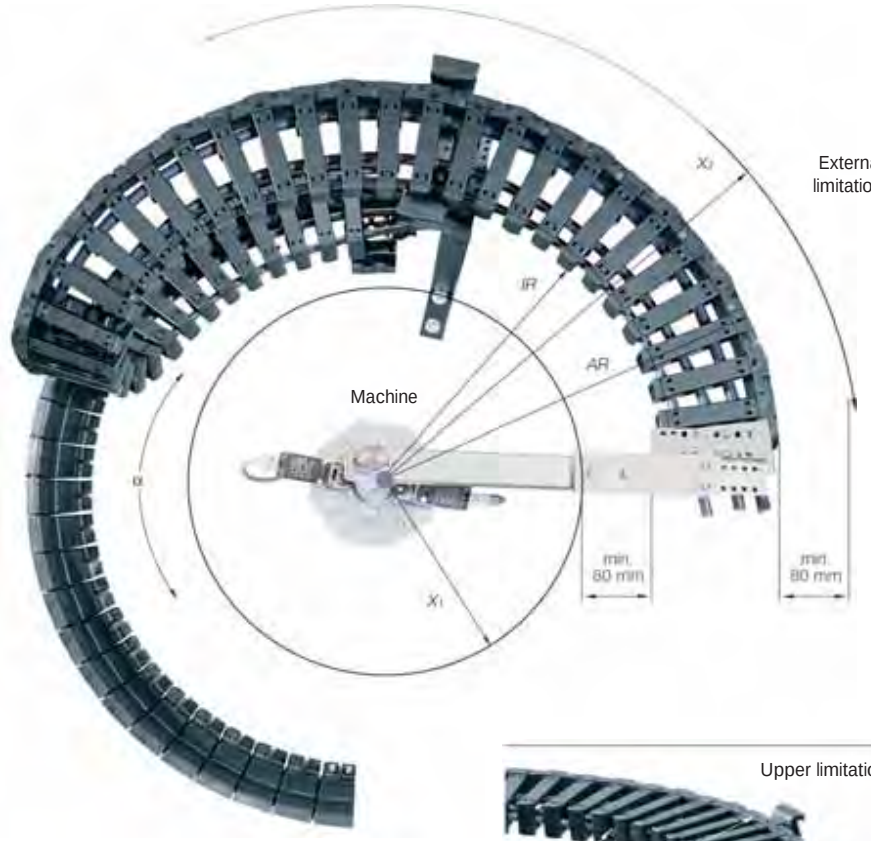
- As replacement for existing twisterchain® classic applications
- If you require an interior separation
- If you requiire cable access on both sides
- For rotational speeds up to 90°/s
- For circular motion up to 540° (with special attachments)

When to use a different igus® Series:

- If a robust, low-noise system is required, appropriate for high loads.
- ►twisterchain® new, page 1082
- In case of very small or very large diameters
- ►Design, page 118
- For applications using rotation angles over 400° please consult igus®

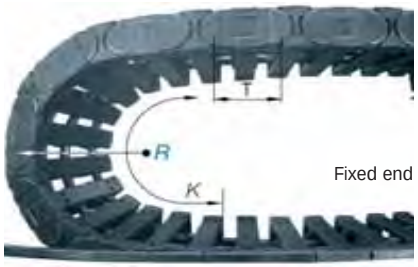
Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



twisterchain® classic - definition

In the case of machine elements which move both to the left and to the right following a circular path, the angle of rotation can be determined by adding the two angles!





AR = Outer radius, e-chain®
IR = Inner radius, e-chain®
R = Bending radius
X_1 = Inner machine construction space
X_2 = Outer radius *AR*, incl. clearance
T = Pitch
H_F = Height incl. 50 mm clearance
H = Nominal clearance height
K = Add-on for bending radius
hi = Inner height e-chain®
ha = Outer height e-chain®
α = Rotation angle

Tips on design:

If you would like us to design your twisterchain® application, simply supply us with your requirements. Please use the igus® System design form at the end of this chapter. If you would like to specify the e-chain® and the guide trough yourself, please work through the following points and enter the results on the calculation sheet at the end of the chapter.

1. Determine the Series and e-chain® width

Specify which cables you would like to use for the e-chain®. The type of cables and the largest cable diameter determine the Series and e-chain® width selection. We recommend that you allow for a cable clearance of approx 20% of the e-chain®'s internal height and width.

2. Specify the outer and inner radius

Determine the construction space available to you (dim. X_1 and X_2)
Example: α = 220° / max. cable diameter 24 mm ▶ Series 2808
X_2 = 580 mm ▶ *AR* = 500 mm
X_1 = 310 mm ▶ $IR_{min.}$ = 390 mm ▶ selection table ▶ 392 mm

3. Specify the bending radius *R*

H_F = 460 mm ▶ $H \leq$ 410 mm ▶ $R = \frac{H - ha}{2}$ = 178 mm ▶ R175 (next smallest radius) ▶Results: Part No. 2808.087.175/500

4. Calculate the required number of links

Number of links: $n = \frac{\pi \times AR \times \alpha}{360° \times T} + \frac{K}{T}$

Note: The resulting number of links must always be rounded up!
The mounting brackets may be attached only to the outside plates of the twisterchain®.
Consequently, the number of links must always be rounded up to the next higher odd number!

twisterchain® classic definition:

In the case of machine elements which move both to the left and to the right following a circular path, the angle of rotation can be determined by adding the two angles!

The following clearances are absolutely essential for proper design function:
IR_{min} = X_1 + 80 mm
$X_{2\ min}$ = *AR* + 80 mm
H_F = *H* + 50 mm

Recommendations for design without additional components

Series	$FZ_{max.}$ α 180° [kg/m]	$FZ_{max.}$ α 360° [kg/m]	*v* an *AR* permitted [m/s]	*a* an *AR* max. [m/s²]	*R* max. [mm]	*AR* permitted [mm]
2208.	1,5	1	0,3 - 1	2	100	300
2808.	2	1	0,3 - 1	2	150	450 - 550
3808.	3	1,8	0,3 - 1	2	200	450 - 550
4008.	4	2,5	0,3 - 1	2	250	600 - 700

If your calculations exceed our recommendations, please talk to us. We offer special solutions and many additional components.

AR = Outer radius | X_1 = Inner machine construction space | H_F = Height incl. 50 mm clearance | *hi* = Inner height | *a* = Acceleration
IR = Inner radius | X_2 = Outer radius *AR*, incl. clearance | *H* = Nominal clearance height | *ha* = Outer height | *n* = Number of links
R = Bending radius | *T* = Pitch | *K* = Add-on for bending radius | α = Rotation angle | FZ_{max} = Max. additional load

For the rapid generation of complete twisterchain® Systems please use our
▶www.igus.eu/twisterconfigurator

Series 2208 | snap-open along inner and outer radius

	R 055 [mm]	*R* 063 [mm]	*R* 075 [mm]	*R* 100 [mm]	*R* 125 [mm]	*R* 150 [mm]	*Bi* [mm]	*Ba* [mm]	*AR* [mm]	*IR* [mm]	Weight [kg/m]
2208....052055/300.0	.052.063/300.0	.052.075/300.0	.052100/300.0	.052125/300.0	.052150/300.0	52,5	80	300	227	≈ 1,20
2208...–	–	.062.075/300.0	.062100/300.0	.062125/300.0	.062150/300.0	62,5	90	300	217	≈ 1,24
2208...–	–	–	.074100/300.0	.074125/300.0	.074150/300.0	74,5	102	300	205	≈ 1,29
2208...–	–	–	.087100/300.0	.087125/300.0	.087150/300.0	87,5	115	300	192	≈ 1,35
2208...–	–	–		.112125/300.0	.112150/300.0	112,5	140	300	167	≈ 1,46

R	055	063	075	100	125	150
K	265	290	330	410	485	565

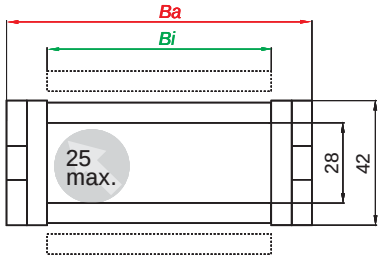
Pitch *T* = 46 mm/link
Links/m = 22 (1012 mm)

Order key

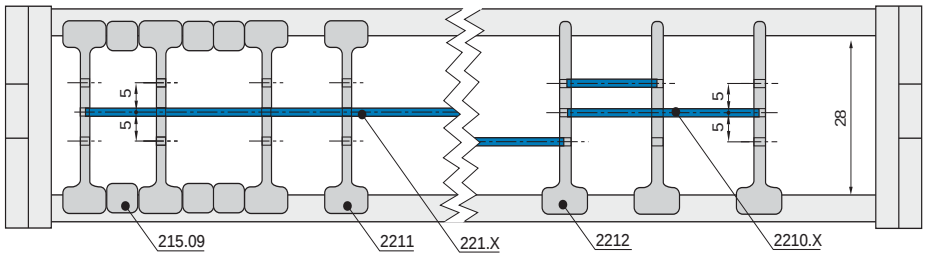
2208.062.075/300.0

- Standard color black
- Outer radius *AR*
- Bending radius *R*
- Width index (depends on *Bi*)
- Series

Dimensioning



Series 2208 | Interior separation | Standard



For this Series the interior separation elements of Series E4.28 may be used (except side-plates) ▶ from page 640

AR = Outer radius, e-chain® | *Ba* = Outer width, e-chain® | *R* = Bending radius, e-chain®
IR = Inner radius, e-chain® | *Bi* = Inner width, e-chain® | *K* = Add-on for bending radius

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

twisterchain® classic | Series 2808 | Product range

32

For new designs we recommend: TC32 ► from page 1092

Series 2808 | snap-open along inner and outer radius

	R 100 [mm]	R 125 [mm]	R 150 [mm]	R 175 [mm]	R 200 [mm]	R 250 [mm]	Bi [mm]	Ba [mm]	AR [mm]	IR [mm]	Weight [kg/m]
2808...	.05. 100/400.0	.05. 125/400.0	.05. 150/400.0	.05. 175/400.0	.05. 200/400.0	.05. 250/400.0	50	81	400	329,5	≈ 1,76
2808...	.06. 100/400.0	.06. 125/400.0	.06. 150/400.0	.06. 175/400.0	.06. 200/400.0	.06. 250/400.0	68	99	400	311,5	≈ 1,87
2808...	.07. 100/400.0	.07. 125/400.0	.07. 150/400.0	.07. 175/400.0	.07. 200/400.0	.07. 250/400.0	75	106	400	304,5	≈ 1,92
2808...	.087100/400.0	.087125/400.0	.087150/400.0	.087175/400.0	.087200/400.0	.087250/400.0	87,5	118,5	400	292	≈ 1,99
2808...	–	–	.10. 150/400.0	.10. 175/400.0	.10. 200/400.0	.10. 250/400.0	100	131	400	279,5	≈ 2,07
2808...	–	–	–	.11. 175/400.0	.11. 200/400.0	.11. 250/400.0	108	139	400	271,5	≈ 2,12
2808...	–	–	–	.12. 175/400.0	.12. 200/400.0	.12. 250/400.0	125	156	400	254,5	≈ 2,22
2808...	–	–	–	–	–	.137250/400.0	137,5	168,5	400	242	≈ 2,30
2808...	–	–	–	–	–	.15. 250/400.0	150	181	400	229,5	≈ 2,38
2808...	.05. 100/500.0	.05. 125/500.0	.05. 150/500.0	.05. 175/500.0	.05. 200/500.0	.05. 250/500.0	50	81	500	429,5	≈ 1,76
2808...	.06. 100/500.0	.06. 125/500.0	.06. 150/500.0	.06. 175/500.0	.06. 200/500.0	.06. 250/500.0	68	99	500	411,5	≈ 1,87
2808...	.07. 100/500.0	.07. 125/500.0	.07. 150/500.0	.07. 175/500.0	.07. 200/500.0	.07. 250/500.0	75	106	500	404,5	≈ 1,92
2808...	.087100/500.0	.087125/500.0	.087150/500.0	.087175/500.0	.087200/500.0	.087250/500.0	87,5	118,5	500	392	≈ 1,99
2808...	.10. 100/500.0	.10. 125/500.0	.10. 150/500.0	.10. 175/500.0	.10. 200/500.0	.10. 250/500.0	100	131	500	379,5	≈ 2,07
2808...	–	.11. 125/500.0	.11. 150/500.0	.11. 175/500.0	.11. 200/500.0	.11. 250/500.0	108	139	500	371,5	≈ 2,12
2808...	–	.12. 125/500.0	.12. 150/500.0	.12. 175/500.0	.12. 200/500.0	.12. 250/500.0	125	156	500	354,5	≈ 2,22
2808...	–	–	.137150/500.0	.137175/500.0	.137200/500.0	.137250/500.0	137,5	168,5	500	342	≈ 2,30
2808...	–	–	.15. 150/500.0	.15. 175/500.0	.15. 200/500.0	.15. 250/500.0	150	181	500	329,5	≈ 2,38
2808...	.05. 100/600.0	.05. 125/600.0	.05. 150/600.0	.05. 175/600.0	.05. 200/600.0	.05. 250/600.0	50	81	600	529,5	≈ 1,76
2808...	.06. 100/600.0	.06. 125/600.0	.06. 150/600.0	.06. 175/600.0	.06. 200/600.0	.06. 250/600.0	68	99	600	511,5	≈ 1,87
2808...	.07. 100/600.0	.07. 125/600.0	.07. 150/600.0	.07. 175/600.0	.07. 200/600.0	.07. 250/600.0	75	106	600	504,5	≈ 1,92
2808...	.087100/600.0	.087125/600.0	.087150/600.0	.087175/600.0	.087200/600.0	.087250/600.0	87,5	118,5	600	492	≈ 1,99
2808...	.10. 100/600.0	.10. 125/600.0	.10. 150/600.0	.10. 175/600.0	.10. 200/600.0	.10. 250/600.0	100	131	600	479,5	≈ 2,07
2808...	.11. 100/600.0	.11. 125/600.0	.11. 150/600.0	.11. 175/600.0	.11. 200/600.0	.11. 250/600.0	108	139	600	471,5	≈ 2,12
2808...	–	.12. 125/600.0	.12. 150/600.0	.12. 175/600.0	.12. 200/600.0	.12. 250/600.0	125	156	600	454,5	≈ 2,22
2808...	–	.137125/600.0	.137150/600.0	.137175/600.0	.137200/600.0	.137250/600.0	137,5	168,5	600	442	≈ 2,30
2808...	–	–	.15. 150/600.0	.15. 175/600.0	.15. 200/600.0	.15. 250/600.0	150	181	600	429,5	≈ 2,38

R	100	125	150	175	200	250
K	465	550	620	700	780	940

Pitch *T* = 56 mm/link
Links/m = 18 (1008 mm)

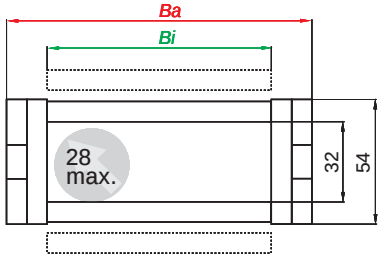
twisterchain® classic | Series 2808 | Product range

Order key

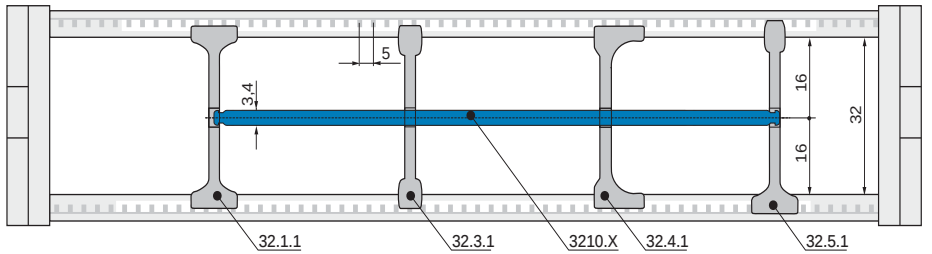
2808.15.150/600.0

- Standard color black
- Outer radius *AR*
- Bending radius *R*
- Width index (depends on *Bi*)
- Series

Dimensioning



Series 2808 | Interior separation | Standard



For this Series the interior separation elements of Series E4.32 may be used (except side-plates) ► from page 652

AR = Outer radius, e-chain® *Ba* = Outer width, e-chain® *R* = Bending radius, e-chain®
IR = Inner radius, e-chain® *Bi* = Inner width, e-chain® *K* = Add-on for bending radius

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Series 3808 | snap-open along inner and outer radius

	R 100 [mm]	R 125 [mm]	R 150 [mm]	R 200 [mm]	R 250 [mm]	Bi [mm]	Ba [mm]	AR [mm]	IR [mm]	
3808...	.05. 100/400 .0	.05. 125/400 .0	.05. 150/400 .0	.05. 200/400 .0	.05. 250/400 .0	50	85	400	327,5	≈ 2,21
3808...	.06. 100/400 .0	.06. 125/400 .0	.06. 150/400 .0	.06. 200/400 .0	.06. 250/400 .0	68	103	400	309,5	≈ 2,30
3808...	.07. 100/400 .0	.07. 125/400 .0	.07. 150/400 .0	.07. 200/400 .0	.07. 250/400 .0	75	110	400	302,5	≈ 2,33
3808...	.087 100/400 .0	.087 125/400 .0	.087 150/400 .0	.087 200/400 .0	.087 250/400 .0	87,5	122,5	400	290	≈ 2,40
3808...	.10. 100/400 .0	.10. 125/400 .0	.10. 150/400 .0	.10. 200/400 .0	.10. 250/400 .0	100	135	400	277,5	≈ 2,46
3808...	–	.11. 125/400 .0	.11. 150/400 .0	.11. 200/400 .0	.11. 250/400 .0	108	143	400	269,5	≈ 2,50
3808...	–	.12. 125/400 .0	.12. 150/400 .0	.12. 200/400 .0	.12. 250/400 .0	125	160	400	252,5	≈ 2,59
3808...	–	.137 125/400 .0	.137 150/400 .0	.137 200/400 .0	.137 250/400 .0	137,5	172,5	400	240	≈ 2,65
3808...	–	–	–	.15. 200/400 .0	.15. 250/400 .0	150	185	400	227,5	≈ 2,72
3808...	–	–	–	.162 200/400 .0	.162 250/400 .0	162,5	197,5	400	215	≈ 2,78
3808...	–	–	–	–	.17. 250/400 .0	168	203	400	209,5	≈ 2,81
3808...	–	–	–	–	.18. 250/400 .0	175	210	400	202,5	≈ 2,84
3808...	–	–	–	–	–	187,5	222,5	400	190	≈ 2,91
3808...	–	–	–	–	–	200	235	400	177,5	≈ 2,97
3808...	.05. 100/500 .0	.05. 125/500 .0	.05. 150/500 .0	.05. 200/500 .0	.05. 250/500 .0	50	85	500	427,5	≈ 2,21
3808...	.06. 100/500 .0	.06. 125/500 .0	.06. 150/500 .0	.06. 200/500 .0	.06. 250/500 .0	68	103	500	409,5	≈ 2,30
3808...	.07. 100/500 .0	.07. 125/500 .0	.07. 150/500 .0	.07. 200/500 .0	.07. 250/500 .0	75	110	500	402,5	≈ 2,33
3808...	.087 100/500 .0	.087 125/500 .0	.087 150/500 .0	.087 200/500 .0	.087 250/500 .0	87,5	122,5	500	390	≈ 2,40
3808...	.10. 100/500 .0	.10. 125/500 .0	.10. 150/500 .0	.10. 200/500 .0	.10. 250/500 .0	100	135	500	377,5	≈ 2,46
3808...	–	.11. 125/500 .0	.11. 150/500 .0	.11. 200/500 0	.11. 250/500 0	108	143	500	369,5	≈ 2,50
3808...	–	.12. 125/500 .0	.12. 150/500 .0	.12. 200/500 .0	.12. 250/500 .0	125	160	500	352,5	≈ 2,59
3808...	–	–	.137 150/500 .0	.137 200/500 .0	.137 250/500 .0	137,5	172,5	500	340	≈ 2,65
3808...	–	–	.15. 150/500 .0	.15. 200/500 .0	.15. 250/500 .0	150	185	500	327,5	≈ 2,72
3808...	–	–	–	.162 200/500 .0	.162 250/500 .0	162,5	197,5	500	315	≈ 2,78
3808...	–	–	–	.17. 200/500 .0	.17. 250/500 .0	168	203	500	309,5	≈ 2,81
3808...	–	–	–	.18. 200/500 .0	.18. 250/500 .0	175	210	500	302,5	≈ 2,84
3808...	–	–	–	.187 200/500 .0	.187 250/500 .0	187,5	222,5	500	290	≈ 2,91
3808...	–	–	–	.20. 200/500 .0	.20. 250/500 .0	200	235	500	277,5	≈ 2,97
3808...	.05. 100/600 .0	.05. 125/600 .0	.05. 150/600 .0	.05. 200/600 0	.05. 250/600 0	50	85	600	527,5	≈ 2,21
3808...	.06. 100/600 .0	.06. 125/600 .0	.06. 150/600 .0	.06. 200/600 .0	.06. 250/600 .0	68	103	600	509,5	≈ 2,30
3808...	.07. 100/600 .0	.07. 125/600 .0	.07. 150/600 .0	.07. 200/600 .0	.07. 250/600 .0	75	110	600	502,5	≈ 2,33
3808...	.087 100/600 .0	.087 125/600 .0	.087 150/600 .0	.087 200/600 .0	.087 250/600 .0	87,5	122,5	600	490	≈ 2,40
3808...	.10. 100/600 .0	.10. 125/600 .0	.10. 150/600 .0	.10. 200/600 .0	.10. 250/600 .0	100	135	600	477,5	≈ 2,46
3808...	.11. 100/600 .0	.11. 125/600 .0	.11. 150/600 .0	.11. 200/600 .0	.11. 250/600 .0	108	143	600	469,5	≈ 2,50
3808...	.12. 100/600 .0	.12. 125/600 .0	.12. 150/600 .0	.12. 200/600 .0	.12. 250/600 .0	125	160	600	452,5	≈ 2,59
3808...	.137 100/600 .0	.137 125/600 .0	.137 150/600 .0	.137 200/600 .0	.137 250/600 .0	137,5	172,5	600	440	≈ 2,65
3808...	.15. 100/600 .0	.15. 125/600 .0	.15. 150/600 .0	.15. 200/600 .0	.15. 250/600 .0	150	185	600	427,5	≈ 2,72
3808...	–	–	–	.162 200/600 .0	.162 250/600 .0	162,5	197,5	600	415	≈ 2,78
3808...	–	–	–	.17. 200/600 .0	.17. 250/600 .0	168	203	600	409,5	≈ 2,81
3808...	–	–	–	.18. 200/600 .0	.18. 250/600 .0	175	210	600	402,5	≈ 2,84
3808...	–	–	–	.187 200/600 .0	.187 250/600 .0	187,5	222,5	600	390	≈ 2,91
3808...	–	–	–	.20. 200/600 .0	.20. 250/600 .0	200	235	600	377,5	≈ 2,97

R	100	125	150	200	250
K	500	650	725	875	1050

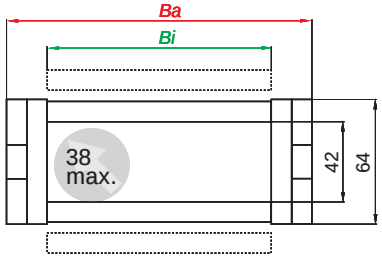
Pitch *T* = 67 mm/link
Links/m = 15 (1005 mm)

Order key

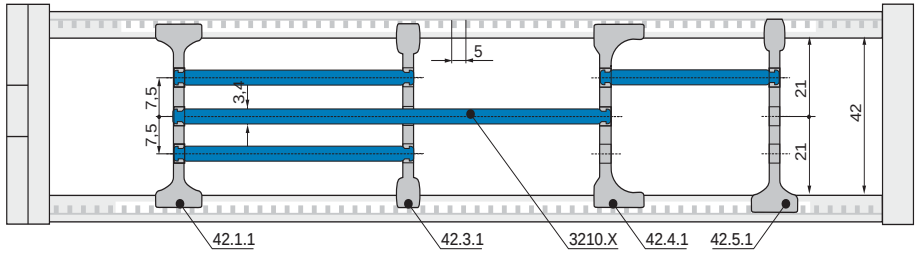
3808.20.200/600.0

- Standard color black
- Outer radius *AR*
- Bending radius *R*
- Width index (depends on *Bi*)
- Series

Dimensioning



Series 3808 | Interior separation | Standard



For this Series the interior separation elements of Series E4.42 may be used (except side-plates) ► from page 668

AR = Outer radius, e-chain® *Ba* = Outer width, e-chain® *R* = Bending radius, e-chain®
IR = Inner radius, e-chain® *Bi* = Inner width, e-chain® *K* = Add-on for bending radius

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Series 4008 | snap-open along inner and outer radius

	R 150 [mm]	R 200 [mm]	R 250 [mm]	R 300 [mm]	R 400 [mm]	Bi [mm]	Ba [mm]	AR [mm]	IR [mm]	Weight [kg/m]
4008...	.05. 150/650 .0	.05. 200/650 .0	.05. 250/650 .0	.05. 300/650 .0	.05. 400/650 .0	50	93	650	572	≈ 3,28
4008...	.06. 150/650 .0	.06. 200/650 .0	.06. 250/650 .0	.06. 300/650 .0	.06. 400/650 .0	65	108	650	557	≈ 3,38
4008...	.07. 150/650 .0	.07. 200/650 .0	.07. 250/650 .0	.07. 300/650 .0	.07. 400/650 .0	75	118	650	547	≈ 3,44
4008...	–	.10. 200/650 .0	.10. 250/650 .0	.10. 300/650 .0	.10. 400/650 .0	100	143	650	522	≈ 3,61
4008...	–	.11. 200/650 .0	.11. 250/650 .0	.11. 300/650 .0	.11. 400/650 .0	112	155	650	510	≈ 3,69
4008...	–	.12. 200/650 .0	.12. 250/650 .0	.12. 300/650 .0	.12. 400/650 .0	125	168	650	497	≈ 3,77
4008...	–	–	.13. 250/650 .0	.13. 300/650 .0	.13. 400/650 .0	137,5	180,5	650	484,5	≈ 3,86
4008...	–	–	.15. 250/650 .0	.15. 300/650 .0	.15. 400/650 .0	150	193	650	472	≈ 3,94
4008...	–	–	.16. 250/650 .0	.16. 300/650 .0	.16. 400/650 .0	162,5	205,5	650	459,5	≈ 4,02
4008...	–	–	–	.17. 300/650	.17. 400/650	175	218	650	447	≈ 4,10
4008...	–	–	–	.18. 300/650	.18. 400/650	187,5	230,5	650	434,5	≈ 4,19
4008...	–	–	–	–	–	200	243	650	422	≈ 4,27
4008...	.05. 150/750 .0	.05. 200/750 .0	.05. 250/750 .0	.05. 300/750 .0	.05. 400/750 .0	50	93	750	672	≈ 3,28
4008...	.06. 150/750 .0	.06. 200/750 .0	.06. 250/750 .0	.06. 300/750 .0	.06. 400/750 .0	65	108	750	657	≈ 3,38
4008...	.07. 150/750 .0	.07. 200/750 .0	.07. 250/750 .0	.07. 300/750 .0	.07. 400/750 .0	75	118	750	647	≈ 3,44
4008...	.10. 150/750 .0	.10. 200/750 .0	.10. 250/750 .0	.10. 300/750 .0	.10. 400/750 .0	100	143	750	622	≈ 3,61
4008...	.11. 150/750 .0	.11. 200/750 .0	.11. 250/750 .0	.11. 300/750 .0	.11. 400/750 .0	112	155	750	610	≈ 3,69
4008...	–	.12. 200/750 .0	.12. 250/750 .0	.12. 300/750 .0	.12. 400/750 .0	125	168	750	597	≈ 3,77
4008...	–	.13. 200/750 .0	.13. 250/750 .0	.13. 300/750 .0	.13. 400/750 .0	137,5	180,5	750	584,5	≈ 3,86
4008...	–	.15. 200/750 .0	.15. 250/750 .0	.15. 300/750 .0	.15. 400/750 .0	150	193	750	572	≈ 3,94
4008...	–	.16. 200/750 .0	.16. 250/750 .0	.16. 300/750 .0	.16. 400/750 .0	162,5	205,5	750	559,5	≈ 4,02
4008...	–	–	.17. 250/750 .0	.17. 300/750 .0	.17. 400/750 .0	175	218	750	547	≈ 4,10
4008...	–	–	.18. 250/750 .0	.18. 300/750 .0	.18. 400/750 .0	187,5	230,5	750	534,5	≈ 4,19
4008...	–	–	.20. 250/750 .0	.20. 300/750 .0	.20. 400/750 .0	200	243	750	522	≈ 4,27
4008...	.05. 150/850 .0	.05. 200/850 .0	.05. 250/850 .0	.05. 300/850 .0	.05. 400/850 .0	50	93	850	772	≈ 3,28
4008...	.06. 150/850 .0	.06. 200/850 .0	.06. 250/850 .0	.06. 300/850 .0	.06. 400/850 .0	65	108	850	757	≈ 3,38
4008...	.07. 150/850 .0	.07. 200/850 .0	.07. 250/850 .0	.07. 300/850 .0	.07. 400/850 .0	75	118	850	747	≈ 3,44
4008...	.10. 150/850 .0	.10. 200/850 .0	.10. 250/850 .0	.10. 300/850 .0	.10. 400/850 .0	100	143	850	722	≈ 3,61
4008...	.11. 150/850 .0	.11. 200/850 .0	.11. 250/850 .0	.11. 300/850 .0	.11. 400/850 .0	112	155	850	710	≈ 3,69
4008...	.12. 150/850 .0	.12. 200/850 .0	.12. 250/850 .0	.12. 300/850 .0	.12. 400/850 .0	125	168	850	697	≈ 3,77
4008...		.13. 200/850 .0	.13. 250/850 .0	.13. 300/850 .0	.13. 400/850 .0	137,5	180,5	850	684,5	≈ 3,86
4008...	–	.15. 200/850 .0	.15. 250/850 .0	.15. 300/850 .0	.15. 400/850 .0	150	193	850	672	≈ 3,94
4008...	–	.16. 200/850 .0	.16. 250/850 .0	.16. 300/850 .0	.16. 400/850 .0	162,5	205,5	850	659,5	≈ 4,02
4008...	–	.17. 200/850 .0	.17. 250/850 .0	.17. 300/850 .0	.17. 400/850 .0	175	218	850	647	≈ 4,10
4008...	–	.18. 200/850 .0	.18. 250/850 .0	.18. 300/850 .0	.18. 400/850 .0	187,5	230,5	850	634,5	≈ 4,19
4008...	–	–	.20. 250/850 .0	.20. 300/850 .0	.20. 400/850 .0	200	243	850	622	≈ 4,27

R	150	200	250	300	400
K	750	900	1050	1225	1450

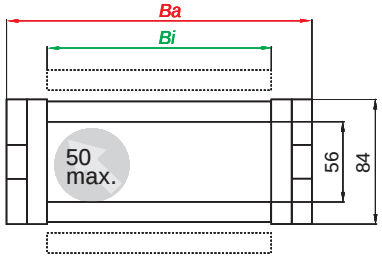
Pitch T = 91 mm/link
Links/m = 11 (1001 mm)

Order key

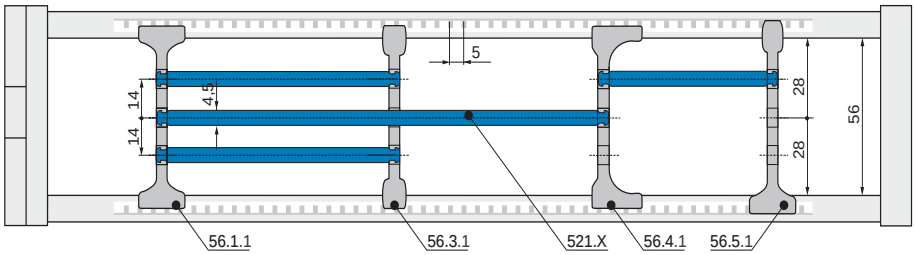
4008.20.250/850.0

- Standard color black
- Outer radius AR
- Bending radius R
- Width index (depends on Bi)
- Series

Dimensioning



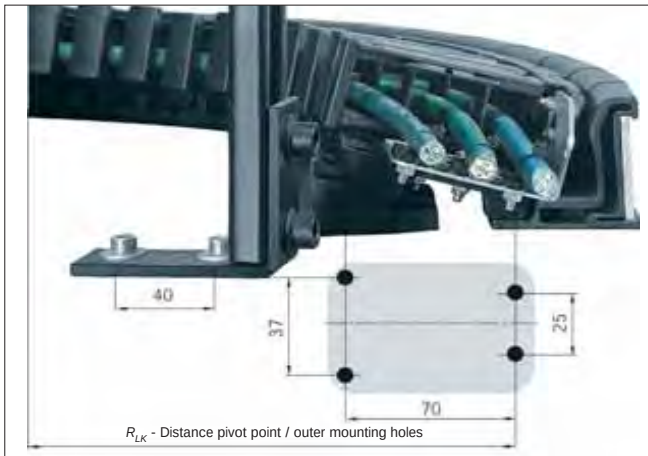
Series 4008 | Interior separation | Standard



For this Series the interior separation elements of Series E4.56 may be used (except side-plates) ► from page 684

AR = Outer radius, e-chain® Ba = Outer width, e-chain® R = Bending radius, e-chain®
IR = Inner radius, e-chain® Bi = Inner width, e-chain® K = Add-on for bending radius

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)





Position 1 Position 2

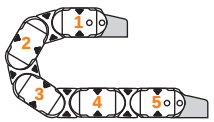


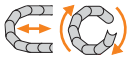
Steel, one-piece | Recommended for unsupported and rotatory applications

For Series	Part No. full set	Part No. position 1	Part No. position 2
2208 ▶	22080.34.VS.E	22080.30.VS.E	22080.40.VS.E
2808 ▶	28080.34.VS.E	28080.30.VS.E	28080.40.VS.E
3808 ▶	38080.34.VS.E	38080.30.VS.E	38080.40.VS.E
4008 ▶	40080.34.VS.E	40080.30.VS.E	40080.40.VS.E

The guide trough must be mounted at the fixed point of the twisterchain®, as shown by the drilling template in the illustration. The following bolted connections are permitted:
● Bore Hole: 4 x Ø 6,6 - 7 mm ● Mounting only with bolts: 4 x bolts M6
Other connection dimensions for mounting
the guide troughType 02 ▶ from page 1126

Note: twisterchain® e-chains® must always end with an outer side link. At the moving end an outer side link always forms the first e-chain® link.
Please note when calculating!





- One part for all e-chain® widths
- Electrically conductive
- Universal use
- Material: Stainless steel: 1.4301

Part No. structure
22080. 34.VS.**E**

- Stainless steel
- Standard: bolted
- Full set = 34
- Mounting brackets for selected e-chain® type

Single-part order
Position 1
22080.30.VS.E
Position 2
22080.40.VS.E

Save assembly time and costs - Better guidance for circular motion - increase cycle life! New guide trough system - Typ 01 ▶ from page 1100



With the new twisterchain® trough, the previously complex adjustment work is clearly minimized. Assembly time is reduced from 6h to 2h. While reducing noise levels, travel speed and service life can be increased, thanks to an almost all-plastic design
▶ www.igus.eu/eu/TCtroughnew



twisterchain® classic for continuous industrial duty in 3-shift operation on a buckling arm robot (for welding applications, rotary movement 420°)



twisterchain® classic in a guide trough for rotary movements on an articulated robot

Guide trough Type 02 for twisterchain® classic

- Guidance of the e-chain®
- Minimized wear on the e-chain®
- Optimal running smoothness
- Rotation angle up to 400°

The modular design of the guide trough makes it possible to connect a large number of e-chains®, circle and bending radii by using the same trough sections. If the e-chain® radius changes, the trough can simply be adapted without purchasing a completely new trough. The table below will assist you in selecting the right guide trough system. The specified part number includes the complete trough system. In all cases, you should state the twisterchain® type when ordering. For new designs we recommend: New guide trough system - Typ 01 ▶ from page 1100



Guide trough and bottom support (see figure) is required only if the support for the upper run cannot be mounted on the machine (Rotation angle > 180°).

Product range | twisterchain® classic guide trough Type 02

Part No. Series	Outer radius AR [mm]	Rotation angle min.-max. α [°]	Trough assembly Type 02	Trough assembly with bottom support	Number of support
2208	- 300	45 - 100	9 2208.4.45.300/ Bi.R	not necessary	
	- 300	>100 - 180	9 2208.4.90.300/ Bi.R	not necessary	
	- 300	>180 - 270	9 2208.4.135.300/Bi.R*	9 2208.5.135.300/Bi.R	1
	- 300	>270 - 360	9 2208.4.180.300/Bi.R**	9 2208.5.180.300/Bi.R	2
2808 / 3808 / 4008	- 450	45 - 100	9 XXXX.4.45.400/ Bi.R	not necessary	
	- 450	>100 - 180	9 XXXX.4.90.400/ Bi.R	not necessary	
	- 450	>180 - 270	9 XXXX.4.135.400/Bi.R*	9 XXXX.5.135.400/Bi.R	1
	- 450	>270 - 360	9 XXXX.4.180.400/Bi.R**	9 XXXX.5.180.400/Bi.R	2
	>450-550	45 - 100	9 XXXX.4.45.500/ Bi.R	not necessary	
	>450-550	>100 - 180	9 XXXX.4.90.500/ Bi.R	not necessary	
	>450-550	>180 - 270	9 XXXX.4.135.500/Bi.R*	9 XXXX.5.135.500/Bi.R	1
	>450-550	>270 - 360	9 XXXX.4.180.500/Bi.R**	9 XXXX.5.180.500/Bi.R	2
	>550-650	45 - 100	9 XXXX.4.45.600/ Bi.R	not necessary	
	>550-650	>100 - 180	9 XXXX.4.90.600/ Bi.R	not necessary	
	>550-650	>180 - 270	9 XXXX.4.135.600/Bi.R*	9 XXXX.5.135.600/Bi.R	1
	>550-650	>270 - 360	9 XXXX.4.180.600/Bi.R**	9 XXXX.5.180.600/Bi.R	2
	>650	>360	Ask us, we will be pleased to help you!		

Supplement Part No. 9 XXXX with required Series (2208, 2808, 3808 or 4008), the value *Bi* and the corresponding value of the required bending radius *R* ► 9 4008.5.180.600/06.250

* These troughs feature one support for the upper run / ** these troughs feature two supports for the upper run

9.4008.5.180.600/06.250

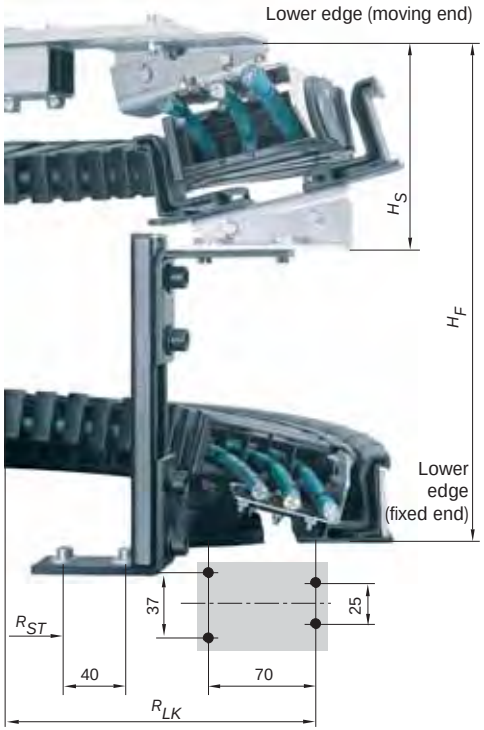
Order key
Guide trough Type 02

R - Bending radius, please add appropriate value
Bi - widths index, please add appropriate value
Outer radius e-chain®
Trough angle (Standard 180°, 135°, 90°, 45°)
Trough version (.5. with and .4. without bottom support)
Guide trough - selected Series (2208, 2808, 3808, 4008)

twisterchain® classic | Guide Troughs Type 02 | Accessories

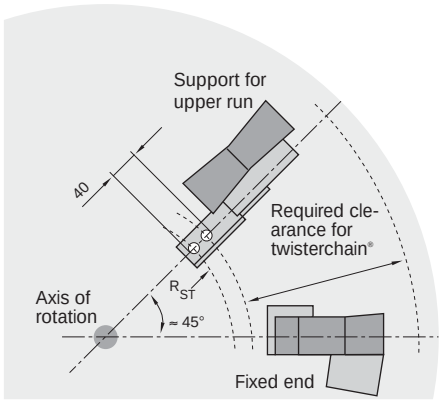
2208
2808
3808
4008

Support for the upper run of twisterchain® classic (as of 180° rotation angle)

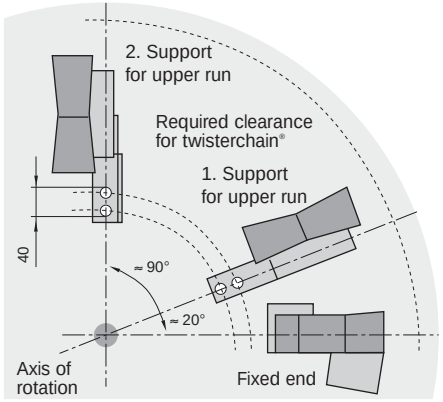


The guide trough must be mounted at the fixed end of the twisterchain® as shown by the drilling template.The following bolted connections are permitted:

- Bore hole: 4 x Ø 6,6 - 7 mm
- Mounting only with bolts: 4 x bolt M6



Mounting position for one support

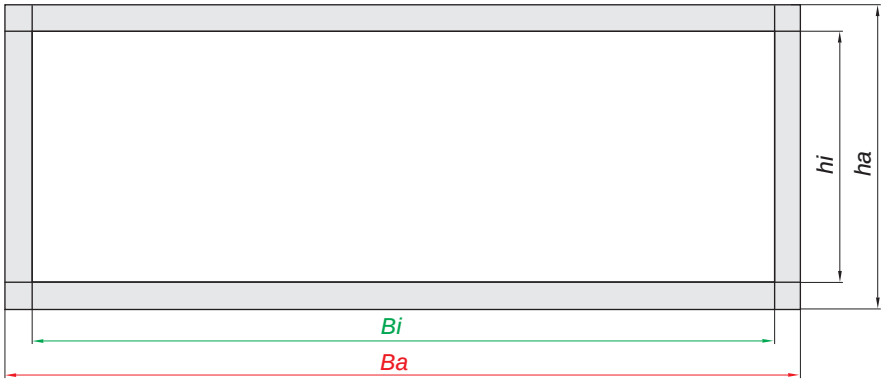


Mounting position for two supports

Installation Dimensions | twisterchain® classic guide trough Type 02

Series Part No.	R_{LK} [mm]	H_S [mm]	H_F [mm] for Bending radius *R* 055	063	075	100	125	150	175	200	250	300	400	Part No. Guide trough	R_{ST} [mm]
2208...300	265	130	195	211	235	285	335	385	–	–	–	–	–	92208...300	145
2808...400	360	146	–	–	–	290	340	390	440	490	590	–	–	92808...400	192,5
3808...400	360	156	–	–	–	300	350	400	–	500	600	–	–	93808...400	192,5
2808...500	460	146	–	–	–	300	350	400	450	500	600	–	–	92808...500	292,5
3808...500	460	156	–	–	–	310	360	410	–	510	610	–	–	93808...500	292,5
2808...600	560	146	–	–	–	305	355	405	455	505	605	–	–	92808...600	392,5
3808...600	560	156	–	–	–	315	365	415	–	515	615	–	–	93808...600	392,5
4008...650	610	176	–	–	–	–	–	432	–	532	632	732	932	94008...650	442,5
4008...750	710	176	–	–	–	–	–	432	–	532	632	732	932	94008...750	542,5

This calculation sheet should help you to select the right igus® twisterchain® System for your application.



Rotation angle

Please sketch the cable and hose layout within the e-chain®. Note: To find the correct Series, refer to the thickest cable diameter, plus cable clearance of approx. 20% of the e-chain® interior.

twisterchain® Series

☐ 2208 ☐ 2808 ☐ 3808 ☐ 4008

Existing installation space

X_1 max..... X_2 max..... H_F max.....

e-chain® data

Outer radius *AR* ..... Inner radius *IR* .....

Bending radius *R* ..... Rotation angle [°] .....

Guide trough

☐ yes ☐ no

Part No. trough Type 02 9._ _ _ _ . _ . _ _ _ . _ _ _ / _ _ . _ _ _

Order example (9.4008.5.180.600/06.250)

Supporting structure necessary

☐ yes ☐ no

The guide trough part number includes all the necessary elements for proper operation. The rotation angle is dependent upon support for the upper run and should be assembled on-site. If on-site assembly is not possible. we will deliver a supporting structure which can be assembled on the floor and is based on the height of the lower trough run. If necessary, we will design a supporting structure specially adapted to your installation!

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Please supply us with your application data. We will then send you a full analysis with cable/layout suggestion and a quotation immediately. Please consult igus® should you have any questions.

Individual components

☐ twisterchain® ☐ chainflex® high-flex cables ☐ Guide trough ☐ Preassembled

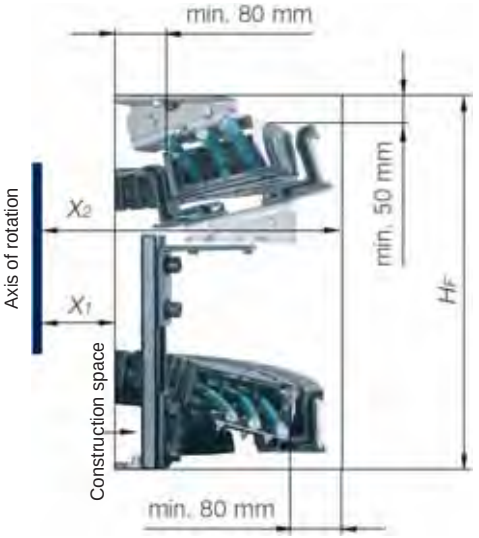
Filling - twisterchain® classic

Number	Type	Ø [mm]	Weight [kg/m]	Permitted bending radius *R* [mm]

Dimensions

X_1 [mm] .....
X_2 [mm] .....
H_F [mm] .....
Rotation angle α* [°] .....

* On machine elements which move to the left and to the right following a circular path, the rotation angle can be determined by adding the two angles



Operating data

Rotations/day .....
Days/year .....
Speed [°/s] .....
Acceleration [°/s²] .....

Environment

Temperature [°C] .....

Moisture ☐ yes ☐ no



igus®
twisterband

Rotary movements
in small space -
20 times around its own axis



Compact, modular and cost-effective - twisterband

Rotary movements in minimum space - 20 times around its own axis. With the very compact igus® twisterband rotations can be implemented economically and with low wear and low maintenance in a confined space. Energy (in the process), data and media are kept secure.

- 4 sizes available
- Rotary movements up to 7000° (Installation position, vertical: up to 3.000°, horizontal: 7.000° and more possible)
- Rotary speeds up to 360°/s possible
- Compact, modular and lightweight
- Ribbons can be shortened easily
- Minimum installation space, builds very close around the rotary axis
- Can be reliably used in various installation positions (horizontal or vertical)
- Cost-effective
- Easy filling
- Limited length compensation possible in combination with igus® chainflex® cables in very limited spaces

Typical industries and applications

● Cable reels ● Robots (robot arms, 1/6 axis, scara robots) ● Tooling machines ● Leisure rides ● Medical equipment ● Radar and telescope equipment ● Aerospace, test, measurement, handling, lifting and installation equipment ● Wind turbines (e.g. blade adjustment) ● Wherever rotary unions are used

reddot design award winner 2011

iF product design award
2011 igus® twisterband



In the Netherlands the twisterband will be used at the musical "Soldaat van Oranje" ensuring that a special platform can turn during the show

twisterband Features



An axis is to be centrally installed for angles of rotation from 1500° rotating and horizontal



Max. rotation angle: As a rule of thumb: Each section gives 180° = 360° more rotation



Film hinge: Easy access and quick filling with cables and hoses



igus® twisterband: Minimum installation space, builds very close around the rotary axis



Compact, modular, economical - up to 7.000° rotary* motions in smallest spaces



Can be reliably used in various installation positions. Limited length compensation possible

Contents, selection table and assembly instructions ► next page

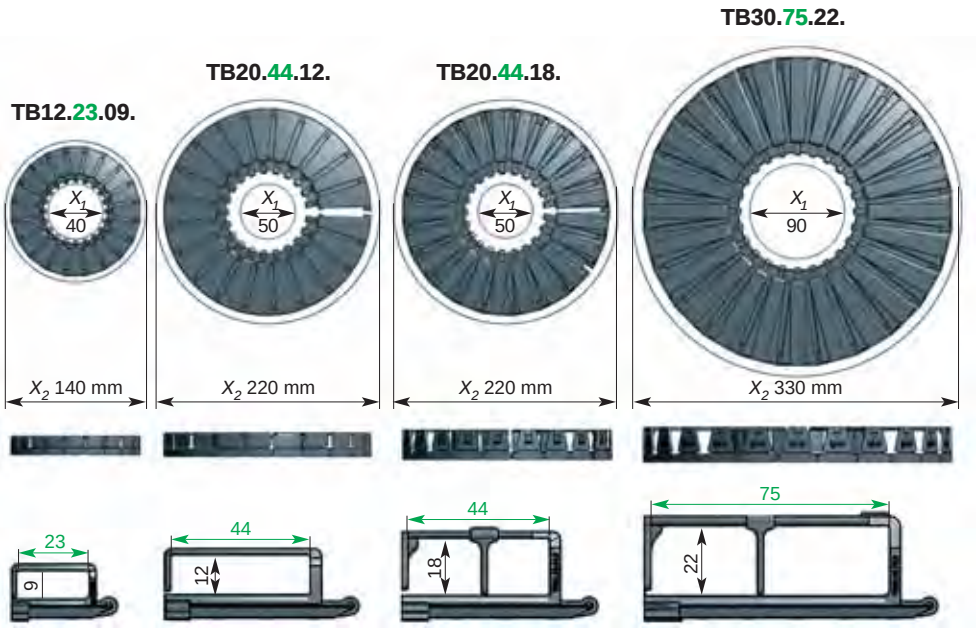


twisterband
Rotary movements in minimum space - 20 times around its own axis

Installation position, vertical: up to 3.000°, horizontal: 7.000° and more possible

Series	Inner height *hi* [mm]	Inner width *BI* [mm]	X_1 [mm]	X_2 [mm]	*R min.* [mm]	*R max.* [mm]	Interior separation	Opening principle	Page
TB12.23.09.X.01.0	9	23	40	140	24	35	–	"easy"-design	1136
TB20.44.12.X.01.0	12	44	50	220	34	57	–	"easy"-design	1136
TB20.44.18.X.01.0	18	44	50	220	34	57	yes	film-hinge	1136
TB30.75.22.X.01.0	22	75	90	330	44	77	yes	film-hinge	1136

More sizes available upon request! X_1 = Inner machine construction space X_2 = Outer machine construction space



Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

TB20.44.18. / TB30.75.22. | Snap-open along outer radius with film-hinge

1



Easy opening and filling of twisterband with a click

2



Please open lock... insert the cable...

3



Push the separator on and add more cables

4



Close film-hinge with a click ...ready!

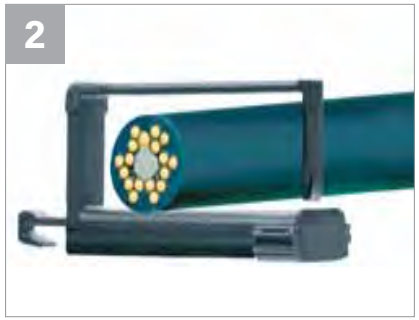
TB12.23.09. / TB20.44.12. | "easy"-design - simply press cables in

1



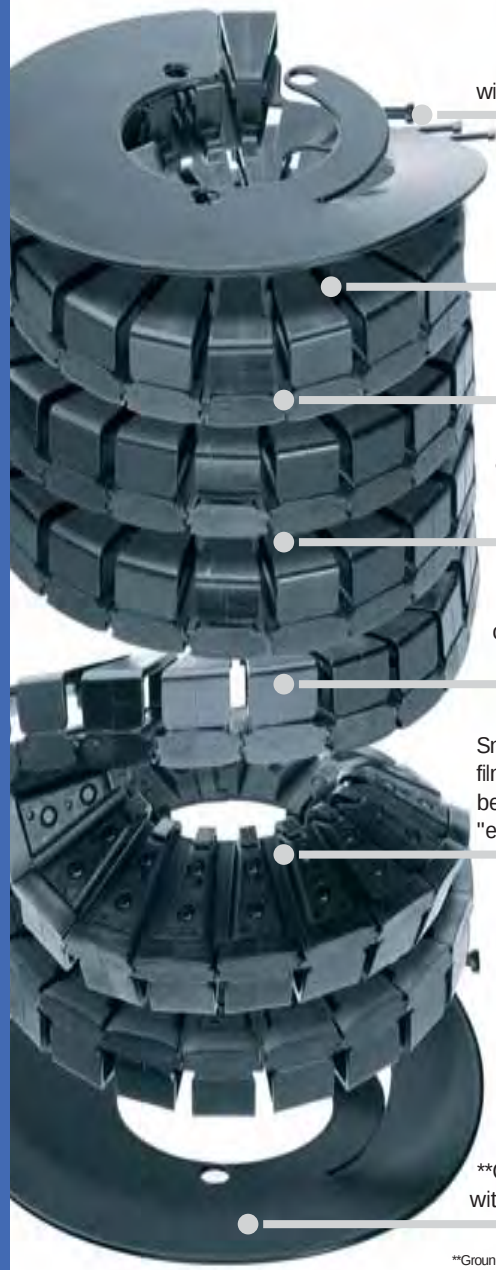
Easy opening and filling of twisterband due to the "easy"-design

2



Please lift e-chain® clamp slightly and simply insert cable

Assembly video available online at ► www.igus.eu/eu/twisterband



**Ground- and base plates are delivered by standard. They are part of the twisterband-module!

Rotary motions in smallest spaces

When to use the twisterband:

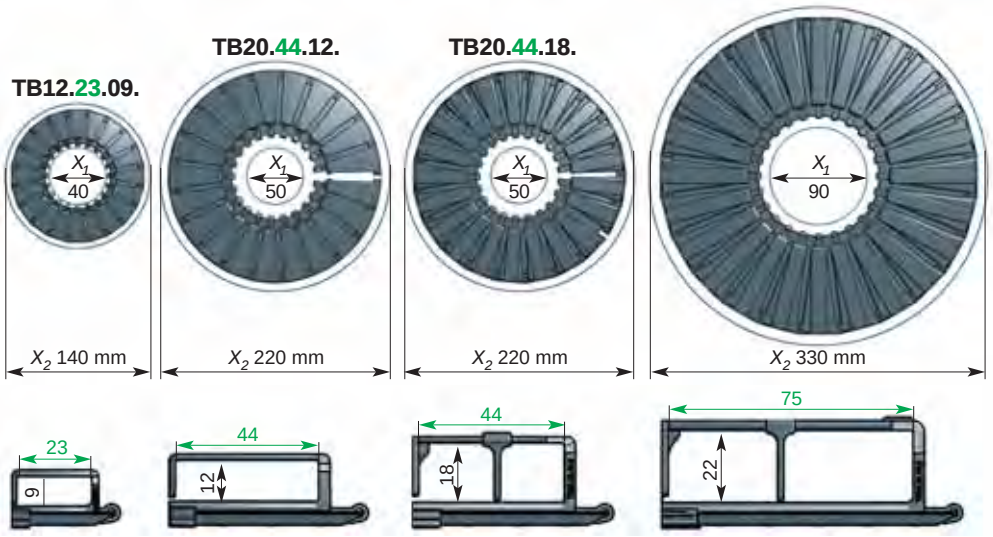
- Rotary movements up to 7000° (Installation position, vertical: up to 3.000°, horizontal: 7.000° and more possible)
- For smallest spaces
- Rotary speeds up to 360°/s possible
- 4 sizes available
- Some parts available with interior separation*
- Easy to fill with film-hinge or to be opened with "easy"-design (depending on Series)
- Limited length adjustment possible

When to use a different igus® Series:

- For higher fill weights
  ► System twisterchain® new, page 1082
- For 3D-movements
  ► triflex® R, page 1018
- RBR-versions for additional fill weights
  ► Design, page 118
- If a smear-and maintenance-free polymer slewing bearing for "endless" turning movements is required
  ► iglidur® polymer slewing bearing, www.igus.eu/eu/PRT
- Use of shielded cables
  ► please ask for support

iF product design award
2011 igus® twisterband

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)



twisterband | Snap-open with film-hinge or to be opened with "easy"-design

Part No. twisterband	Inner width *Bi* [mm]	Inner height *hi* [mm]	X_1 [mm]	X_2 [mm]	*R min.* [mm]	*R max.* [mm]	Opening principle	*d1* [mm]
TB12.23.09. X.01.0	23	9	40	140	24	35	"easy"-design	7
TB20.44.12. X.01.0	44	12	50	220	34	57	"easy"-design	9
TB20.44.18. X.01.0	44	18	50	220	34	57	film-hinge	14
TB30.75.22. X.01.0	75	22	90	330	44	77	film-hinge	17

***Ground- and base plates are delivered by standard. They are part of the twisterband-module!** more twisterband sizes upon request!

Supplement Part No. with required number of ribbons **X** (see calculation box) e.g. TB20.44.12.**6**.01.0

Calculation

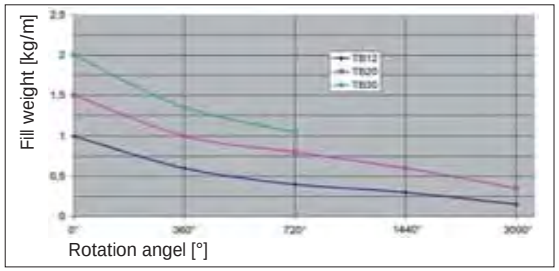
Number of ribbons
depending on rotation angle
(please always round up number of ribbons)

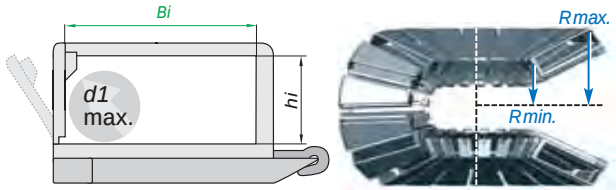
TB12: $X \approx \frac{\text{Rotation angle}}{360} + 2$ = Example:
$X \approx \frac{1200°}{360} + 2$ = result: **X ≈ 6 ribbons**

TB20: $X \approx \frac{\text{Rotation angle}}{340} + 2$ = Example:
$X \approx \frac{1200°}{340} + 2$ = result: **X ≈ 6 ribbons**

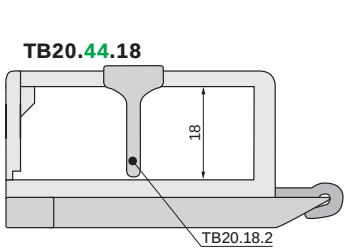
TB30: $X \approx \frac{\text{Rotation angle}}{180} + 6$ = Example:
$X \approx \frac{1200°}{180} + 6$ = result: **X ≈ 13 ribbons**

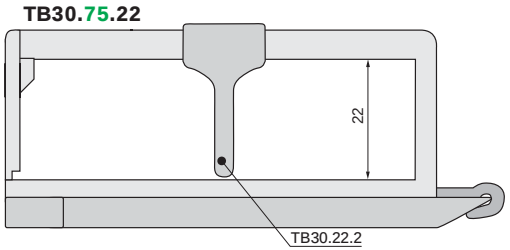
Additional loads depending of the rotation angel



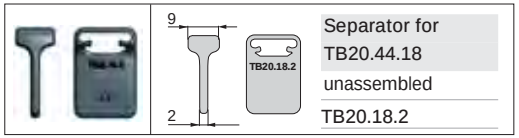


Bi = Inner width e-chain® X_1 = Inner machine construction space *R min.* = Min. bending radius *d1* = Max. cable diameter
hi = Inner height e-chain® X_2 = Outer machine construction space *R max.* = Max. bending radius X = Number of ribbons

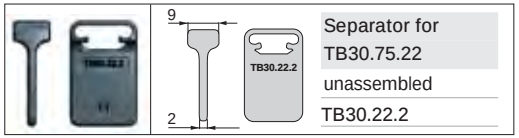




Separators are delivered unassembled. Simply push them onto the crossbar!



Separator for TB20.44.18
unassembled
TB20.18.2



Separator for TB30.75.22
unassembled
TB30.22.2

Separators

For Series TB20 with an inner height of 18 mm and Series TB30 (inner height: 22 mm). For installation simply open the e-chain®, insert a cable and push the separator onto the crossbar. Then add more cables. The separators provide a clear, cable-friendly interior separation.



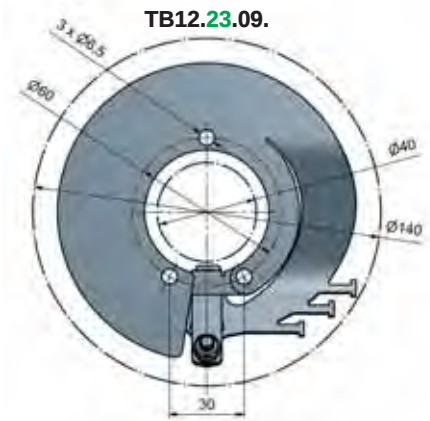
Easy opening and filling of the twisterbandes with a click or with the "easy"-design. Simply push separators on and add more cables. The separators provide a clear, cable-friendly interior separation.



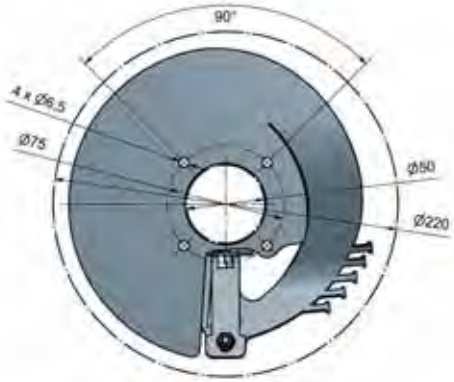
Woodworking machine - the twisterband is used for rotational movements in minimum space.
It provides the energy supply of the gimbal working head. E2/000 e-chains® are installed for the other axes

Dimensions - ground / base plate made of steel with strain relief for the following Series:

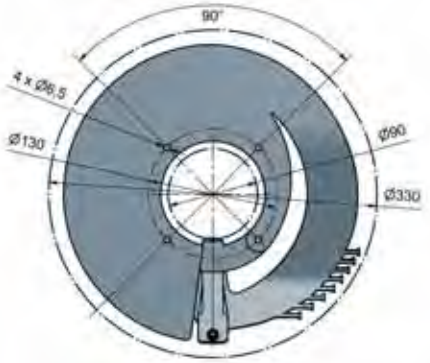
TB12.23.09.



TB20.44.12. / TB20.44.18.



TB30.75.22.



Ground plate and base plate are delivered by standard. They are part of the twisterband-module!



twisterband application of two systems mounted above one another. This space-saving solution allows double filling space with a constant outer diameter of the system



igus® twisterband TB30 for rotational movement of 360° and E2 mini as well as E2/000 e-chains® in this loading and unloading unit



Endurance test of a twisterband module in the igus® test laboratory



Customer application with twisterband TB20.44.18 - consuming and expensive rotary joints could be replaced here



Suitable igus® chainflex® cables for smallest bending radii at ►www.igus.eu/eu/chainflex

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Short description of application

Which task should be performed

Solution at the moment

Rotating angle [°]

min. service life [cycles]

Frequency [°/s]

☐ Continuous rotation ☐ Stop & Go

Cable specification

Quantity | Type (control, data, servo, hoses, etc.) | Outer diameter [ø mm] | min. bending radius [mm]

Environment

Ambient temperature [C°]

☐ ATEX/ESD ☐ Cleanroom

Your data

Company

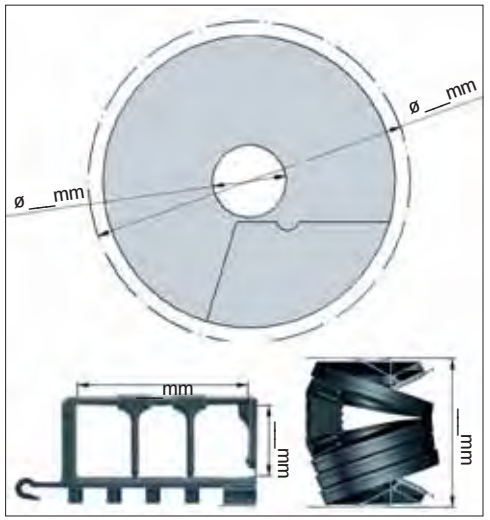
Name

Adress

Phone/Fax

E-mail

Sketch please enter your dimensions [mm]





igus®
e-spool

The alternative
to cable drum.
Protect cables and
conduct various
media safely



New in this catalog

The alternative to cable drum - igus® e-spool

Protect cables and conduct various media safely

Route many different cables in very narrow spaces. e-spool uniquely combines two different energy supply systems: one standard e-chain® is guided by one roller and always provides the precisely correct length and tension of the energy supply system through an integrated retaining spring. In the starting position, the e-chain® is entirely rolled up to save space. The twisterband connects the roller with the shaft block, which serves as an interface with the permanently laid cables.

- No tensile load of the cables
- Different media and diameters in one drum possible
- Energy supply in all possible directions (horizontal, vertical, diagonal)
- Space-saving, no "chain junction"
- No lower run is left behind, the paths remain free
- Cable diameters up to 16 mm

Typical industries and applications

- Telescopic applications
- Light / Stage equipment
- Space-saving alternative to zigzag applications

iF product design award
2013 igus® e-spool



The igus® e-spool in an extendable winding system of the company Becker Electric Forklift Service in Erftstadt. Vertically extendable up to 10 meters. The e-spool supplies the motor of the facility with media and energy cables.
More information ▶ www.igus.eu/spoolcollector



The standard range consists of six different e-spool options: Three lengths equipped with one or two twisterbands

e-spool | SP1 | Introduction | New in this catalog



Figure shows the top view of the e-spool system

Variable use: Energy supply possible in all directions

Space-saving: e-chain® rolled into the home position, the paths remain free

Cost-effective: twisterband as an alternative to rotary feedthrough

Variable energy supply: Various media (electricity, air, liquids) can be routed in a system

The alternative to cable drum

When to use the e-spool series:

- If an uncomplicated, simple solution is desired as a cable drum
- When different media (electricity, air, liquids) should be routed together in a single system

When not to use it:

- Where it must be routed vertically at very high loads

▶ Zigzag applications

e-spool | The igus® cable drum without slip ring

Part No. e-spool with 1 twisterband	Part No. e-spool with 2 twisterbands	Maximum extension length [mm]	ø Drum diameter [mm]
SP1.600.4000.01.0	SP2.600.4000.01.0	4000	600
SP1.700.7000.01.0	SP2.700.7000.01.0	7000	700
SP1.850.14000.01.0	SP2.850.14000.01.0	14000	850

Order key SP1.600.4000.01.0

- 1 twisterband
- Drum diameter ø
- Max. extension length
- Standard color black

System with a single twisterband with 600 mm drum diameter, and 4000 mm maximum extension length

Order key SP2.600.4000.01.0

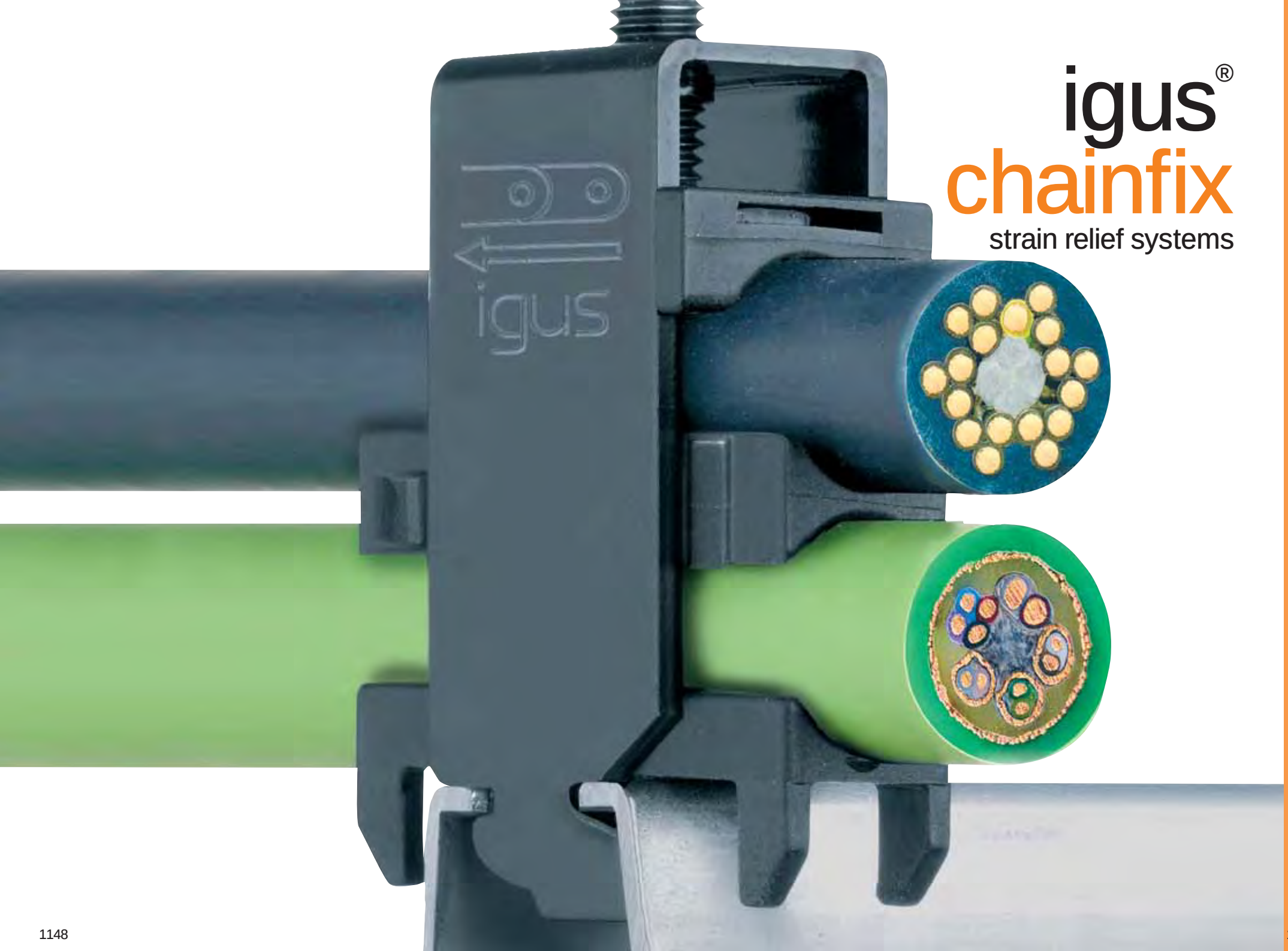
- 2 twisterbands
- Drum diameter ø
- Max. extension length
- Standard color black

System with two twisterbands with 600 mm drum diameter, and 4000 mm maximum extension length



Space-saving solution for a secure vertical movement. igus® e-spool with 3500 mm extension length in this handling unit. Assembled with igus® chainflex® CF9 control and CF30 motor cables as well as CF.Robot torsion cable and CA.PU pneumatic hose

igus®
chainfix
strain relief systems



Flexible and fast assembled. igus® chainfix strain relief.

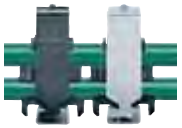
Strain relief from igus® specifically developed for use in e-chains® and dynamic applications. The combination of chainflex® cable materials in contact with the polymer strain relief components of igus® chainfix are designed for high durability of the cables and maximum holding power. For a wide variety of applications igus® is the best solution in terms of costs and benefits, such as the best chainfix strain relief for long travels or rough use or chainfix Nuggets, for simple and inexpensive strain relief solutions. igus® chainfix strain relief components are under practical for the use by customers around the world.



Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

igus® chainfix strain relief | Selection Table

Clamps and stainless steel clamps - for maximum pull forces ►from page 1156



Clamps and bottom saddle elements, chainfix Multi-Clamps	ø [mm]	page
CFX* Single, double, triple standard clamps	6-42	1158
CFXL* Single, double, triple clamps with wide base for maximum pull forces	6-42	1159
Saddle elements - bottom and stacker saddles	6-42	1160
chainfix Multi-Clamps*	6-12	1161

C-profiles ►page 1162



Standard C-profiles and C-profiles for Heavy-Duty applications	page
Standard C-profiles Part No. CF.92.42. (to be integrated into KMA!)	1162
C-profiles Part No. CF.92.52. with increased pull force (mounting in front of e-chain®)	1162

Tiewrap plates - for universal tiewrap, bolted or clip-on ►from page 1164



chainfix tiewrap plates	ø [mm]	page
Option 1A: Tiewrap plates as single part "Series 2000" + cable tiewraps		1164
Option 1B: Tiewrap plates as single part "Series 3000" + cable tiewraps		1165

Tiewrap plates, with clip-on connection for the C-profile ►from page 1166



chainfix tiewrap plates	page
Option 2: Tiewrap plates with clip-on connection for the C-profile	1166
Option 3: Integrated strain relief for E2 e-tubes - Series R	1166
Option 4: Tiewrap plates for fixed crossbars	1167
Option 5: Tiewrap plates for opening crossbars	1167

Clips - high pull forces, plug-in ►from page 1168



chainfix Clips	ø [mm]	page
Option 1: for all e-chains® with C-profiles and	4-24	1168
also suitable for assembly in the KMA mounting brackets		
Option 2: Clip-on strain relief for opening crossbars	4-24	1169

Strain relief separators - with integrated teeth ►from page 1170



chainfix strain relief separator	page
Separator with integrated strain relief -	
easy strain relief with tiewrap	1170

Nuggets - for top hat rail and C-profile ►page 1172



chainfix Nuggets	ø [mm]	page
Option 1: completey simple and universal cable fixation,	≤ 30	1172
for diameter with Ø 20 mm and Ø 30 mm		
Option 2: Fastening through clipping onto standard top hat rail	≤ 20	1172

Blocks - Special strain relief for hoses ►from page 1173



Blocks	ø [mm]	page
Conventional igus® blocks - strain relief for hoses	4,3-14	1173
CFB polymer strain relief connector system,		
many cables in a very confined space		1174

*Standard material: galvanized steel. Also available as stainless steel-version (material stainless steel: 1.4301/AISI 304)

chainfix | Select your strain relief system

e-chain® Series	chainfix							chainfix tiewrap plates						
	Clamps[1]		Clip	Clip	Nugget[1]	Strain relief		Single part	Single part	Clip-on for	Fixed	Cross-	For	For E2
	CFX	CFXL**	C-profile[1]	crossbars[1]		separator[2]		2000[2]	3000[2]	C-profile[2]	crossbar[2]	bar[2]	triflex®[2]	e-tube[2]
triflex®														
easy triflex®	X**												E33X.XX.2	
triflex®	X**												33X.XX	
easy chain®														
E/Z200	X**							20XX.ZB			2050.Z			
E/Z26	X**								30XX.ZB					
E/Z300	X**								30XX.ZB					
E2/000														
1400/1500	X**	X**				21.1.Z		20XX.ZB						
1450/1480	X**	X**						20XX.ZB						
2400/2500	X**	X**				2020.Z		20XX.ZB			2050.Z			
2450/2480	X**	X**				2020.ZR		20XX.ZB						
2600/2700	X	X**	X		X	262.Z			30XX.ZB	30XX.ZC	2050.Z	2050.Z		
2650/2680	X	X**	X		X				30XX.ZB	30XX.ZC		2050.Z*		
3400/3500	X	X**	X		X	301.Z			30XX.ZB	30XX.ZC	30XX.Z	30XX.ZS		
3450/3480	X	X**	X		X	34501.Z			30XX.ZB	30XX.ZC		30XX.ZS*		
255								20XX.ZB						
E2														
R117/118	X**	X**						20XX.ZB						
R157/158	X**	X**				1585.01.Z								
R167/168	X**	X**				1685.01.Z								
R48	X**	X**				481.ZR		20XX.ZB						
R58	X**	X**												5850.Z
R68	X**	X**												30XX.Z
E4.1														
E4.21	X**	X**				T2103.Z		20XX.ZB						
E4.28/R4.28	X**	X**				28.Z* / 28.ZT*		20XX.ZB				2050.Z		
E4.32/H4.32/R4.32	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		
E4.42/H4.42/R4.42	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		
E4.56/H4.56/R4.56	X	X**	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
E4.80/H4.80/R4.80	X	X**	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
E4.112	X**	X**		X					30XX.ZB			45XX.ZS		
800	X**	X**							30XX.ZB					
840	X**													
E4.1 light														
E4.38L/R4.38L	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		
E4.48L/R4.48L	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		
E4/light														
14040/14140/18840	X	X**	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
14240/14340	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		
14550/14650/19050	X	X**	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
15050/15150/19850	X	X**	X	X					30XX.ZB	30XX.ZC		45XX.ZS		
15250/15350	X	X**	X						30XX.ZB	30XX.ZC		3850.ZS		
1640/R1608	X	X**		X					30XX.ZB			45XX.ZS		
E6														
E6.29	X**	X**				E6.29.02.Z		20XX.ZB						
R6.29	X**	X**						20XX.ZB						
E6.35	X**	X**				E6.35.02.Z		20XX.ZB						
E6.40	X	X**	X		X	E6.40.02.Z		20XX.ZB						
E6.52	X	X**	X		X				30XX.ZB	30XX.ZC		2050.Z		
R6.52	X	X**	X		X				30XX.ZB	30XX.ZC				
E6.62	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		
E6.80L	X	X**	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
E6.80	X	X**	X	X	X				30XX.ZB	30XX.ZC		45XX.ZS		
E6.1														
E61.29	X**	X**				E6.29.02.Z		20XX.ZB						
E61.52	X	X**	X		X				30XX.ZB	30XX.ZC		3850.ZS		

**CFXL-Clamps must be assembled in front of the e-chain® - Not to be integrated in KMA

*New in this catalog

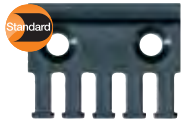
■ = Recommended strain relief for selected e-chain®

*Half e-tube only

[1] you'll find on subsequent page

[2] you'll find on the product page of each e-chain® Series

chainfix strain relief | Parameters | Overview

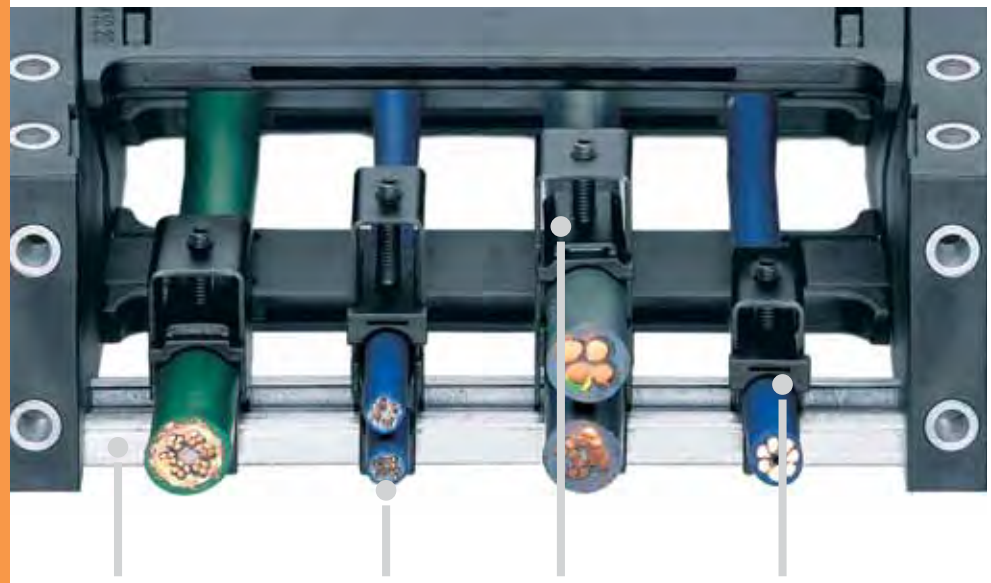
igus® chainfix strain relief sytem							
Parameters	**CFX** clamps	**Tiewrap plates** bolted, clip-on		**Clips** for C-profiles or stackable	**Nuggets** top hat rails	**Strain relief separators**	**CFB** Strain relief connector system
Recommended standard for the following e-chains®:	E4, E6, for all KMA* with C-profile *Polymer Metal Mounting Bracket	easy chain®, E2/000, E2 e-tubes, E4, E6		E4, E6, for all KMA* with C-profile *Polymer Metal Mounting Bracket	For all KMA* with C-profiles, top hat rails *Polymer Metal Mounting Bracket	E2/000, E2 e-tubes, E6, T3	E4, E6, for all KMA* with C-profile *Polymer Metal Mounting Bracket
When to take this igus® strain relief system:	Standard for high accelerations, loads and demanding applications. For many cables, large-diameter cables, and cables on top of each other. For long travels, cranes, offshore, machine tools, high speed, hydraulic lines. If modularity is required.	Standard for many applications with medium acceleration. For unsupported, gliding, hanging and standing applications in general machinery and machine tools. In cables next to each other. Also available as single parts, for example for cabinets, etc.		Cost-effective, space-saving strain relief for many applications with medium acceleration. For cables over one another or cables with identical diameters.	Low cost, fast strain relief for ease of use with minimal space requirements at medium acceleration. Also available as single parts for rigid linings, such as in cabinets, etc.	Combination of separator and strain relief, ideal for limited space. For applications with medium acceleration. For smaller cable diameter. Ideal for e-tubes. For machine tools and automation.	Space-saving, modular grip with many cables in a confined space. For example, applications with high accelerations and loads, e.g. machine tools.
When not to take it:	No limitation	For large cable diameters		At high loads	At high loads	At high loads	No limitation
Characteristic features							
Index assembly time	+	+		+ –	+ –	+	+ –
Customizable traction	+ +	–		+ –	–	–	+
Price Index	●●◐	●○○		●●○	●○○	●○○	●●●
Modularity	yes	yes		yes	yes	yes	yes (special fabrication)
Dynamics	high - very high	high		medium	high	high	high - very high
Traction determine [1] in N with chainflex®-cables under different conditions		Cable tiewraps single	Cable tiewraps double			Cable tiewraps single	Cable tiewraps double
Dry, PUR	1023	94	165	66	356	109	128	573
Dry, PVC	891	455	601	72	395	339	289	330
Dry, TPE	1580	97	224	103	286	64	82	285
Water [2], PUR	947	65	150	51	255	65	139	245
Water [2], PVC	917	447	528	55	312	136	151	233
Water [2], TPE	1283	94	123	86	170	48	98	177
Oil [3], PUR	500	96	137	45	95	19	89	203
Oil [3], PVC	874	393	627	59	402	146	315	223
Oil [3], TPE	1044	64	87	63	87	77	33	165

1) Tested with igus® chainflex® cables in the sheathing materials PVC (CF7.15.12), PUR (CF5.05.25), TPE (CF9.10.25) and Ø 15 mm
2) Water, 60°C, 24h climate cabinet at 90% RF
3) Cables coated with oil. Oil type synthetic lubricant with Teflon.

Price Index
○○○ low category
●○○ medium category
●●● high category

+ + = best suitability
+ = good suitability
+ – = suitable
– = conditionally suitable

All clamps were tightened to 1 Nm.
Cable tiewraps tightened by hand.



To be integrated into KMA monting bracket

For up to three cables over one another

Reduced installation height, space saving

Excellent durability for dynamic applications

More secure, faster assembled - igus® chainfix clamps

- Integration with KMA mounting brackets and C-profile host-option
- Easy to read the Part no. and lateral marking of the correct installation direction
- Reduced installation height due to optimal housing height (compared to conventional clamps up to 15 mm)
- Space- and time-saving assembly
- Delivery options for complete systems with cables and preassembled strain relief
- Improved base for easy fit on the C-profile
- Setscrews, tightened with Allen wrench, for easy installation
- Durability for dynamic applications through improved stacker elements: optimized stacker saddles, captive by retaining lugs
- The long contact surface of the stacker elements improves the clamp's stability
- The high rigidity of the stacker elements significantly increases the reliability
- Built-in ribs to the stacker elements - no disconnection of cables from the strain relief
- Optional: CFXL clamps with increased holding power for Heavy-Duty applications (CFXL are always assembled in front of the e-chain® - Not be integrated into KMA mounting brackets with C-profile-host option!)

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Product range and materials

- Steel clamp: clamp and screw black painted steel
- Stainless steel clamp: clamp and screw: blank (material 1.4301/AISI 304)
- Stacker elements: bottom saddle and stacker saddle (material igumid G)
- C-profiles: steel (material galvanized steel) or stainless steel (material 1.4301/AISI 304) available

Installation Height

If the e-chain® glides on itself for long travels, the screw heads of the strain relief at the fixed end of the e-chain® must have a distance of at least 10 mm from the top of the e-chain®. This restriction has the consequence that the strain relief elements described may not be used at the fixed end of long e-chains®. For unsupported e-chains® strain relief elements can be safely used.

Please note

- In the ideal case the cables are attached to both ends of the e-chain®. They definitely need to be attached at the moving end of the e-chain®!
- When using chainfix clamps on C-profiles in the mounting bracket for the Series: E4.32/H4.32/R4.32, E4.38L/R4.38L a shortened bottom saddle must be used. For shortened bottom saddles supplement Part No. with index "**K**" = Example: Part No. CFX12.1**K**

For the following igus® Series

E2/000
2400/2500/2450/2480
2600/2700/2650/2680
3400/3500/3450/3480
E4.1
E4.32/H4.32/R4.32
E4.42/H4.42/R4.42
E4.56/H4.56/R4.56
E4.80/H4.80/R4.80
E4.112/H4.112/R4.112
E4.1 light
E4.38L/R4.38L
E4.48L/R4.48L
E4/light
14040/14140/18840
14240/14340
14550/14650/19050
15050/15150/19850
15250/15350
E6
E6.40
E6.52 / R6.52
E6.62
E6.80L
E6.80
E6.1
E61.52



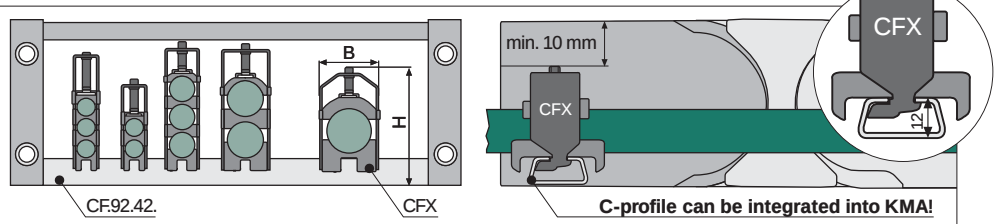
CFX - chainfix housing with reduced height



KMA mounting bracket with integrated C-profile and chainfix clamps



Saves both time and space during installation of igus® chainfix clamps



The dimensions given for H in the tables are based on the maximum cable diameter. Cables with smaller diameters may result in lower overall clamp housing heights. Tightening torque 1.5 Nm for CFX clamps

CFX | Standard clamps with standard base

Suitable for C-profiles CF.92.42.XX - Can be integrated into KMA with C-profile host-option!

CFX - Single clamp housing, incl. bottom saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]
CFX12.1	CFX12.1.E	06 - 12	16	54	CFX26.1	CFX26.1.E	22 - 26	30	67
CFX14.1	CFX14.1.E	12 - 14	18	50	CFX30.1	CFX30.1.E	26 - 30	34	71
CFX16.1	CFX16.1.E	14 - 16	20	52	CFX34.1	CFX34.1.E	30 - 34	38	75
CFX18.1	CFX18.1.E	16 - 18	22	54	CFX38.1	CFX38.1.E	34 - 38	42	79
CFX20.1	CFX20.1.E	18 - 20	24	56	CFX42.1	CFX42.1.E	38 - 42	46	83
CFX22.1	CFX22.1.E	20 - 22	26	58					

*Material stainless steel: 1.4301/AISI 304



CFX - Double clamp housing, incl. bottom and stacker saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]
CFX12.2	CFX12.2.E	06 - 12	16	72	CFX22.2	CFX22.2.E	20 - 22	26	90
CFX14.2	CFX14.2.E	12 - 14	18	74	CFX26.2	CFX26.2.E	22 - 26	30	109
CFX16.2	CFX16.2.E	14 - 16	20	78	CFX30.2	CFX30.2.E	26 - 30	34	117
CFX18.2	CFX18.2.E	16 - 18	22	82	CFX34.2	CFX34.2.E	30 - 34	38	125
CFX20.2	CFX20.2.E	18 - 20	24	86					

*Material stainless steel: 1.4301/AISI 304



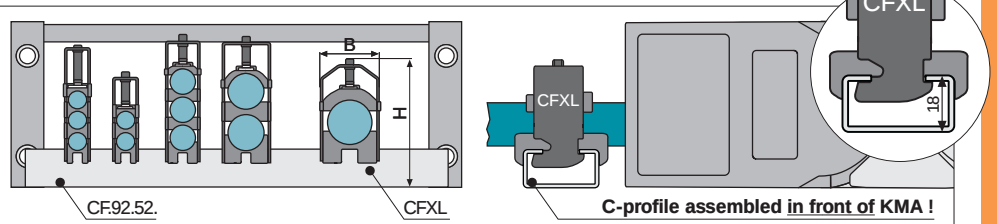
CFX - Triple clamp housing, incl. bottom and stacker saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]
CFX12.3	CFX12.3.E	06 - 12	16	100	CFX18.3	CFX18.3.E	16 - 18	22	108
CFX14.3	CFX14.3.E	12 - 14	18	96	CFX20.3	CFX20.3.E	18 - 20	24	114
CFX16.3	CFX16.3.E	14 - 16	20	102	CFX22.3	CFX22.3.E	20 - 22	26	120

*Material stainless steel: 1.4301/AISI 304



Suitable C-profiles for CFX clamps Part No. **CF.92.42.** ►page 1162



The dimensions given for H in the tables are based on the maximum cable diameter. Cables with smaller diameters may result in lower overall clamp housing heights. Tightening torque 1.5 Nm for CFXL clamps

CFXL | Clamps with wide base for increased holding power

Suitable for C-profiles CF.92.52.XX - C-profile assembled in front of KMA ! - NO integration!

CFXL - Single clamp housing, incl. bottom saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]
CFXL12.1	CFXL12.1.E	06 - 12	16	60	CFXL26.1	CFXL26.1.E	22 - 26	30	73
CFXL14.1	CFXL14.1.E	12 - 14	18	56	CFXL30.1	CFXL30.1.E	26 - 30	34	77
CFXL16.1	CFXL16.1.E	14 - 16	20	58	CFXL34.1	CFXL34.1.E	30 - 34	38	81
CFXL18.1	CFXL18.1.E	16 - 18	22	60	CFXL38.1	CFXL38.1.E	34 - 38	42	85
CFXL20.1	CFXL20.1.E	18 - 20	24	62	CFXL42.1	CFXL42.1.E	38 - 42	46	89
CFXL22.1	CFXL22.1.E	20 - 22	26	64					

*Material stainless steel: 1.4301/AISI 304



CFXL - Double clamp housing, incl. bottom and stacker saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]
CFXL12.2	CFXL12.2.E	06 - 12	16	78	CFXL22.2	CFXL22.2.E	20 - 22	26	86
CFXL14.2	CFXL14.2.E	12 - 14	18	80	CFXL26.2	CFXL26.2.E	22 - 26	30	115
CFXL16.2	CFXL16.2.E	14 - 16	20	84	CFXL30.2	CFXL30.2.E	26 - 30	34	123
CFXL18.2	CFXL18.2.E	16 - 18	22	86	CFXL34.2	CFXL34.2.E	30 - 34	38	131
CFXL20.2	CFXL20.2.E	18 - 20	24	92					

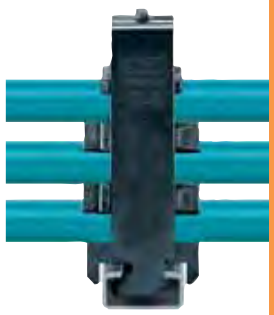
*Material stainless steel: 1.4301/AISI 304



CFXL - Triple clamp housing, incl. bottom and stacker saddles

Part No. Steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]	Part No. steel	Part No. Stainless steel*	ø [mm]	B +2 [mm]	H [mm]
CFXL12.3	–	06 - 12	16	106	CFXL18.3	–	16 - 18	22	114
CFXL14.3	–	12 - 14	18	102	CFXL20.3	–	18 - 20	24	120
CFXL16.3	–	14 - 16	20	108	CFXL22.3	–	20 - 22	26	126

*Material stainless steel: 1.4301/AISI 304



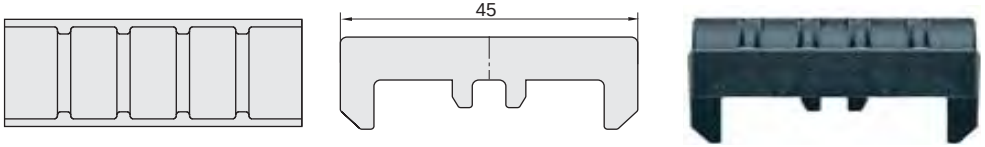
Suitable C-profiles for CFXL clamps Part No. **CF.92.52.** ►page 1162

chainfix strain relief | Clamps | Saddle elements

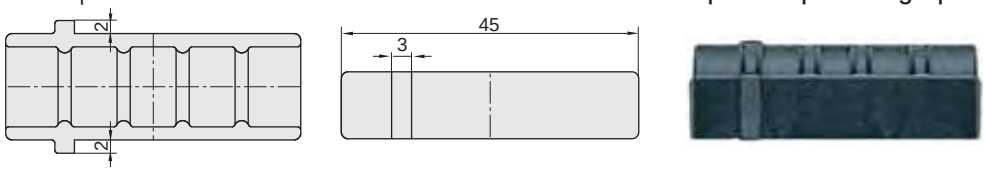
Characteristics of igus® chainfix clamps - stacker elements
- Built-in ribs for securety of cables in the strain relief
- Optimized stacker saddles, captivated by ① locking spring and with ② spring groove for a simplified and precise installation
- Conventional stacker saddles
- Long contact surface improves the clamp's stability
- More secure due to high stiffness
- Suitable for CFX-and CFXL-clamps



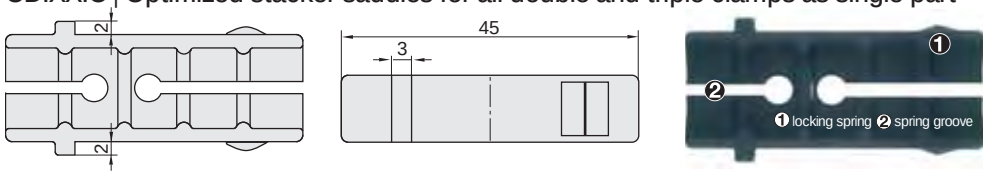
CGXX | Bottom saddles to slide into the clamp housing as single part



CDXX | Conventional stacker saddles for all for all double and triple clamps as single part



CD.XX.C | Optimized stacker saddles for all double and triple clamps as single part



Part No. clamp	Part No. bottom saddle	**CDXX** stacker saddle	**CD.XX.C** stacker saddle	Cable Ø [mm]
CFX/CFXL12.X	CG12	CD12	CD.12.C	06 - 12
CFX/CFXL14.X	CG14	CD14	CD.14.C	12 - 14
CFX/CFXL16.X	CG16	CD16	CD.16.C	14 - 16
CFX/CFXL18.X	CG18	CD18	CD.18.C	16 - 18
CFX/CFXL20.X	CG20	CD20	CD.20.C	18 - 20
CFX/CFXL22.X	CG22	CD22	CD.22.C*	20 - 22

Part No. clamp	Part No. bottom saddle	**CDXX** stacker saddle	**CD.XX.C** stacker saddle	Cable Ø [mm]
CFX/CFXL26.X	CG26	CD26	CD.26.C	22 - 26
CFX/CFXL30.X	CG30	CD30	CD.30.C	26 - 30
CFX/CFXL34.X	CG34	CD34	CD.34.C	30 - 34
CFX/CFXL38.X	CG38	–	–	34 - 38
CFX/CFXL42.X	CG42	–	–	38 - 42

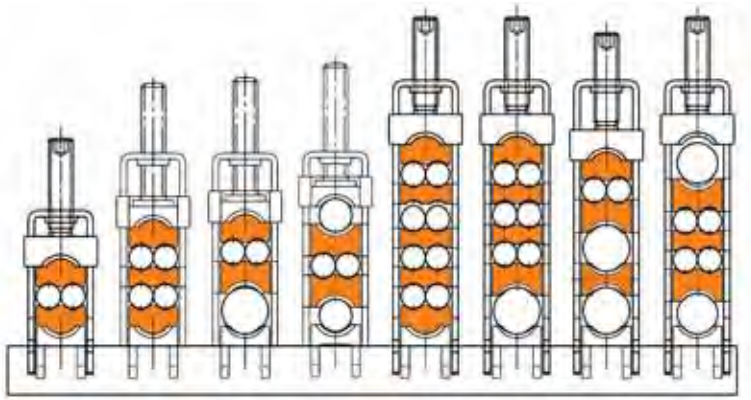
Please note: When using chainfix clamps on C-profile in the mounting bracket for Series E4.32/H4.32/R4.32, E4.38L/R4.38L a shortened bottom saddle has to be used. The Part No. for this is "**K**" = example: Part No. CFX12.1**K**

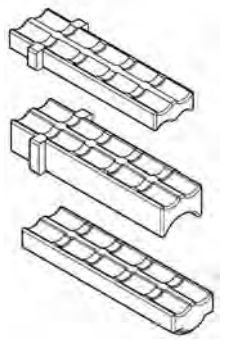
chainfix strain relief | Multi-Clamps

Characteristics of igus® chainfix Multi-Clamps
- Now more flexible mounting options of the proven chainfix strain relief elements with more components
- Universal strain relief - various assembly options
- Saves both time and space during installation
- Compact and modular
- For small outer diameters
- Cost-effective



CFX12 | Multi-Clamps, universal strain relief





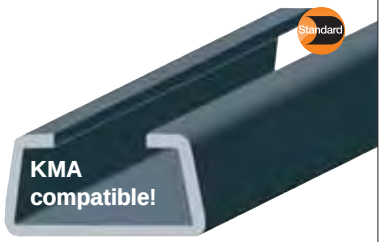
Universal bottom and stacker saddles

Part No. Series	Part No. stacker saddles - single parts				For cables Ø max. [mm]
CFX12.1.Z1	**X** (2-piece)	–	–	–	6
CFX12.2.Z1	**X** (2-piece)	**X** (1-piece)	–	–	6
CFX12.2.Z2	**X** (1-piece)	–	**X** (1-piece)	–	6 + 12
CFX12.2.Z3	–	–	**X** (2-piece)	–	6 + 8
CFX12.3.Z1	**X** (2-piece)	**X** (3-piece)	–	–	6
CFX12.3.Z2	**X** (1-piece)	**X** (2-piece)	**X** (1-piece)	–	6 + 12
CFX12.3.Z3	**X** (1-piece)	–	**X** (1-piece)	**X** (1-piece)	6 + 12
CFX12.3.Z4	–	**X** (1-piece)	**X** (2-piece)	–	6 + 10

Standard material: galvanized steel. For the stainless steel version (material 1.4301/AISI 304) supplement Part No. with Index "**E**" = example: Part No. CFX.12.3.Z1.**E**

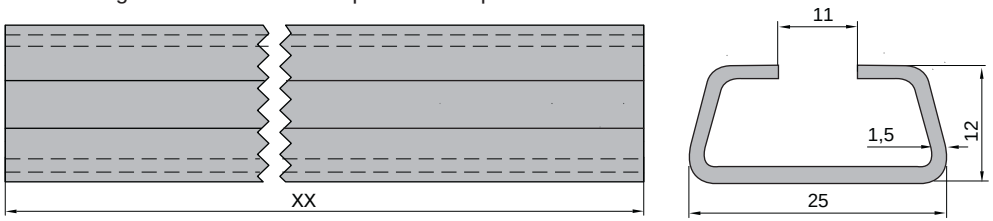
chainfix strain relief | C-profiles

Standard C-profiles Part No. CF.92.42.XX
- For all igus® CFX clamps and KMA-mounting brackets with C-profile host-option
- Standard material: galvanized steel
  Part No. CF.92.42.XX (XX = length in mm)
- Also available as stainless steel version (Material: 1.4301/AISI 304)
  please add Index **.E**, example: Part No. CF.92.42.XX**.E**
- Length tolerances of ±1 mm possible!



Standard C-profile Part No. CF.92.42. | For conventional applications

Can be integrated into KMA with C-profile host-option!



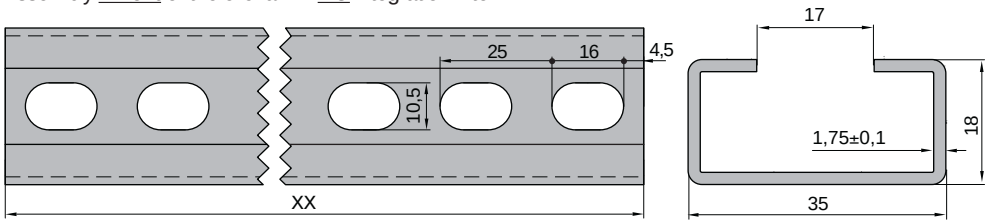
Optional | For Heavy-Duty applications

C-profiles Part No. CF.92.52.XX
- For all igus® CFXL clamps
- With increased holding power - even for harsh applications
- Standard material: galvanized steel
  Part No. CF.92.52.XX (XX = length in mm)
- Also available as stainless steel version (Material: 1.4301/AISI 304)
  please add Index **.E**, example: Part No. CF.92.52.XX**.E**
- Length tolerances of ±5 mm possible!



C-profile Part No. CF.92.52. | With increased holding power for harsh conditions

Assembly in front of the e-chain® - NO integration into KMA!



Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)



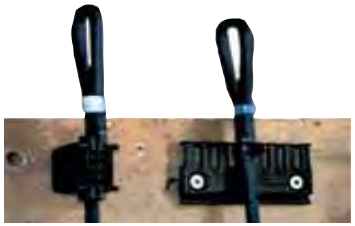
igus® tensile strength test with CFX clamps

igus® strain relief devices are tested under practical conditions, taking various parameters into account

Whether under the influence of fluids like water or oil, or at different ambient temperatures. The interaction of chainfix systems with different sheath materials of cables and hoses of course plays a big role in the in-house tests. Detailed information about these tests: chainfix strain relief parameter overview ►page 1154



igus® test: Comparison of three different strain reliefs - Result: Triple tensile strength of igus® chainfix clamps in comparison with conventional products.



Tensile strength tests with chainflex® cables

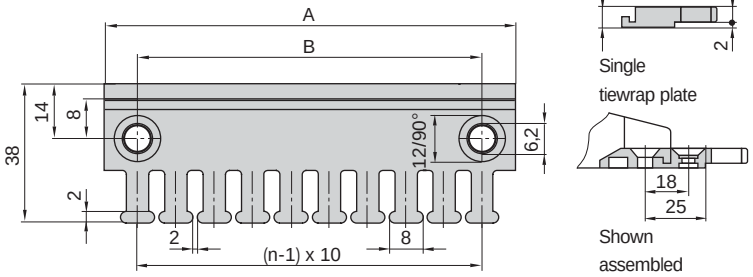


Tensile strength tests of igus® clamps with cable tiewraps

Characteristics of igus® chainfix tiewrap plate Series 2000
Option 1A: Tiewrap plate as single part
- Available as individual component
- Screwed on KMA* with C-profile (*polymer metal mounting bracket)
- Can be stacked onto the mounting bracket
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chainsystems®



Series 2000 | Tiewrap plate as single part



Tiewrap plate	*n* Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Center bore – = no / + = yes
2020.ZB	3	30	15	–	–
2030.ZB	4	40	20	–	–
2040.ZB	5	50	30	–	–
2050.ZB	6	60	40	–	–
2070.ZB	8	80	60	–	–
2090.ZB (= 2030.ZB + 2040.ZB)	9	90	–	–	–
2100.ZB	10	100	80	–	–
2125.ZB (= 2050.ZB + 2050.ZB)	12	120	–	–	–

For the following igus® Series

- **easy chain®**
  - E200/Z200
- **E2/000**
  - 1400/1500/1450/1480
  - 2400/2500/2450/2480
  - 255
- **E2 e-tubes**
  - R117/R118
  - R48
- **E4.1**
  - E4.21
  - E4.28
- **E6**
  - E6.29/R6.29
  - E6.35
  - E6.40
- **E6.1**
  - E61.29

Cable tiewraps as single part

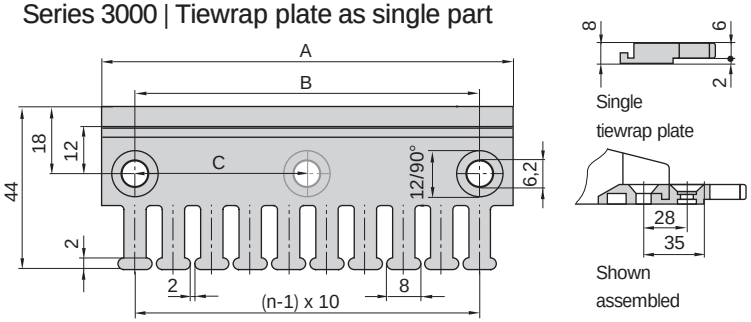
Cable tiewraps (100-piece bag)	Width x length [mm]	Maximum Ø	Pull force resistance [N]
CFB.001	4,8 x 150	36	222 N

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Characteristics of igus® chainfix tiewrap plate Series 3000
Option 1B: Tiewrap plate as single part
- Available as individual component
- Screwed on KMA* with C-profile (*polymer metal mounting bracket)
- Can be stacked onto the mounting bracket
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chainsystems®



Series 3000 | Tiewrap plate as single part



Tiewrap plate	*n* Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Center bore – = no / + = yes
3050.ZB	5	50	30	–	–
3075.ZB	7	75	55	–	–
3100.ZB	10	100	80	–	–
3115.ZB	11	115	95	–	–
3125.ZB	12	125	105	–	–
3150.ZB	15	150	130	–	–
3175.ZB	17	175	155	–	–
3200.ZB	20	200	180	90	+
3225.ZB	22	225	205	102,5	+
3250.ZB	25	250	230	115	+

For the following igus® Series

- **easy chain®**
  - E26/Z26
  - E300/Z300
- **E2/000**
  - 2600/2700/2650/2680
  - 3400/3500/3450/3480
- **E4.1**
  - E4.32/H4.32/R4.32
  - E4.42/H4.42/R4.42
  - E4.56/H4.56/R4.56
  - E4.80/H4.80/R4.80
  - E4.112/H4.112/R4.112
  - 800
  - 840
- **E4.1 light**
  - E4.38L/R4.38L
  - E4.48L/R4.48L
- **E4/light**
  - 14040/14140/18840
  - 14240/14340
  - 14550/14650/19050
  - 15050/15150/19850
  - 15250/15350
  - 1640/1608
- **E6**
  - E6.52/R6.52
  - E6.62
  - E6.80L / E6.80
- **E6.1**
  - E61.52

Cable tiewraps as single part

Cable tiewraps (100-piece bag)	Width x length [mm]	Maximum Ø	Pull force resistance [N]
CFB.001	4,8 x 150	36	222 N

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Characteristics of igus® chainfix tiewrap plates
Option 2: With clip-on connection for the C-profile
- Can be plugged into the KMA C-profile
- Easy to assemble without any screws
- Easy to remove with screwdriver nevertheless safe stop
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chainsystems®



Option 2 | Tiewrap plate with clip-on connection for C-profile

For all mounting brackets with C-profile connectivity!

Part No.	Width [mm]	Number of teeth
3050.ZC	50	5
3075.ZC	75	7

Characteristics of igus® chainfix tiewrap plates
Option 3: integrated strain relief for E2 e-tubes - Series R
- Strain relief disappears completely in the e-tube
- Easy to assemble without any screws
- Single part for the manufacturing of switchgear cabinets or for the assembly of machines
- Accessory for igus® e-chainsystems®



Option 3 | Tiewrap plate for E2 e-tubes of Series R

For the following igus® Series
►see table

Part No.	Width [mm]	Number of teeth	For Series
3050.Z*	50	5	R68
3075.Z	75	7	R68
5850.Z	46	4	R58

*only possible from e-chain® width 100 mm and larger

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

chainfix strain relief | Tiewrap plates | Optional
chainfix

Characteristics of igus® chainfix tiewrap plates
Option 4: for fixed crossbars Option 5: For opening crossbars
- Can be fitted to fixed and opening crossbars
- In case of many harnessed cables
- Strain relief "over two floors"
- If the KMA is too small for the C-profile
- Easy to assemble without any screws
- Accessory for igus® e-chainsystems®



Option 4 | Tiewrap plate for fixed crossbars

For the following igus® Series
►see table

Part No.	Width [mm]	Number of teeth	For Series
2050.Z	60	6	E/Z200, 2400/2500, 2600/2700
3050.Z	50	5	3400/3500
3075.Z	74	7	3400/3500

Option 5 | Tiewrap plate for opening crossbars

For the following igus® Series
►see table

Part No.	Width [mm]	Number of teeth	For Series
2050.Z	60	6	E4.28, 2650, E6.52, E61.52
3035.ZS	35	3	3400/3500
3050.ZS	50	5	3400/3500
3075.ZS	75	7	3400/3500
3850.ZS	48	5	E4/H4/R4.32, E4/H4/R4.42, 14240/14340, 15250/15350, E6.62
4550.ZS	48	5	E4/H4/R4.56, E4/H4/R4.80, E4/H4/R4.112, 14040/14140/18840,14550/14650/19050, 15050/15150/19850, E6.80L, E6.80, 1640/1608
4575.ZS	74	7	E4/H4/R4.56, E4/H4/R4.80, E4/H4/R4.112, 14040/14140/18840, 14550/14650/19050, 15050/15150/19850, E6.80L, E6.80,1640/1608

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Characteristics of igus® chainfix Clips -
Option 1: Modular clip-on strain relief for the C-profile

- Available for all igus® e-chains® with C-profiles
- Also suitable for assembly in the KMA mounting brackets
- Polymer, for cable diameters ranging from 4 mm to 24 mm
- Quick assembly without any tools
- 2 and 3 layers on top of one another possible
- Each layer can be detached and changed later on

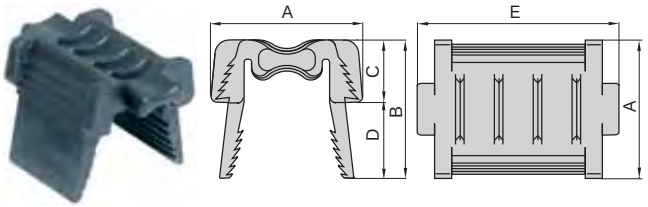


Option 1 | Clip-on strain relief for the C-profile

For all mounting brackets with C-profile connectivity!

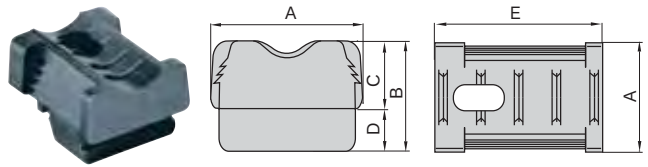
Clamp - Part No. CFC-XX-**M**

ø Cable [mm]	Part No. clamp	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
04 - 08 mm	CFC-08-M	14,5	13	5,5	7,5	30
08 - 12 mm	CFC-12-M	23,7	24	10	14	36
12 - 16 mm	CFC-16-M	32,4	32,5	13,6	18,9	42
16 - 20 mm	CFC-20-M	43,2	39,1	17,6	11,5	45
20 - 24 mm	CFC-24-M	54	49	22	27	50



Bottom part - Part No. CFC-XX-**C**

ø Cable [mm]	Part No. bottom part	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
04 - 08 mm	CFC-08-C	14,5	12,5	5,5	7	24
08 - 12 mm	CFC-12-C	23,8	18	11	7	28
12 - 16 mm	CFC-16-C	32,4	23,6	13,6	10	32
16 - 20 mm	CFC-20-C	43,2	24,6	17,6	7	36
20 - 24 mm	CFC-24-C	54	29	22	7	39

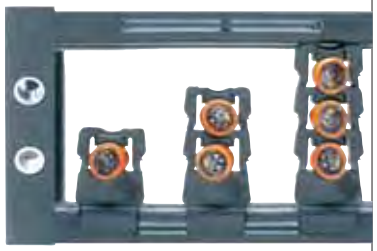


Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

chainfix strain relief | Clip-on solutions

Characteristics of igus® chainfix Clips -
Option 2: Clip-on strain relief for opening crossbars

- Available for all e-chains® with opening crossbars Part No. 450.XX.
- Polymer, for cable diameters ranging from 8 mm to 12 mm
- Quick assembly without any tools
- 2 and 3 layers on top of one another possible
- Each layer can be detached and changed later on



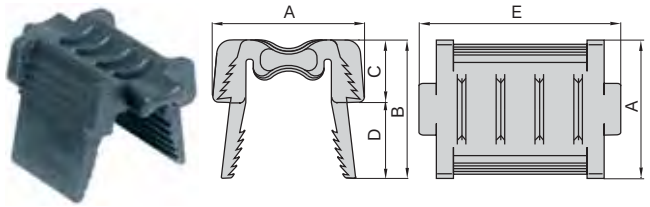
Option 2 | Clip-on strain relief for opening crossbars

For the following igus® Series

- E4.1
  - E4.56/H4.56/R4.56
  - E4.80/H4.80/R4.80
  - E4.112/H4.112/R4.112
  - 840
- E4/light
  - 14040/14140
  - 14550/14650
  - 15050/15150
  - 1640
- E6
  - E6.80L
  - E6.80

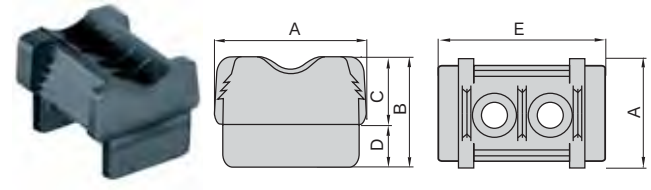
Clamp - Part No. CFC-XX-**M**

ø Cable [mm]	Part No. clamp	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
08 - 12 mm	CFC-12-M	23,7	24	10	14	36



Bottom part - Part No. CFC-XX-**B**

ø Cable [mm]	Part No. bottom part	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D [mm]	Dim. E [mm]
08 - 12 mm	CFC-12-B	23,8	21	13	8	38



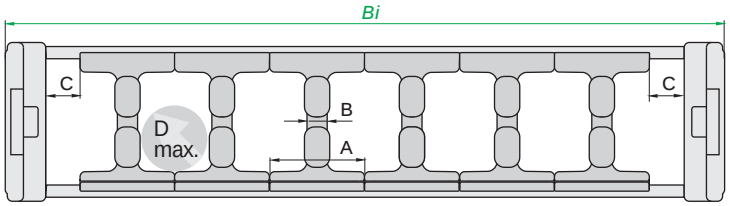
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Characteristics of igus® strain relief separators -
Separator with integrated strain relief teeth

- To be used assembled either at the first or last e-chain® link
- For restricted space conditions
- Accessory for igus® e-chainsystems®
- Easy to assemble without any screws
- The number n is depending on the selection of cable (diameter, type) and available space



Strain relief separator | with integrated teeth



For Series	Part No. strain relief separator	Number of teeth	Dim. A [mm]	Dim. B [mm]	Dim. C [mm]	Dim. D max ø [mm]
1400/1500	21.1.Z	2	10	4	–	6
2400/2500	2020.Z	2	10	4	–	6
2450/2480	2020.ZR	2	10	4	–	6
2600/2700	262.Z	3	10	4	–	6
3400/3500	301.Z	3	18	4	–	14
3450/3800	34501.Z	3	14	4	–	10
R157/R158	1585.01.Z	3	22	4	–	18
R167/R168	1685.01.Z	4	22	4	–	18
R48	481.ZR	2	10	3,5	10	6,5
E4.21	T2103.Z	2	8	4	1	4
E4.28	28.Z*	2	10	4	–	6
R4.28	28.ZT*	2	10	4	15	6
T3.29	E6.29.02.Z	2	8	4	1	4
E6.29/E61.29	E6.29.02.Z	2	8	4	1	4
E6.35	E6.35.02.Z	3	8	4	1	4
E6.40	E6.40.02.Z	3	13	4	–	8

*New in this catalog

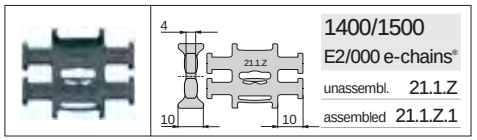
For the following igus® Series

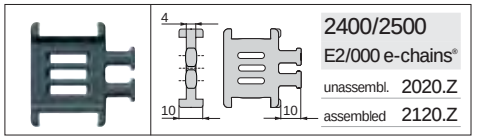
- **E2/000**
  - 1400/1500
  - 2400/2500
  - 2450/2480
  - 2600/2700
  - 3400/3500
  - 3450/3480
- **E2 e-tubes**
  - R157/R158
  - R167/R168
  - R48
- **E4.1**
  - E4.21
  - E4.28/R4.28
- **T3**
  - T3.29
- **E6**
  - E6.29
  - E6.35
  - E6.40
- **E6.1**
  - E61.29

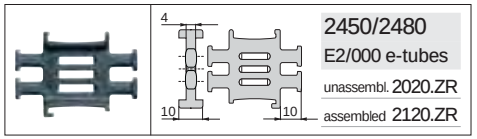


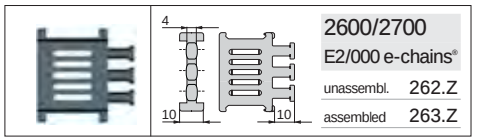
Strain relief separators are assembled either at the first or last e-chain® link. For an intermediate strain relief they can alternatively be assembled in the e-chain®

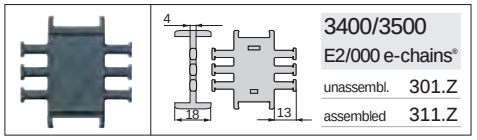
Strain relief separators | Product range overwiew

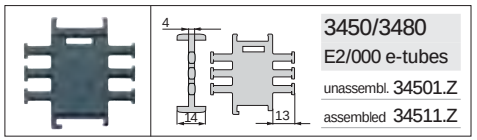


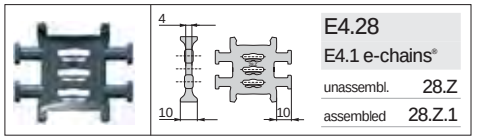


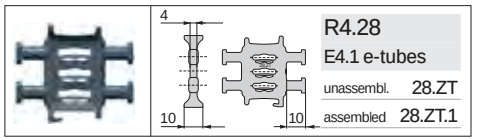


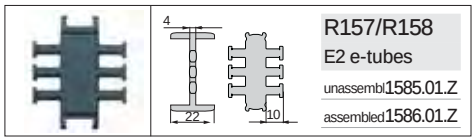


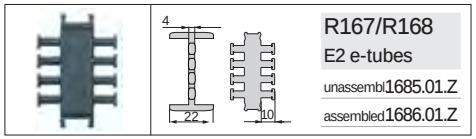


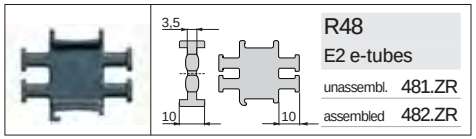


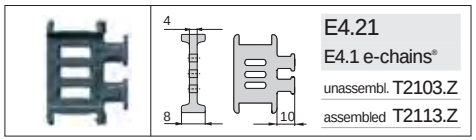


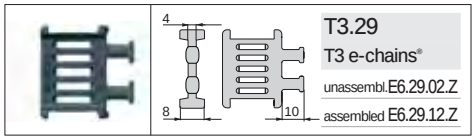


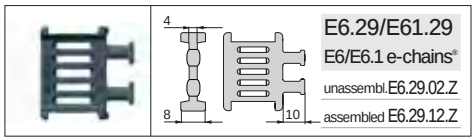


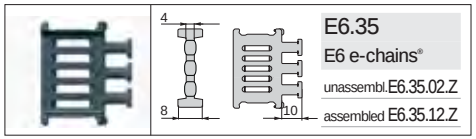


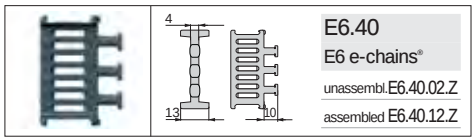












Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

chainfix strain relief | Clip-on solutions

Characteristics of igus® chainfix Nuggets
Option 1: C-profile and Option 2: top hat rail

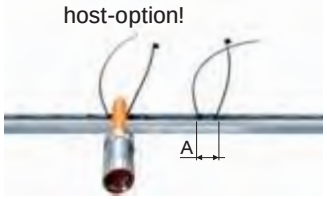
- Option 1: Universal cable fixation in C-profile
- Option 2: Clip onto a top hat rail
- Simple strain relief - harnessed cable tiewraps
- Minimum space required
- Easy to assemble without any screws and tools
- Adjustable to every e-chain® filling



Option 1 | chainfix Nuggets for the C-profile

For C-profiles	Part No. Nugget	ø Cable max. [mm]	Dim. A [mm]
92.42.../92.42...E	CFN.20	20	10,8
92.52.../92.52...E	CFN.30.52	30	16,4

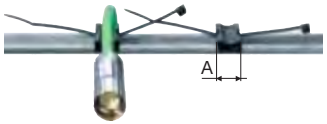
For all mounting brackets with C-profile host-option!

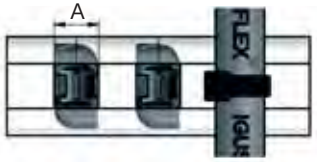


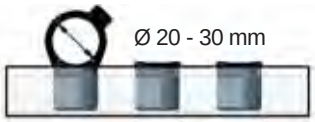
Option 2 | chainfix Nuggets for the top hat rail

For top hat rail	Part No. Nugget	ø Cable max. [mm]	Dim. A [mm]
	CFN.20.N35	20	20,0

For top hat rail 35!









Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

chainfix strain relief | Blocks

Characteristics of special strain relief for hoses - igus® blocks

- Modular, space-saving system
- No hose damage
- Combination of hoses and cables possible
- Hose diameters: 4,3 - 14 mm
- Easy to assemble without any screws of tools
- Adjustable to every e-chain® filling



Block | Strain relief for hoses

Part No. Block modules	Hose ø [mm]	Number of hoses	Width [mm]
CFS 4.3	4,3	4 - 12	27,5
CFS 6	6	3 - 6	27,5
CFS 9	9	2	27,5
CFS 55.9	9	5	55,0
CFS 10	10	2	27,5
CFS 12	12	2	27,5
CFS 14	14	1	27,5
Part No. Base plate	**Part No. Cover plate**	**Width [mm]**	
CFS U75	CFS P75	75	
CFS U102.5	CFS P102,5	102,5	
CFS U130	CFS P130	130	
CFS U185	CFS P185	185	
CFS U212	CFS P212	212,5	
CFS U240	CFS P240	240	
CFS U295	CFS PD295	295	
Part No. Spacer	**Height [mm]**		
CFS D 16	16		
CFS D 12	12		
CFS D295	16		

Please contact igus® for individual designing



① Cover plate
② Spacers
③ Base plate
④ Grid-dimensioned modules
B = 27,5 mm, H = 16 mm

The modules accommodate hoses from 4.3 to 14 mm, 3 x 4.3 mm hoses can be fitted on top of each in module CFS 4.3 and 2 hoses can be fitted directly on top of each other in one notch using module CFS 6. The modules have a width of 27.5 mm, are inserted into the base plate and then fastened in position with M4 countersunk-head screws. The exception is module CFS 55.9 which offers the capacity for 5 x 9 mm hoses with twice the width. The base plate and cover plate are available in widths ranging from 75 to 240 mm. The height of the spacers and modules is 16 mm. Several layers can be installed directly above one another.

Delivery time upon request, in case of customer-specific fabrication!

Characteristics of the modular igus® CFB: Polymer strain relief connector system to be mounted onto the C-profile

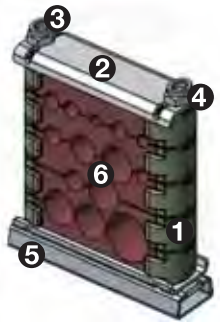
- Customized strain relief solutions can be offered
- 2 variations available
- Fast assembly by standard screw connection
- Can be mounted in the mounting bracket or in front of the e-chain®
- Customized production from 1 piece
- Cost-effective



CFB 907.881. | Polymer strain relief connector system

Parts list Description	Part No.	Quantity
① Outer fixing block	CFB20.1	N x 2
② Clamping bar	907.881.1.XXX	2
③ Threaded bolt with plate	907.825.2.LLL	2
④ Hexagon nut M8	MAT 0040012	2
⑤ C-profile (part of KMA)	92.42.XXX	1
⑥ Strain relief block	customer-specific	1

Please contact igus® for individual designing



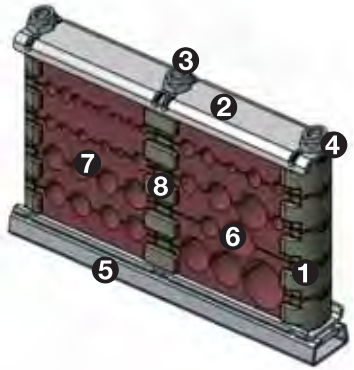
Order key
907.881.XXX.N

N = Number of layers fixing blocks
XXX = *Bi* (mounting bracket) - 3 mm
Part No. with version 881

CFB 907.825. | Polymer strain relief connector system

Parts list Description	Part No.	Quantity
① Outer fixing block	CFB20.1	N x 2
② Clamping bar	907.825.1.XXX	2
③ Threaded bolt with plate	907.825.2.LLL	3
④ Hexagon nut M8	MAT 0040012	3
⑤ C-profile (part of KMA)	92.42.XXX	1
⑥ Strain relief block	customer-specific	1
⑦ Strain relief block	customer-specific	1
⑧ Inner fixing block	CFB20.2	N

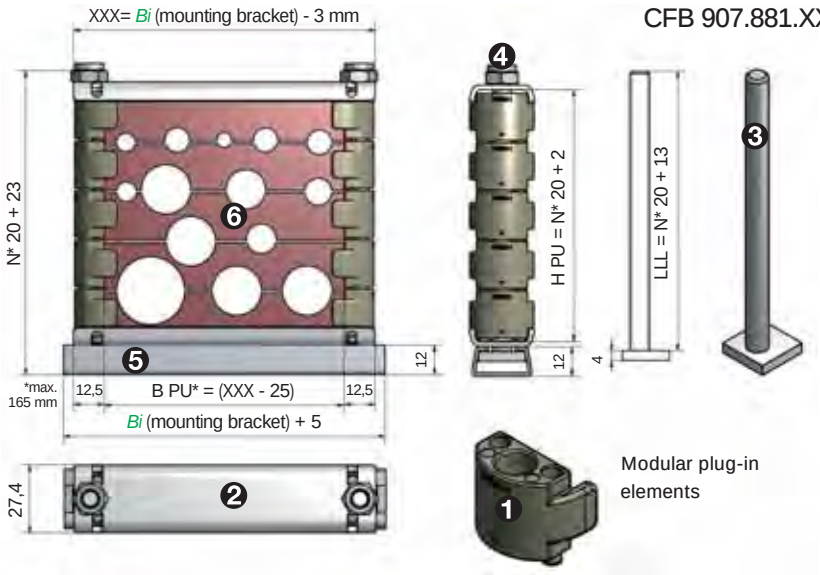
Please contact igus® for individual designing



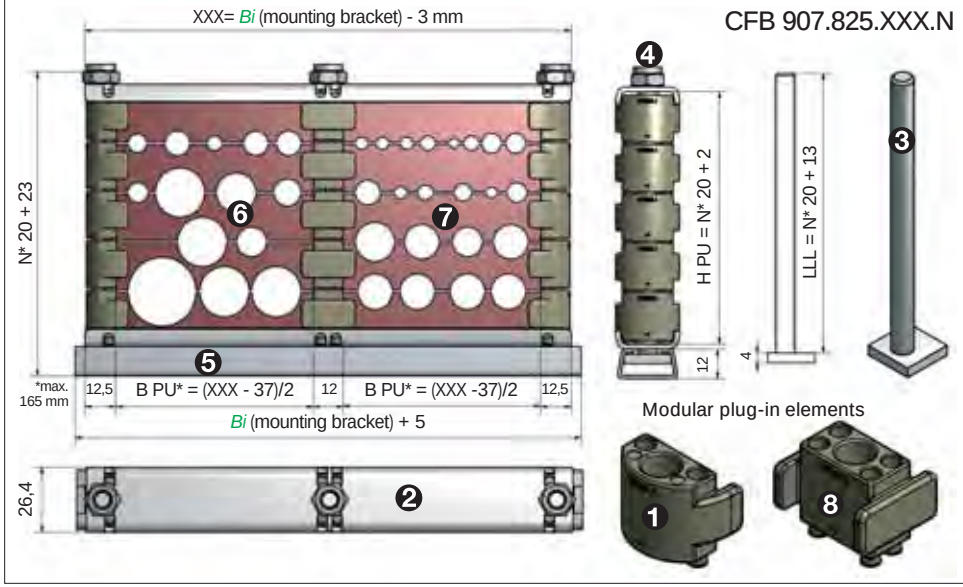
Order key
907.825.XXX.N

N = number of layers fixing blocks
XXX = *Bi* (mounting bracket) - 3 mm
Part No. with version 825

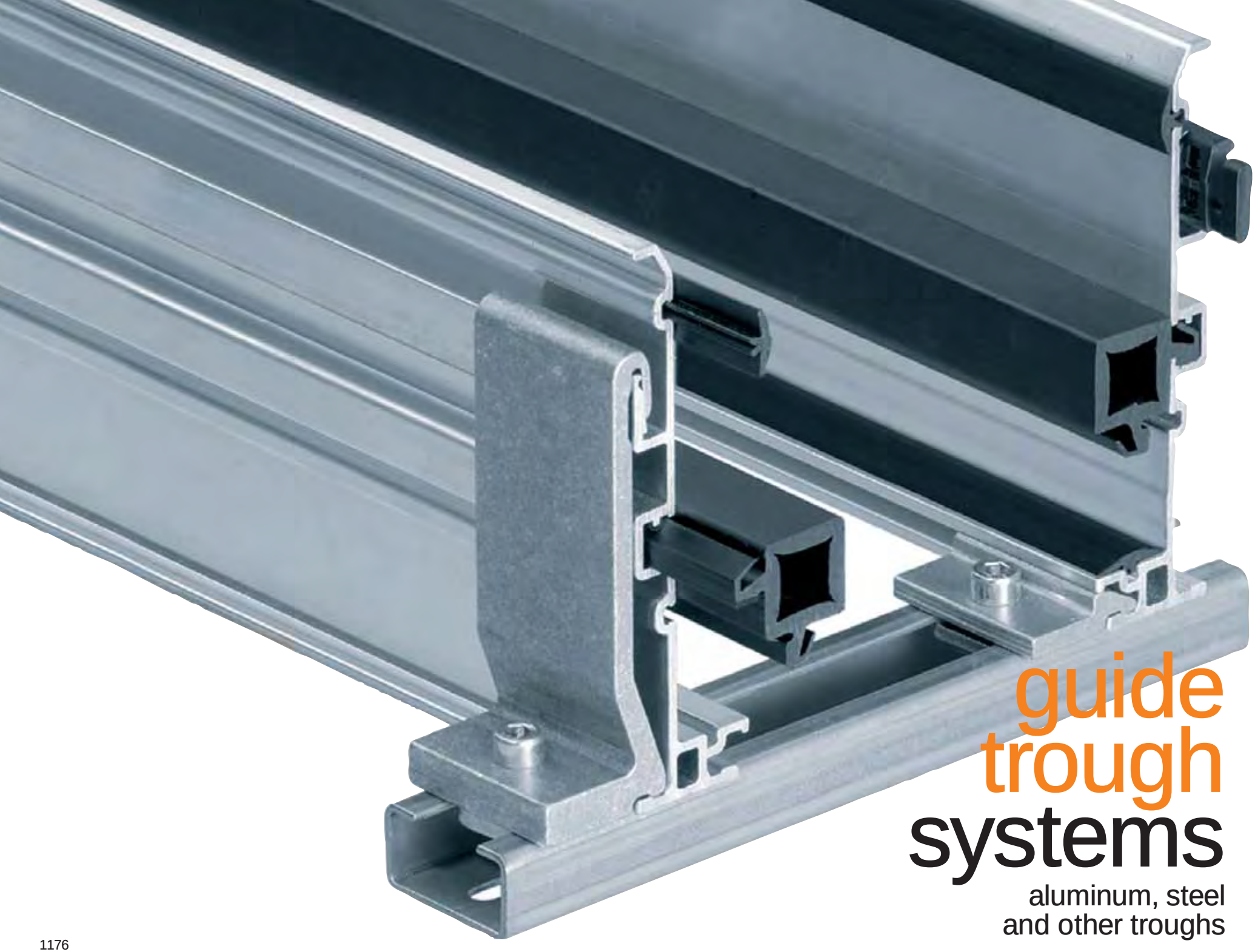
CFB 907.881.XXX.N



CFB 907.825.XXX.N

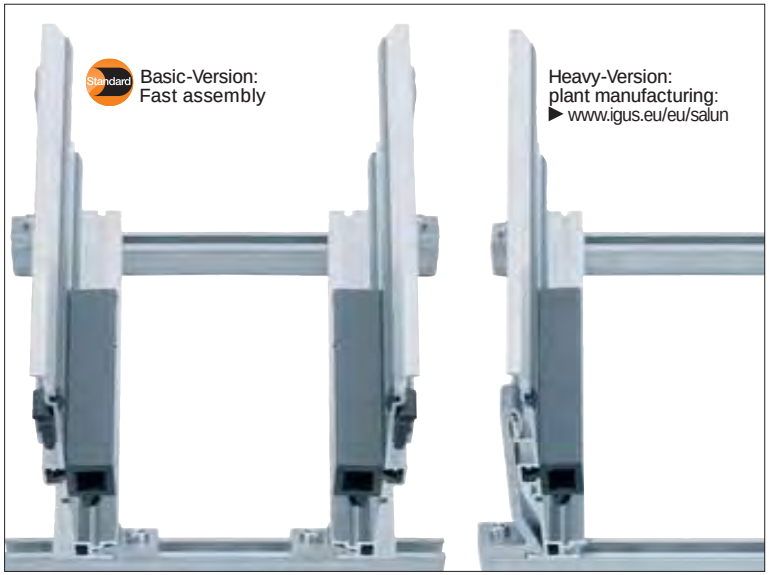


Delivery time upon request, in case of customer-specific fabrication!



guide trough systems

aluminum, steel and other troughs



Aluminum SuperTrough - The igus® standard guide trough

- Huge program available for almost all igus® e-chains®
- Very simple, modular assembly
- Side-mounted glide strips for wear protection in high-speed
- Corrosion resistant, seawater resistant aluminum profile
- Flexible assembly - Fastening on substructure independent of profile lengths and butt joints
- Plastic glide bar made of PE
- Bottom clamp can be mounted -inside or outside- directly on the bottom or on the c-profile
- Heavy-Duty bracket (add-on item) for high load applications
  You can configure the Heavy-Duty version at our online-catalog

The complete product range with order options ▶from page 1184
or online ▶www.igus.eu/eu/salun



Aluminum SuperTrough - New, optimized fixed end modules made of plastic*
With this module for the fixed end, fast and easy mounting onto the Aluminum Super-Trough is now possible without any drilling. Fast mounting of the e-chain® by clamping onto the alu trough ● Quick relocation of the stationary end ● No drilling necessary
Product range with order options
▶ from page 1208



Steel guide trough - Very stable and rugged for Heavy-Duty applications

- Very stable and robust guide trough made of steel for high load applications:
- Easy assembly due to installation set for joint and attachment surface connection
- Simple fastening directly on the ground or with c-profiles
- Big range, two-piece design, adjustable to e-chain® width
- Available in galvanized steel and stainless steel
- Low friction: Glide bar made of PE
- Fixed end module (add-on item), for fast and easy mounting - without any drilling available
- Side parts will be mounted in defined distances and fixed onto the ground
- All sizes use a common C-profile on which the guide parts are assembled. The assembly brackets used vary in height only

The complete product range with order options ▶from page 1210
or online ▶www.igus.eu/eu/steelguide



Steel guide trough - Fixed end module
Quick and simple fastening
2.000 mm long kit ● Fast fixation of mounting brackets thanks to prefabricated boreholes
● Fast installation of C-profile for strain relief
● Fast bolting of glide bars
Product range with order options
▶ from page 1236



Various guide trough systems are available



igus® troughs delivered from stock

igus® guide troughs

Guide troughs are used for long travels. They allow to continue smooth, low-friction operation in these long-travel situations.
If the fixed end is installed in the center of the travel ("center-mounted"), the e-chains® glide on themselves for half the travel. For the other half, we recommend glide bars, which are assembled in the trough and on which the e-chains® glide. igus® guide troughs are available from stock with these highly abrasion-resistant polymer glide bars, which perform well with igus® e-chains® regarding noise, abrasion and friction.

Trough type

igus® offers guide troughs made of corrosion-resistant aluminum, steel or stainless steel. The trough type to be used depends on the application conditions and the requirements of the customer. We recommend the igus® standard Aluminum SuperTrough.

Glide bars

Glide bars made of igulen are optimally matched to the e-chain® material and achieve the lowest values for friction, noise and wear. Glide bars must be used, if the fixed point is in the center of the travel. It means: Use half of the guide trough with glide bars and the other half of the guide trough without glide bars (see picture in the lower right corner!).

Delivery condition

The troughs are delivered in 2 meter sections. Special lengths up to 6 m are possible. The left and right side parts are installed on location with the appropriate distance - depending on the width of the e-chain®. The necessary width is shown by the dimension B_{RI} on the guide trough pages. The e-chain® sides can be linked with the base by screwing, welding or a special igus® installation set. The fixation module for the igus® Aluminum SuperTrough is a quick fix for mounting the stationary end of an e-chain® with a KMA-mounting bracket. With this module a fast and easy mounting onto the Aluminum SuperTrough is possible without any drilling.



Trough without glide bars - e-chain® glides on e-chain®

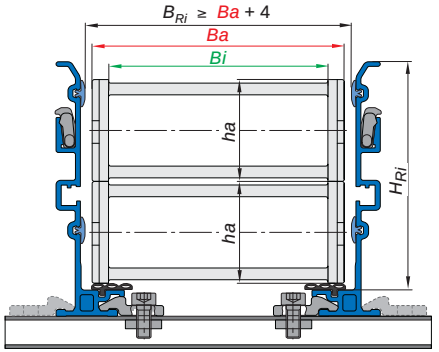


Trough with glide bars - e-chain® glides on glide bars

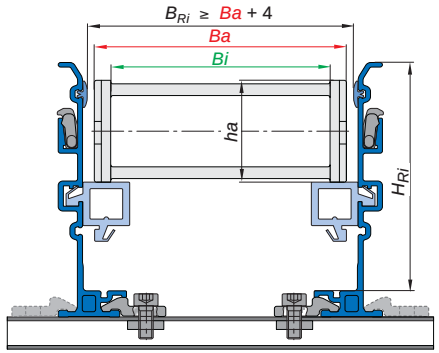


Center mounted: 1/2 Travel with glide bars - 1/2 Travel without glide bars

For long travels, the upper run of the igus® e-chains® rests on the lower run. The upper run glides partially on the lower run and partially at the same height on a glide bar. The diagrams below show this. For lateral guidance, a Guide Trough is necessary. If the stationary mounting bracket and the fixed end of the cables and hoses can be placed in the center, the e-chain® length is calculated as follows: $L_k = {}^{S}/_{2} + K_2$. The shortest e-chain® length is attained by the axial feeder module. The length of the e-chain® then corresponds to about half the travel distance. Depending on the technical data and the selected e-chain®, the mounting point of the moving end of the e-chain® must be lowered on some units. In our system analysis for long travels, we give exact details for your specific application.



Aluminum SuperTrough without glide bars - upper run glides on the lower run



Aluminum SuperTrough with glide bars - From the middle of the travel the upper run glides off on the glide bar

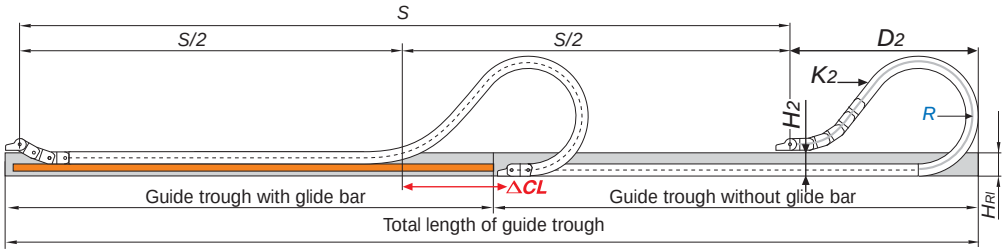
Selection criteria

Following parameters are required for the design of a trough system:
● e-chain® type (Series, width *Bi*, radius *R*) ● Travel and travel speed ● Fill weight ● Acceleration and/or lagging ● Lateral accelerations ● Environmental conditions

Design and installation of the guide trough

The guide trough is an important element in long travel applications. Usually, the height of the trough must be at least twice that of the e-chain® link height: $H_{RI} \geq 2 \times ha$. The sides must provide a chamfered opening. The trough inner width is the same as the e-chain® outer width, plus 4 mm ($B_{Ri} = Ba + 4$). Along the side of the trough, where the upper run cannot glide on the lower run, glide bars must be installed. We recommend the use of polymer glide bars from igus®. They are optimally matched to the e-chain® material and achieve the lowest values for friction, noise and wear. Guide troughs with and without glide bars can be obtained for almost all igus® e-chains®. **Important: When assembling the trough parts, the following points must be given particular attention:** ● Properly align all trough parts upon installation ● All screw heads should be flush with the trough ● Smooth levelled transition between the end of the e-chain® and the glide bars ● Solid connection with the glide surface. **These points must be observed when using assembly-friendly igus® guide troughs.**

e-chain® length	$L_k = {}^{S}/_{2} + K_2$
Inner trough height	$H_{Ri} \geq 2 \times ha$
Inner width, Alu SuperTrough	$B_{Ri} \geq Ba + 4$
	(*Ba* + 5 Steel guide trough)



● Trough set ● Installation set ● Glide bar ● C-Profile

Ba = Outer width e-chains® | *Bi* = Inner width e-chains® | *R* = Bending radius | *ΔCL* = Offset fixed point

S = Length of travel | *S/2* = Half length of travel | B_{Ri} = Inner trough width | B_{Ra} = Outer trough width

H_{Ri} = Inner trough height | H_{Ra} = Outer trough height | *ha* = Outer e-chain® height | L_k = e-chain® length

H_2 = Mounting height (if the moving end is set lower) | D_2 = Over length - long travels, gliding | K_2 = Further add-on (if the moving end is set lower) | H_F = Required clearance height

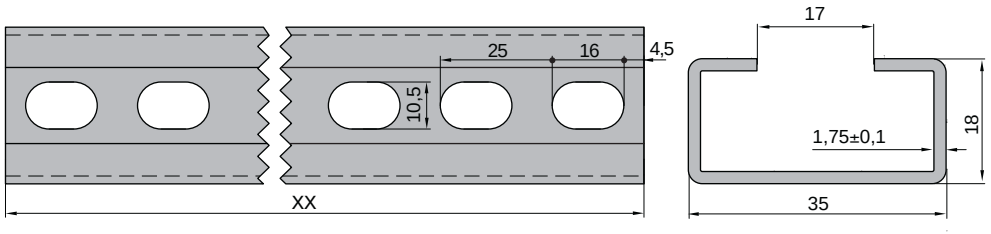
Alu ▶ 1184
Steel ▶ 1210

C-profiles Part No. 92.52.XX

- For all igus® Aluminum SuperTrough and Steel guide troughs
- With increased holding power - even for harsh applications
- Standard material: galvanized steel
  Part No. 92.52.XX (XX - length in mm)
- C-profile available in galvanized steel.
  Optional: Stainless steel V2A, material 1.4301 (AISI 304).
  For AISI 304 please add index "E" to the Part No. 92.52.E
- Length tolerances of ±5 mm possible!



C-profile Part No. 92.52.XX | With increased holding power also for harsh conditions





C-profiles Part No. 92.52.XX - For all igus® Aluminum SuperTrough and steel guide troughs









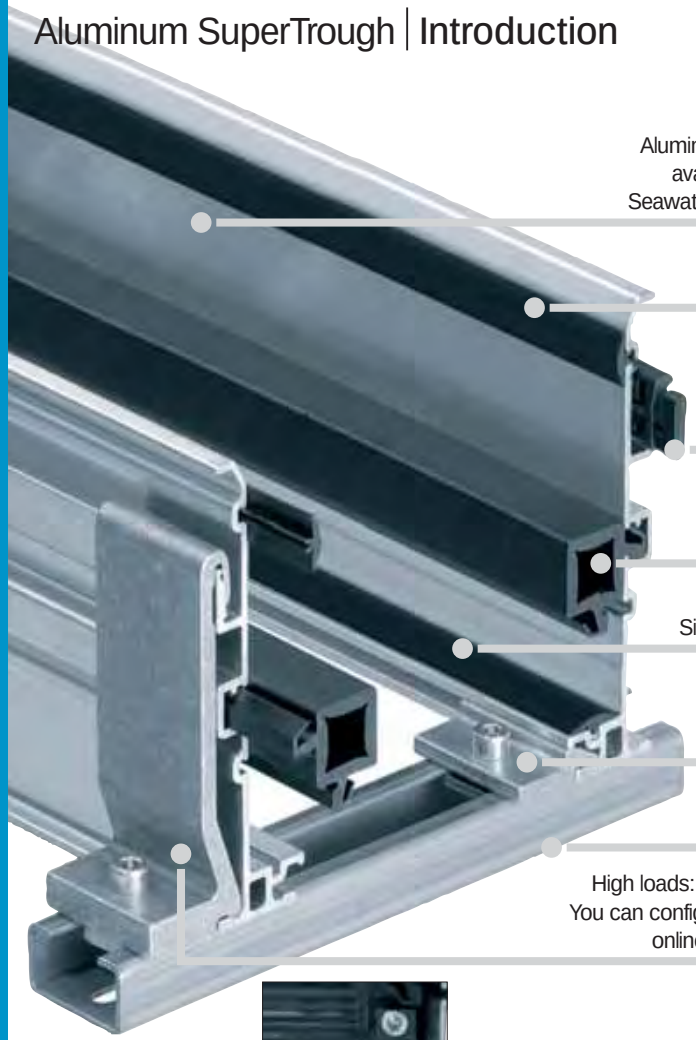


igus® has experience with all kind of installations and travels. Very long travels up to 615 m or "green systems", they helps to save energy costs, are made with igus® e-chains®, chainflex® cables and guide troughts. Thanks to compatible components, they have best lifetimes also at difficult weather conditions, environmental pollutions or impacts of dust and dirt



Aluminum Super Trough

for general use



Huge program:
Aluminum profile (Standard: 2 m section)
available for almost all igus® e-chains®
Seawater resistant and corrosion resistant

Wear-reducing: Glide strip
Protect from wear on the sides

Fast connection:
Interface connector Basic,
polymer, easy assembly,
no tools needed

Wear-reducing
Polymer glide bar
Easy click-on assembly

Noise-reducing:
Silencer profile, rubber (add-on item)

Simple fastening: Bottom
clamp Basic, attached inwards
or outwards, fast and easy

Simple fastening: C-profile,
hold for bottom clamps

High loads: Heavy-Duty bracket (add-on item)
You can configure the Heavy-Duty version at our
online-catalog ► www.igus.eu/eu/salun



Simple connection:
Fixed end module (add-on item),
for fast and easy mounting - without any drilling
Details ► from 1208

The igus® standard - Aluminum SuperTrough

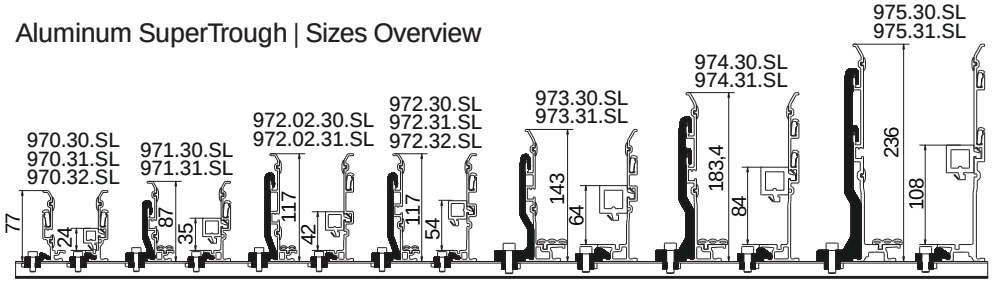
- From a simple and cost-effective basic version to a version for ambitous plant engineering
- Very simple, modular assembly
- Corrosion resistant, seawater resistant aluminum profile
- Flexible assembly - Fastening on substructure independent of profile lengths and butt joints
- Misalignment-free installation - No screwing or welding of the profiles required

Installation Guide-PDF with detailed assembly information ► www.igus.eu/eu/installation-guide-pdf

Series Part No.	Outer trough height H_{Ra} [mm]	Installation set* Part No.	Side part material	Page
				
Standard **Basic version, Standard -** for general use				
970.30.SL | 970.31.SL	77	960.30	aluminum	1190
970.30.SL | 970.32.SL	77	960.30	aluminum	1192
971.30.SL | 971.31.SL	87	960.30	aluminum	1194
972.02.30.SL | 972.02.31.SL	117	960.30	aluminum	1196
972.30.SL | 972.31.SL	117	960.30	aluminum	1198
972.30.SL | 972.32.SL	117	960.30	aluminum	1200
973.30.SL | 973.31.SL	144	960.50	aluminum	1202
974.30.SL | 974.31.SL	184	960.50	aluminum	1204
975.30.SL | 975.31.SL	236	960.50	aluminum	1206
				
Heavy-Duty version - for Heavy-Duty use You can configure the Heavy-Duty version online with the respective e-chain® you've chosen or ►www.igus.eu/eu/salun				
971.30.SL | 971.31.SL	87	971.50	aluminum	www.igus.eu/eu/salun
972.02.30.SL | 972.02.31.SL	117	972.50	aluminum	www.igus.eu/eu/salun
972.30.SL | 972.31.SL	117	972.50	aluminum	www.igus.eu/eu/salun
972.30.SL | 972.32.SL	117	972.50	aluminum	www.igus.eu/eu/salun
973.30.SL | 973.31.SL	144	973.50	aluminum	www.igus.eu/eu/salun
974.30.SL | 974.31.SL	184	974.50	aluminum	www.igus.eu/eu/salun
975.30.SL | 975.31.SL	236	975.50	aluminum	www.igus.eu/eu/salun

*The basic installation sets are the standard for the Aluminum SuperTroughs. They can be fastened inside or outside and are recommended for most application areas. The basic clamping shoes are made of aluminum. The Heavy-Duty version is differentiated only by the type of the installation set. The part numbers of the channel side plates, slide bars, etc., are the same as the basic model. The Heavy-Duty installation set consists of a rugged aluminum bracket, fastened outside on the guide trough.

Aluminum SuperTrough | Sizes Overview



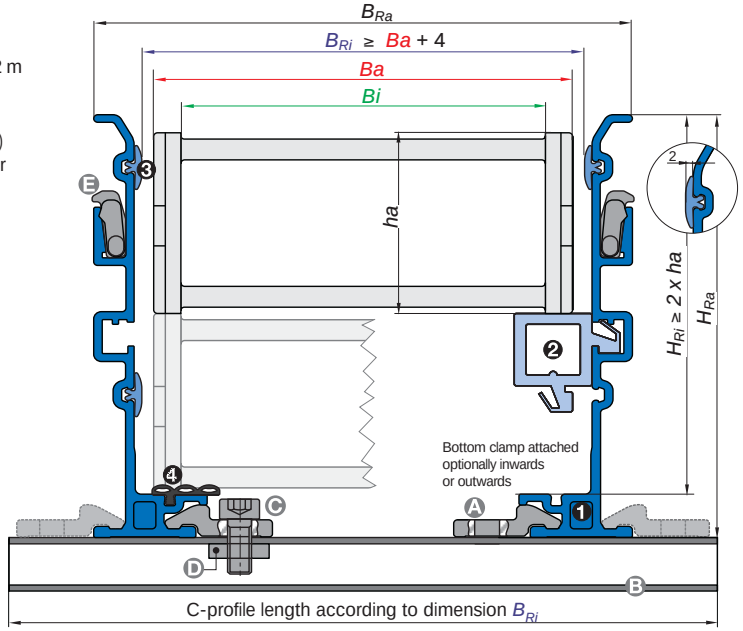
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Components, trough
❶ Trough side parts, aluminum, 2 m
❷ Glide bar, plastic, 2 m
❸ Glide strips, plastic, 2 m
(without glide strips on request)
❹ Optional: Silencer profile, rubber

Components, installation set
Ⓐ Bottom clamp, aluminum
Ⓑ C-profile[1], galvanized steel
Ⓒ Screw
Ⓓ Sliding nut
Ⓔ Interface connector, plastic

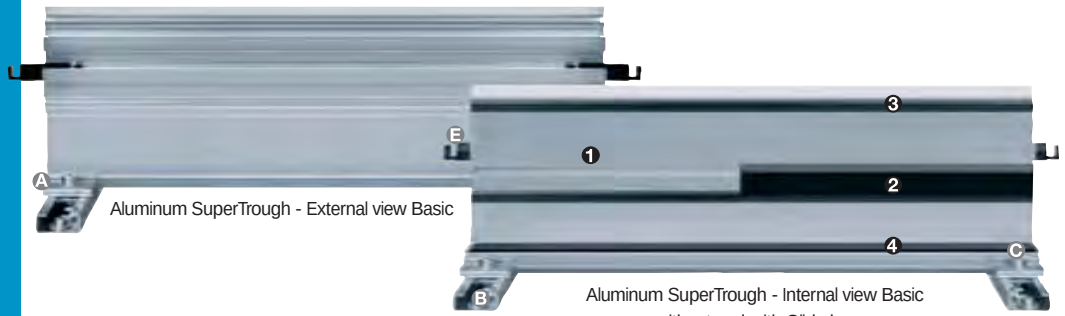
Ba = Outer e-chain® width
Bi = Inner e-chain® width
ha = e-chain® outer height
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width

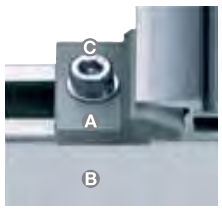
H_{Ri} ≥ 2 x ha
B_{Ri} ≥ Ba + 4

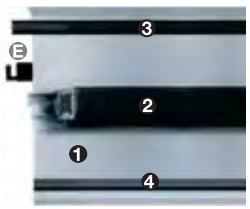


1) C-profile also available in stainless steel V2A, material 1.4301 (AISI 304)

Aluminum SuperTrough | Features




Simple fastening with Basic bottom clamp and C-profile


Wear-reducing with polymer glide barand glide strip.

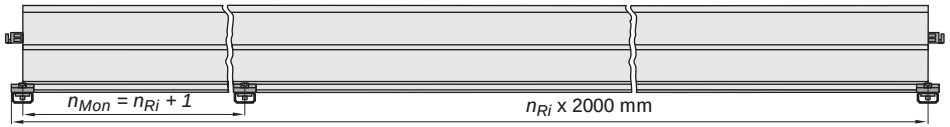

Noise-reducing with silencer profile (add-on item)


Simple connection to the e-chain® with the Fixed end module

Aluminum SuperTrough | Configuration according to your requirements

Quick and easy assemble the right trough for your application

- Selection of the suitable guide trough according to the e-chain® Series and e-chain® width *Bi*
- Determine the feeding point of the cables
- Determine travel distance and thus the length of the required guide trough and the number of trough pieces. (Standard length of a trough side plate: 2000 mm). The length of the guide trough - for axial feeding - is calculated from half the travel length with and half the travel length without the glide bar
- Option: "Sound dampening" with silencer profile
- Number and selection of the assembly kit
  There are two assembly kit options: Basic (standard), Heavy-Duty (for plant construction)
  The quantity of the assembly kit is calculated from the number of the trough pieces + 1 kit:



- The assembly kit matches the igus c-profile option
- If you have opted for an e-chain® with KMA mounting brackets, we offer you a fixed-end module for the quick and simple fastening of the e-chain® in the trough without holes

Installation Guide-PDF with detailed assembly information
►www.igus.eu/eu/installation-guide-pdf

Order example | Based on Part No. 973.30.SL | 973.31.SL

Order example: Length of travel 30 m -
Center mounted for Series 3500.100.200.0 with B_{Ri} = 124

Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 973.30.SL
Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 973.31.SL
Installation set "Basic" complete (guide trough-sets + 1) Order text: 17 installation sets "Basic"	Part No. 960.40.175
Module for the fixed end Order text: 1 set	Part No. 973.80.5
Option: For an additional noise dampening with silencer profile, please add Index A Example:	Part No. 973.30.SLA

Calculation - travel center mounted: Half travel length, rounded down to full 2 m sections = X m guide trough length without glide bars + X m guide trough length with glide bars + installation sets Basic (number of trough pieces + 1)

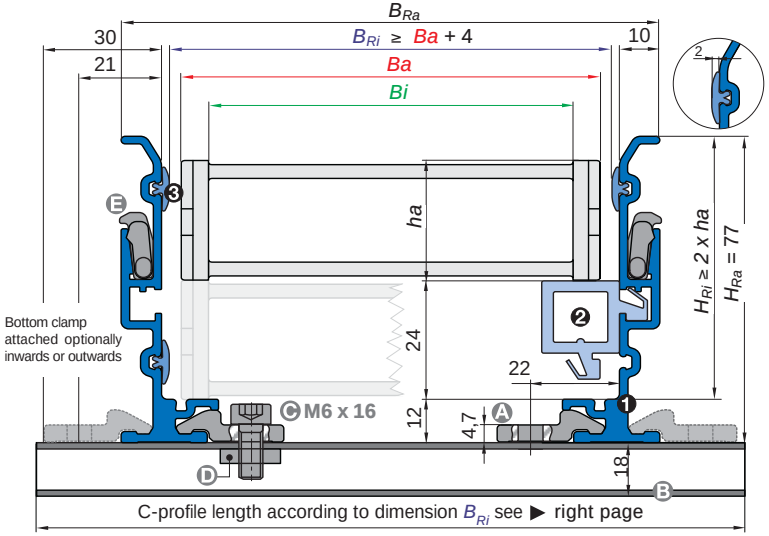
Aluminum SuperTrough | 970.30.SL | 970.31.SL

Trough height: 77 mm | Product range

For the following igus® Series

E2 mini
- 10
- B15

zipper
- 15/R15



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	970.30.SL	≈ 4,20 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	970.31.SL	≈ 4,90 kg

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.30	≈ 0,08 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.30.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.30.125

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	70.11	≈ 2,04 kg
❷ 1 Glide bar, plastic, individual, 2 m section	81.79	≈ 0,42 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.40	≈ 0,03 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M6 x 16, individual	MAT 0040209	
Ⓓ 1 Sliding nut M6, individual	MAT 0040057	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end clamp (Detailed information ▶ page 1208)	970.80	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

10

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	30	upon request	960.30.125
.025	40	upon request	960.30.150
.038	53	upon request	960.30.150
.050	65	960.30.125	960.30.175
.5	80	960.30.125	960.30.175
.6	98	960.30.150	960.30.200
.7	117	960.30.175	960.30.225

B15

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	30	upon request	960.30.125
.025	40	upon request	960.30.150
.038	53	upon request	960.30.150
.050	65	960.30.125	960.30.175
.5	80	960.30.125	960.30.175
.6	98	960.30.150	960.30.200
.7	117	960.30.175	960.30.225

15

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	30	upon request	960.30.125
.025	40	upon request	960.30.150
.038	53	upon request	960.30.150
.050	65	960.30.175	960.30.175
.5	80	960.30.175	960.30.175
.6	98	960.30.200	960.30.200
.7	117	960.30.225	960.30.225

R15

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.025	40	upon request	960.30.150
.038	80	upon request	960.30.150
.063	80	upon request	960.30.175
.080	98	960.30.150	960.30.200



e-chain® on the tower of the storage and retrieval unit for high-bay warehouses rolls off from one aluminum guide trough to the opposite one

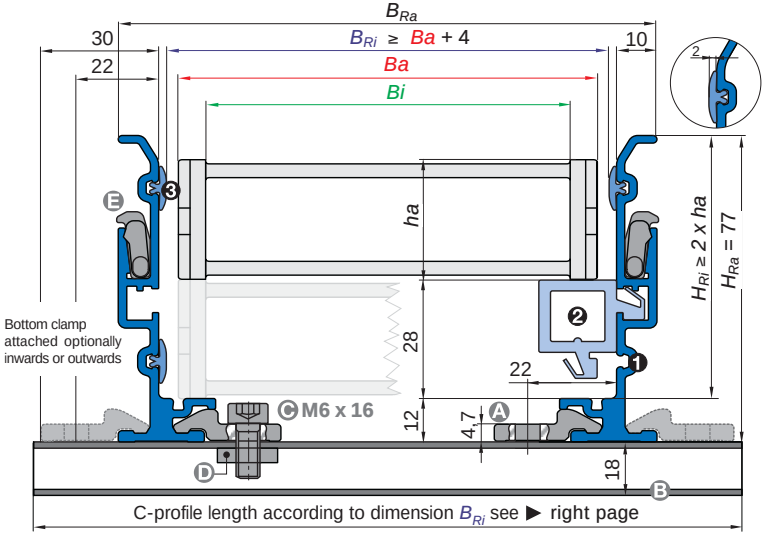
Aluminum SuperTrough | 970.30.SL | 970.32.SL

Trough height: 77 mm | Product range

For the following igus® Series

E2/000
- 1500

E4.1
- E4.21



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	970.30.SL	≈ 4,20 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	970.32.SL	≈ 5,00 kg

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.30	≈ 0,06 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.30.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.30.125

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	70.11	≈ 2,04 kg
❷ 1 Glide bar, plastic, individual, 2 m section	81.79	≈ 0,42 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.40	≈ 0,03 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M6 x 16, individual	MAT 0040209	
Ⓓ 1 Sliding nut M6, individual	MAT 0040057	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end clamp (not for E4.21. Detailed information ▶ page 1208)	970.80	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

1500

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.015	33	upon request	960.30.125
.020	38	upon request	960.30.125
.025	43	upon request	960.30.150
.038	56	upon request	960.30.150
.050	68	960.30.125	960.30.175
.068	86	960.30.150	960.30.175
.080	98	960.30.150	960.30.200
.100	118	960.30.175	960.30.225
.125	143	960.30.200	960.30.250

E4.21

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	48	upon request	960.30.150
.040	58	960.30.125	960.30.150
.050	68	960.30.125	960.30.175
.060	78	960.30.125	960.30.175
.070	88	960.30.150	960.30.175
.080	98	960.30.150	960.30.200
.090	108	960.30.175	960.30.200
.100	118	960.30.175	960.30.225
.110	128	960.30.175	960.30.225
.120	138	960.30.200	960.30.225
.140	158	960.30.225	960.30.250



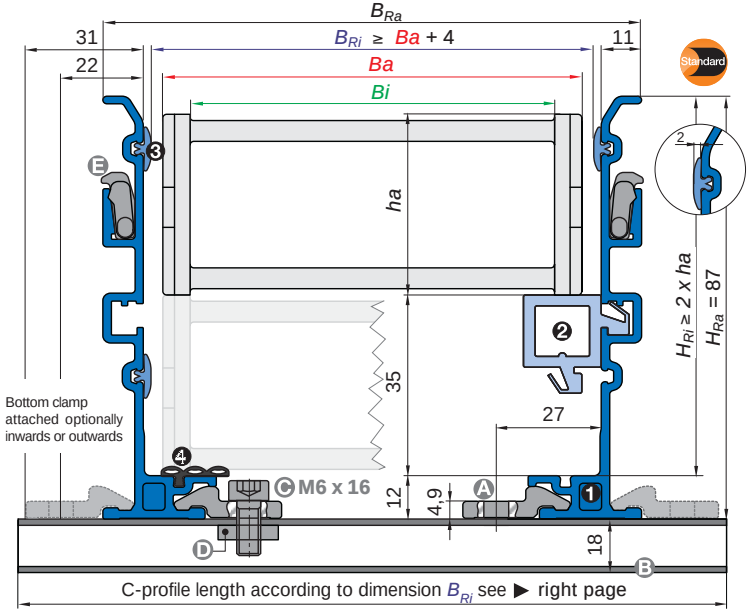
Seawater resistant Aluminum SuperTrough in a RTG-crane. Long travel with igus® E4 system

Aluminum SuperTrough | 971.30.SL | 971.31.SL

Trough height: 87 mm | Product range

For the following igus® Series

- E2/000
- 2500
- 255
- E2 e-tubes
- R48
- E6
- E6.29/R6.29



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	971.30.SLA**	≈ 5,00 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	971.31.SLA**	≈ 6,40 kg

** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 971.30.SLA

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.30	≈ 0,06 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.30.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.30.150

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	71.11	≈ 2,44 kg
❷ 1 Glide bar, plastic, individual, 2 m section	82.79	≈ 0,6 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.67.H.2000	≈ 0,16 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.40	≈ 0,03 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M6 x 16, individual	MAT 0040209	
Ⓓ 1 Sliding nut M6, individual	MAT 0040057	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (not for R48, E6.29/R6.29. Detailed information ▶ page 1208)	971.80.4	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

2500

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.02	45	upon request	960.30.150
.03	58	upon request	960.30.150
.05	77	960.30.125	960.30.175
.07	97	960.30.150	960.30.200
.09	109	960.30.175	960.30.225
.10	123	960.30.175	960.30.225
.12	145	960.30.200	960.30.250

255

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.03	58	upon request	960.30.150
.05	77	960.30.125	960.30.175
.07	97	960.30.150	960.30.200
.10	123	960.30.175	960.30.225

E6.29/R6.29

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	50	upon request	960.30.150
.040	60	upon request	960.30.175
.050	70	upon request	960.30.175
.060	80	960.30.150	960.30.175
.070	90	960.30.150	960.30.200
.080	100	960.30.150	960.30.200
.090	110	960.30.175	960.30.225
.100	120	960.30.175	960.30.225
.110	130	960.30.200	960.30.225
.120	140	960.30.200	960.30.250

R48

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.025	40	upon request	960.30.150
.050	65	upon request	960.30.175
.075	90	960.30.150	960.30.200
.100	115	960.30.175	960.30.225
.130	145	960.30.200	960.30.250



Series E4 in a seawater resistant aluminum guide trough

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 971.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum SuperTrough ▶www.igus.eu/eu/salun



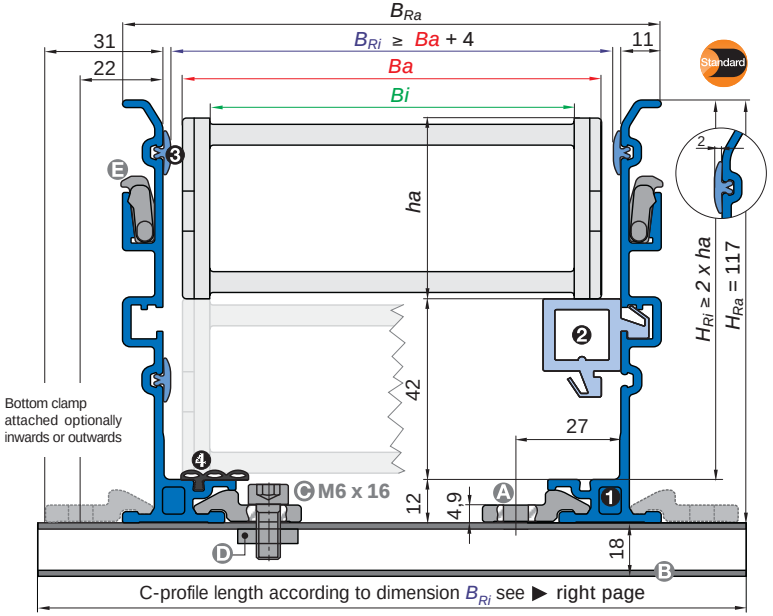
Aluminum SuperTrough | 972.02.30.SL | 972.02.31.SL

Trough height: 117 mm | Product range

For the following igus® Series

E4.1
- E4.28/R4.28

E6
- E6.35



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	972.02.30.SLA**	≈ 6,00 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	972.02.31.SLA**	≈ 7.40 kg

** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 972.02.30.SLA

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.30	≈ 0,06 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.30.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.30.175

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	72.02.11	≈ 2,94 kg
❷ 1 Glide bar, plastic, individual, 2 m section	82.79	≈ 1,30 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.67.H.2000	≈ 0,16 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.40	≈ 0,03 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M6 x 16, individual	MAT 0040209	
Ⓓ 1 Sliding nut M6, individual	MAT 0040057	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1208)	972.80.4	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

E4.28/R4.28

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	64	upon request	960.30.175
.050	74	960.30.125	960.30.175
.062	86	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.075	99	960.30.150	960.30.200
.087	111	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.125	149	960.30.200	960.30.250
.150	174	960.30.225	960.30.275
.175	199	960.30.250	960.30.300
.200	224	960.30.275	960.30.325
.225	249	960.30.300	960.30.350
.250	274	960.30.325	960.30.375
.275	299	960.30.350	960.30.400
.300	324	960.30.375	960.30.425

E6.35

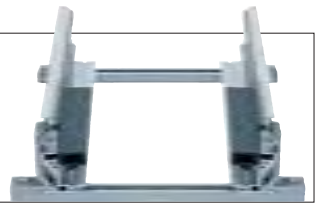
Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.030	54	upon request	960.30.150
.040	64	upon request	960.30.175
.050	74	960.30.125	960.30.175
.060	84	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.080	104	960.30.150	960.30.200
.090	114	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.110	134	960.30.200	960.30.250
.120	144	960.30.200	960.30.250



Safely guide the e-chain® across longer travel. Nowadays, users increasingly prefer aluminum (corrosion resistance, weight savings, faster assembly among others)

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 972.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum SuperTrough ▶www.igus.eu/eu/salun

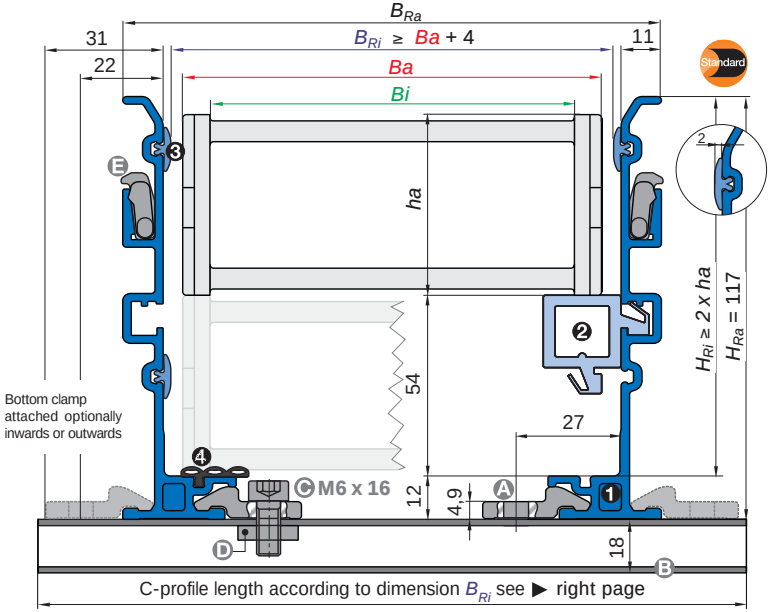


Aluminum SuperTrough | 972.30.SL | 972.31.SL

Trough height: 117 mm | Product range

For the following igus® Series

- E4.1
  - ● E4.32/H4.32/R4.32
- E4.1 light
  - ● E4.38L/R4.38L
- E6
  - ● E6.40/R6.40



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	972.30.SLA**	≈ 6,00 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	972.31.SLA**	≈ 7,40 kg

** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 972.30.SLA

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.30	≈ 0,06 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.30.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.30.150

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	72.11	≈ 2,94 kg
❷ 1 Glide bar, plastic, individual, 2 m section	82.79	≈ 0,60 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.67.H.2000	≈ 0,16 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.40	≈ 0,03 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M6 x 16, individual	MAT 0040209	
Ⓓ 1 Sliding nut M6, individual	MAT 0040057	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1208)	972.80.4	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

E4.32/H4.32/R4.32

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	77	960.30.125	960.30.175
.06	95	960.30.150	960.30.200
.07	102	960.30.150	960.30.200
.087	114	960.30.175	960.30.225
.10	127	960.30.175	960.30.225
.11	135	960.30.200	960.30.250
.112	140	960.30.200	960.30.250
.12	152	960.30.200	960.30.250
.137	165	960.30.225	960.30.275
.15	177	960.30.225	960.30.275
.162	190	960.30.250	960.30.300
.17	195	960.30.250	960.30.300
.18	202	960.30.250	960.30.300
.187	215	960.30.275	960.30.325
.20	227	960.30.275	960.30.325
.212	240	960.30.300	960.30.350
.23	252	960.30.300	960.30.350
.237	265	960.30.325	960.30.375
.25	277	960.30.325	960.30.375
.262	290	960.30.350	960.30.400
.28	302	960.30.350	960.30.400
.29	315	960.30.375	960.30.425
.30	327	960.30.375	960.30.425
.312	340	960.30.400	960.30.450
.325	352	960.30.400	960.30.450
.337	365	960.30.425	960.30.475
.350	377	960.30.425	960.30.475
.362	390	960.30.450	960.30.500
.375	402	960.30.450	960.30.500
.387	415	960.30.475	960.30.525
.400	427	960.30.475	960.30.525

E4.38L/R4.38L

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
050.	70	upon request	960.30.200
062.	82	upon request	960.30.200
075.	95	upon request	960.30.225
087.	107	upon request	960.30.225
100.	120	960.30.175	960.30.250
112.	132	960.30.200	960.30.250
125.	145	960.30.200	960.30.275
137.	157	960.30.225	960.30.275
150.	170	960.30.225	960.30.300
162.	182	960.30.250	960.30.300
175.	195	960.30.250	960.30.325
187.	207	960.30.275	960.30.325
200.	220	960.30.275	960.30.350
212.	232	960.30.300	960.30.350
225.	245	960.30.300	960.30.375
237.	257	960.30.325	960.30.375
250.	270	960.30.325	960.30.400
262.	282	960.30.350	960.30.400
275.	295	960.30.350	960.30.425
287.	307	960.30.375	960.30.425
300.	320	960.30.375	960.30.450
312.	332	960.30.400	960.30.450
325.	345	960.30.400	960.30.475
337.	357	960.30.425	960.30.475
350.	370	960.30.425	960.30.500
362.	382	960.30.450	960.30.500
375.	395	960.30.450	960.30.525
387.	407	960.30.475	960.30.525
400.	420	960.30.475	960.30.550

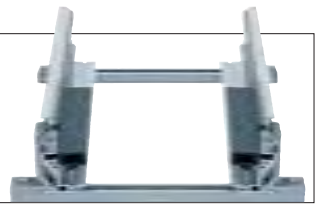
*Width available upon request, please consult igus® for delivery time!

E6.40/R6.40

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	64	upon request	960.30.175
.050	74	960.30.125	960.30.175
.062	86	960.30.150	960.30.200
.070	94	960.30.150	960.30.200
.075	99	960.30.150	960.30.200
.087	111	960.30.175	960.30.225
.100	124	960.30.175	960.30.225
.125	149	960.30.200	960.30.250
.150	174	960.30.225	960.30.275
.175	199	960.30.250	960.30.300
.200	224	960.30.275	960.30.325
.225	249	960.30.300	960.30.350
.250	274	960.30.325	960.30.375
.275	299	960.30.350	960.30.400
.300	324	960.30.375	960.30.425

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 972.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum Super-Trough ▶www.igus.eu/eu/salun



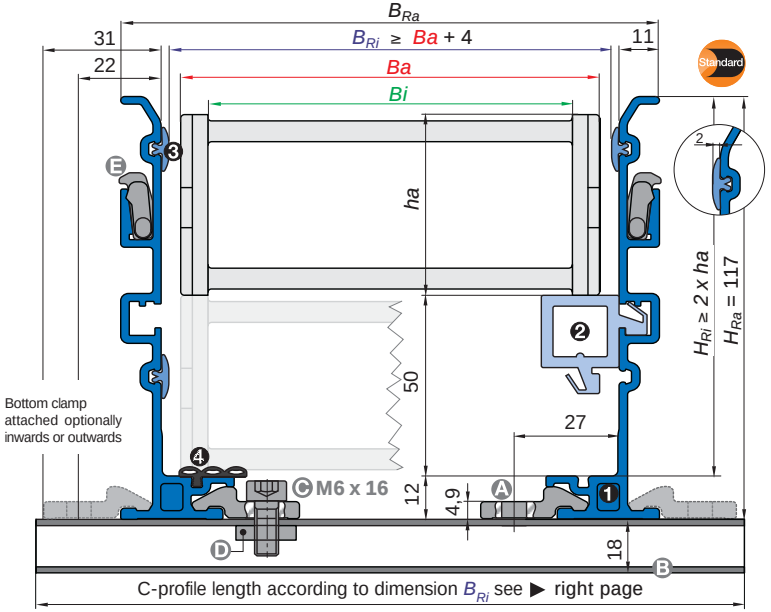
Aluminum SuperTrough | 972.30.SL | 972.32.SL

Trough height: 117 mm | Product range

For the following igus® Series

E2/000
- 2700

E2 e-tubes
- R58



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	972.30.SLA**	≈ 6,00 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	972.32.SLA**	≈ 7,40 kg
** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 972.30.SLA		
Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.30	≈ 0,06 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.30.XXX*	upon request
* Please add the C-profile length as shown on the tables on the right page. Example: 960.30.150		

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	72.11	≈ 2,94 kg
❷ 1 Glide bar, plastic, individual, 2 m section	82.79	≈ 0,60 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.67.H.2000	≈ 0,16 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.40	≈ 0,03 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M6 x 16, individual	MAT 0040209	
Ⓓ 1 Sliding nut M6, individual	MAT 0040057	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1208)	972.80.4	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

2700

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	70	upon request	960.30.175
.06	85	960.30.150	960.30.200
.07	95	960.30.150	960.30.200
.09	110	960.30.175	960.30.225
.10	120	960.30.175	960.30.225
.12	145	960.30.200	960.30.250
.15	170	960.30.225	960.30.275
.17	198	960.30.250	960.30.300

R58

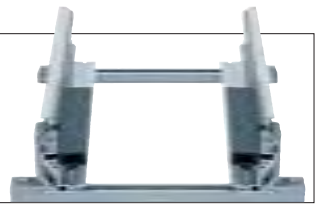
Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.050	70	upon request	960.30.175
.075	95	960.30.150	960.30.200
.100	120	960.30.175	960.30.225
.125	145	960.30.200	960.30.250
.150	170	960.30.225	960.30.275
.175	195	960.30.250	960.30.300
.200	220	960.30.275	960.30.325



Stable guidance without oscillation. Crane operating speed 80 m/min.

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 972.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum Super-Trough ▶www.igus.eu/eu/salun

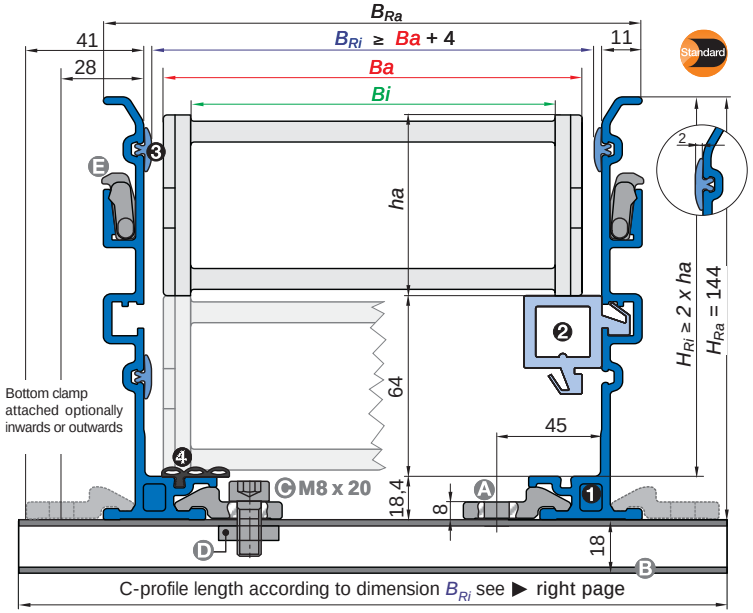


Aluminum SuperTrough | 973.30.SL | 973.31.SL

Trough height: 144 mm | Product range

For the following igus® Series

- E2/000
  - 3500
- E2 e-tubes
  - R68
- E4.1
  - E4.42/H4.42/R4.42
- E4.1 light
  - E4.48L/R4.48L
- E6
  - E6.52/R6.52



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	973.30.SLA**	≈ 8,00 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	973.31.SLA**	≈ 10,8 kg

** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 973.30.SLA

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.40	≈ 0,08 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.40.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.40.175

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	73.11	≈ 3,94 kg
❷ 1 Glide bar, plastic, individual, 2 m section	83.79	≈ 1,30 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.68.H.2000	≈ 0,38 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.50	≈ 0,04 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M8 x 20, individual	MAT 0040445	
Ⓓ 1 Sliding nut M8, individual	MAT 0040413	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Part No. depend on e-chain® Series - Detailed information ▶page 1208)	973.80.5A) / 973.81.5B)	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

A) - for Series 3500, R68 B) - for Series E4.42/H4.42/R4.42, E4.48L/R4.48L, E6.52/R6.52

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

3500

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.050	74	upon request	960.40.200
.075	99	upon request	960.40.225
.100	124	960.40.175	960.40.250
.115	139	960.40.200	960.40.275
.125	149	960.40.200	960.40.275
.150	174	960.40.225	960.40.300
.175	199	960.40.250	960.40.325
.200	224	960.40.275	960.40.350
.225	249	960.40.300	960.40.375
.250	274	960.40.325	960.40.400

R68

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.050	72	upon request	960.40.200
.075	97	upon request	960.40.225
.100	122	960.40.175	960.40.250
.115	137	960.40.200	960.40.275
.125	147	960.40.200	960.40.275
.150	172	960.40.225	960.40.300
.175	197	960.40.250	960.40.325
.200	222	960.40.275	960.40.350
.225	247	960.40.300	960.40.375
.250	272	960.40.325	960.40.400

E4.42/H4.42/R4.42

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	80	upon request	960.40.200
.06	98	upon request	960.40.225
.07	105	upon request	960.40.225
.087	118	960.40.175	960.40.250
.10	130	960.40.200	960.40.250
.11	138	960.40.200	960.40.275
.112	143	960.40.200	960.40.275
.12	155	960.40.225	960.40.275
.137	168	960.40.225	960.40.300
.15	180	960.40.250	960.40.300
.162	193	960.40.250	960.40.325
.17	198	960.40.250	960.40.325
.18	205	960.40.275	960.40.325
.187	218	960.40.275	960.40.350
.20	230	960.40.300	960.40.350
.212	243	960.40.300	960.40.375
.23	255	960.40.325	960.40.375
.237	268	960.40.325	960.40.400
.25	280	960.40.350	960.40.400
.262	293	960.40.350	960.40.425
.28	305	960.40.375	960.40.425
.29	318	960.40.375	960.40.450
.30	330	960.40.400	960.40.450
.312	343	960.40.400	960.40.475
.325	355	960.40.425	960.40.475
.337	368	960.40.425	960.40.500
.350	380	960.40.450	960.40.500
.362	393	960.40.450	960.40.525
.375	406	960.40.475	960.40.525
.387	418	960.40.475	960.40.550
.400	430	960.40.500	960.40.550

E4.48L/R4.48L

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
050.	74	upon request	960.40.200
062.*	86	upon request	960.40.200
075.	99	upon request	960.40.225
087.*	111	upon request	960.40.225
100.	124	960.40.175	960.40.250
112.*	136	960.40.200	960.40.250
125.	149	960.40.200	960.40.275
137.*	161	960.40.225	960.40.275
150.	174	960.40.225	960.40.300
162.*	186	960.40.250	960.40.300
175.*	199	960.40.250	960.40.325
187.*	211	960.40.275	960.40.325
200.*	224	960.40.275	960.40.350
212.*	236	960.40.300	960.40.350
225.*	249	960.40.300	960.40.375
237.*	261	960.40.325	960.40.375
250.*	274	960.40.325	960.40.400
262.*	286	960.40.350	960.40.400
275.*	299	960.40.350	960.40.425
287.*	311	960.40.375	960.40.425
300.*	324	960.40.375	960.40.450
312.*	336	960.40.400	960.40.450
325.*	349	960.40.400	960.40.475
337.*	361	960.40.425	960.40.475
350.*	374	960.40.425	960.40.500
362.*	386	960.40.450	960.40.500
375.*	399	960.40.450	960.40.525
387.*	411	960.40.475	960.40.525
400.*	424	960.40.475	960.40.550

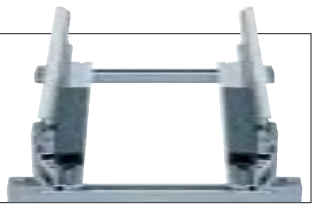
*Width available upon request, please consult igus® for delivery time!

E6.52/R6.52

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.040	68	upon request	960.40.200
.050	78	upon request	960.40.200
.062	90	upon request	960.40.225
.070	98	upon request	960.40.225
.075	103	upon request	960.40.225
.087	115	upon request	960.40.250
.100	128	960.40.175	960.40.250
.125	153	960.40.200	960.40.275
.150	178	960.40.225	960.40.300
.175	203	960.40.250	960.40.325
.200	228	960.40.275	960.40.350
.225	253	960.40.300	960.40.375
.250	278	960.40.325	960.40.400
.275	303	960.40.350	960.40.425
.300	328	960.40.375	960.40.450

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 973.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum Super-Trough ▶www.igus.eu/eu/salun



Aluminum SuperTrough | 974.30.SL | 974.31.SL

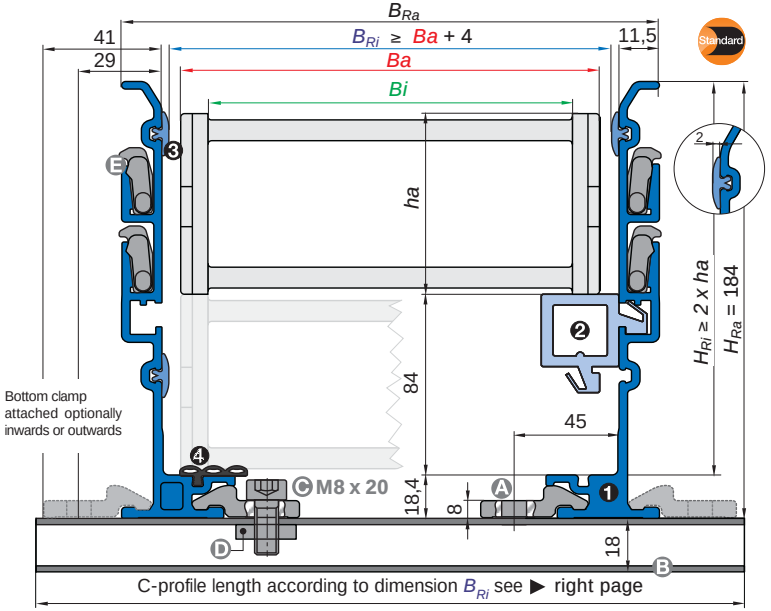
Trough height: 184 mm | Product range

For the following igus® Series

E4.1
- E4.56/H4.56/R4.56

E4/light
- 14040/14140/R18840
- 14240/14340

E6
- E6.62



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	974.30.SLA**	≈ 10,0 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	974.31.SLA**	≈ 12,8 kg

** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 974.30.SLA

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.50	≈ 0,08 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.50.200

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	74.11*	≈ 4,94 kg
❷ 1 Glide bar, plastic, individual, 2 m section	83.79	≈ 1,30 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.68.H.2000	≈ 0,38 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.50	≈ 0,04 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M8 x 20, individual	MAT 0040445	
Ⓓ 1 Sliding nut M8, individual	MAT 0040413	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Part No. depend on e-chain® Series - Detailed information ▶page 1208)	974.80.5A) / 974.81.5B)	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

A) - for Series E4.56/H4.56/R4.56, E6.62 B) - for Series 14040/14140/R18840, 14240/14340

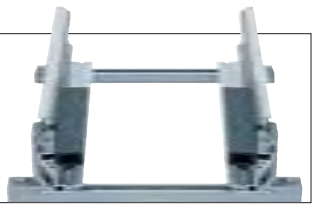
Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

E4.56/H4.56/R4.56				14040/14140/R18840				14240/14340				E6.62			
Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards	Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards	Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards	Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	88	upon request	960.50.225	.05	80	upon request	960.50.200	.05	80	upon request	960.50.200	.05	90	upon request	960.50.225
.06	103	upon request	960.50.225	.06	95	upon request	960.50.225	.06	98	upon request	960.50.225	.06	108	upon request	960.50.225
.07	113	upon request	960.50.250	.07	105	upon request	960.50.225	.07	105	upon request	960.50.225	.07	115	upon request	960.50.250
.08	125	960.50.175	960.50.250	.08	117	960.50.175	960.50.225	.087	118	960.50.175	960.50.250	.087	127	960.50.175	960.50.250
.10	138	960.50.200	960.50.275	.10	130	960.50.200	960.50.250	.10	130	960.50.200	960.50.250	.10	140	960.50.200	960.50.275
.11	151	960.50.200	960.50.275	.11	143	960.50.200	960.50.275	.11	138	960.50.200	960.50.275	.11	148	960.50.200	960.50.275
.12	163	960.50.225	960.50.300	.12	155	960.50.225	960.50.275	.112	143	960.50.200	960.50.275	.112	152	960.50.200	960.50.275
.13	176	960.50.225	960.50.300	.13	168	960.50.225	960.50.300	.12	155	960.50.225	960.50.275	.12	165	960.50.225	960.50.300
.15	188	960.50.250	960.50.325	.15	180	960.50.250	960.50.300	.137	168	960.50.225	960.50.300	.137	177	960.50.225	960.50.300
.16	201	960.50.250	960.50.325	.16	193	960.50.250	960.50.325	.15	180	960.50.250	960.50.300	.15	190	960.50.250	960.50.325
.17	213	960.50.275	960.50.350	.17	205	960.50.275	960.50.325	.162	193	960.50.250	960.50.325	.162	202	960.50.250	960.50.325
.18	226	960.50.275	960.50.350	.18	218	960.50.275	960.50.350	.17	198	960.50.250	960.50.325	.17	208	960.50.275	960.50.325
.20	238	960.50.300	960.50.375	.20	230	960.50.300	960.50.350	.18	205	960.50.275	960.50.325	.18	215	960.50.275	960.50.350
.21	251	960.50.300	960.50.375	.21	243	960.50.300	960.50.375	.187	218	960.50.275	960.50.350	.187	227	960.50.275	960.50.350
.22	263	960.50.325	960.50.400	.22	255	960.50.325	960.50.375	.20	230	960.50.300	960.50.350	.20	240	960.50.300	960.50.375
.23	276	960.50.325	960.50.400	.23	268	960.50.325	960.50.400	.212	243	960.50.300	960.50.375	.212	252	960.50.300	960.50.375
.25	288	960.50.350	960.50.425	.25	280	960.50.350	960.50.400	.23	255	960.50.325	960.50.375	.23	265	960.50.325	960.50.400
.26	301	960.50.350	960.50.425	.26	293	960.50.350	960.50.425	.237	268	960.50.325	960.50.400	.237	277	960.50.325	960.50.400
.27	313	960.50.375	960.50.450	.27	305	960.50.375	960.50.425	.25	280	960.50.350	960.50.400	.25	290	960.50.350	960.50.425
.28	326	960.50.375	960.50.450	.28	318	960.50.375	960.50.450	.262	293	960.50.350	960.50.425	.262	302	960.50.350	960.50.425
.30	338	960.50.400	960.50.475	.30	330	960.50.400	960.50.450	.28	305	960.50.375	960.50.425	.28	315	960.50.375	960.50.450
.31	351	960.50.400	960.50.475	.31	343	960.50.400	960.50.475	.29	318	960.50.375	960.50.450	.29	327	960.50.375	960.50.450
.32	363	960.50.425	960.50.500	.32	355	960.50.425	960.50.475	.30	330	960.50.400	960.50.450	.30	340	960.50.400	960.50.475
.33	376	960.50.425	960.50.500	.33	368	960.50.425	960.50.500	.312	343	960.50.400	960.50.475	.312	352	960.50.400	960.50.475
.35	388	960.50.450	960.50.525	.35	380	960.50.450	960.50.500	.325	355	960.50.425	960.50.475	.325	365	960.50.425	960.50.500
.36	401	960.50.450	960.50.525	.36	393	960.50.450	960.50.525	.337	368	960.50.425	960.50.500	.337	377	960.50.425	960.50.500
.37	413	960.50.475	960.50.550	.37	405	960.50.475	960.50.525	.350	380	960.50.450	960.50.500	.350	390	960.50.450	960.50.525
.38	426	960.50.475	960.50.550	.38	418	960.50.475	960.50.550	.362	393	960.50.450	960.50.525	.362	402	960.50.450	960.50.525
.40	438	960.50.500	960.50.575	.40	430	960.50.500	960.50.550	.375	405	960.50.475	960.50.525	.375	415	960.50.475	960.50.550
.41	451	960.50.500	960.50.575	.41	443	960.50.500	960.50.575	.387	418	960.50.475	960.50.550	.387	427	960.50.475	960.50.550
.42	463	960.50.525	960.50.600	.42	455	960.50.525	960.50.575	.400	430	960.50.500	960.50.550	.400	440	960.50.500	960.50.575
.43	476	960.50.525	960.50.600	.43	468	960.50.525	960.50.600								
.45	488	960.50.550	960.50.625	.45	480	960.50.550	960.50.600								
.46	501	960.50.550	960.50.625	.46	493	960.50.550	960.50.625								
.47	513	960.50.575	960.50.650	.47	505	960.50.575	960.50.625								
.48	526	960.50.575	960.50.650	.48	518	960.50.575	960.50.650								
.50	538	960.50.600	960.50.675	.50	530	960.50.600	960.50.650								
.51	551	960.50.600	960.50.675	.51	543	960.50.600	960.50.675								
.52	563	960.50.625	960.50.700	.52	555	960.50.625	960.50.675								
.53	576	960.50.625	960.50.700	.53	568	960.50.625	960.50.700								
.55	588	960.50.650	960.50.725	.55	580	960.50.650	960.50.700								
.60	638	960.50.700	960.50.775	.60	630	960.50.700	960.50.750								

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 974.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum Super-Trough ▶www.igus.eu/eu/salun



Aluminum SuperTrough | 975.30.SL | 975.31.SL

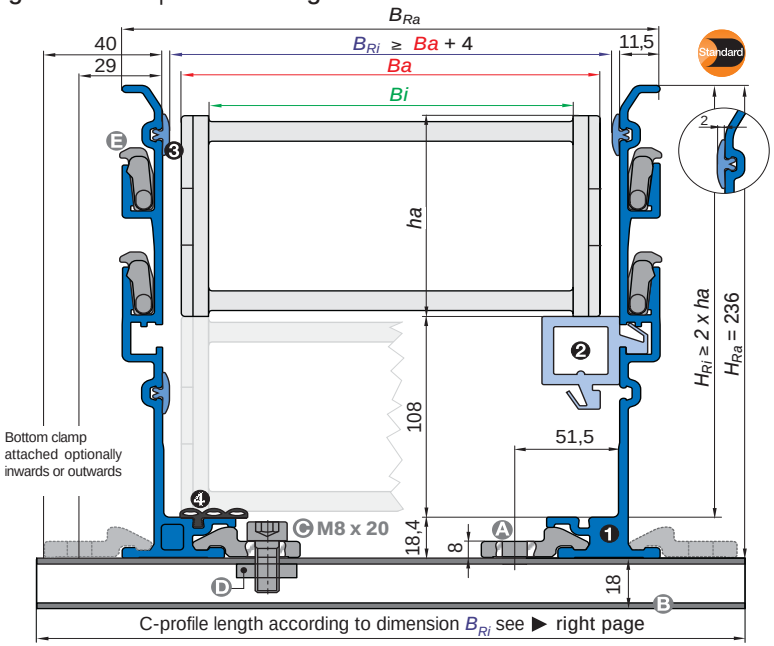
Trough height: 236 mm | Product range

For the following igus® Series

E4.1
- E4.80/H4.80/R4.80

E4/light
- 15050/15150/R19850
- 15250/15350

E6
- E6.80



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Aluminum SuperTrough | Complete sets

Trough side parts sets - consisting of part ❶ / ❷ / ❸ / ❹	Part No.	Weight
Set of 2 trough side parts, incl. glide strips, without glide bars, 2 m section	975.30.SLA**	≈ 14,0 kg
Set of 2 trough side parts, incl. glide strips, with glide bars, 2 m section	975.31.SLA**	≈ 16,6 kg

** For an additional noise dampening with silencer profile, please add index "A" to the Part No. Example: 975.30.SLA

Installation sets - consisting of part Ⓐ / Ⓑ / Ⓒ / Ⓓ / Ⓔ		
1 Installation set without C-profile	960.50	≈ 0,08 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	960.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 960.50.425

Aluminum SuperTrough | Components as single parts

Single parts, trough	Part No.	Weight
❶ 1 Trough side part, individual, 2 m section	75.11	≈ 6,94 kg
❷ 1 Glide bar, plastic, individual, 2 m section	83.79	≈ 1,30 kg
❸ 1 Glide strip, plastic, individual, 2 m section	75.01	≈ 0,06 kg
❹ 1 Silencer profile, rubber, individual, 2 m section (optional for an additional noise dampening)	75.68.H.2000	≈ 0,38 kg
Single parts, installation set		
Ⓐ 1 Bottom clamp, aluminum individual	75.50	≈ 0,04 kg
Ⓑ 1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX.E*	≈ 0,90 kg/m
Ⓒ 1 Screw M8 x 20, individual	MAT 0040445	
Ⓓ 1 Sliding nut M8, individual	MAT 0040413	
Ⓔ 1 Interface connector, individual	75.60	
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Part No. depend on e-chain® Series - Detailed information ▶page 1208)	975.80A) / 975.81B)	

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.125.E
C-profile also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index "E" to the Part No.

A) - for Series E4.80/H4.80/R4.80, E6.80 B) - for Series 15050/15150/R19850, 15250/15350

Basic Version | C-profile lengths (according to dim. B_{Ri})

Bottom clamp attached optionally inwards or outwards

E4.80/H4.80/R4.80

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	104	upon request	960.50.225
.06	119	upon request	960.50.250
.07	129	upon request	960.50.250
.08	141	960.50.200	960.50.275
.10	154	960.50.225	960.50.275
.11	167	960.50.225	960.50.300
.12	179	960.50.250	960.50.300
.13	192	960.50.250	960.50.325
.15	204	960.50.275	960.50.325
.16	217	960.50.275	960.50.350
.17	229	960.50.300	960.50.350
.18	242	960.50.300	960.50.375
.20	254	960.50.325	960.50.375
.21	267	960.50.325	960.50.400
.22	279	960.50.350	960.50.400
.23	292	960.50.350	960.50.425
.25	304	960.50.375	960.50.425
.26	317	960.50.375	960.50.450
.27	329	960.50.400	960.50.450
.28	342	960.50.400	960.50475
.30	354	960.50.425	960.50.475
.31	367	960.50.425	960.50.500
.32	379	960.50.450	960.50.500
.33	392	960.50.450	960.50.525
.35	404	960.50.475	960.50.525
.36	417	960.50.475	960.50.550
.37	429	960.50.500	960.50.550
.38	442	960.50.500	960.50.575
.40	454	960.50.525	960.50.575
.41	467	960.50.525	960.50600
.42	479	960.50.550	960.50.600
.43	492	960.50.550	960.50.625
.45	504	960.50.575	960.50.625
.46	517	960.50.575	960.50.650
.47	529	960.50.600	960.50.650
.48	542	960.50.600	960.50.675
.50	554	960.50.625	960.50.675
.51	567	960.50.625	960.50.700
.52	579	960.50.650	960.50.700
.53	592	960.50.650	960.50.725
.55	604	960.50.675	960.50.725
.60	654	960.50.725	960.50.775

15050/15150/R19850

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	84	upon request	960.50.200
.06	99	upon request	960.50.225
.07	109	upon request	960.50.225
.08	121	upon request	960.50.250
.10	134	upon request	960.50.250
.11	146	960.50.200	960.50.275
.12	159	960.50.225	960.50.275
.13	171	960.50.225	960.50.300
.15	184	960.50.250	960.50.300
.16	196	960.50.250	960.50.325
.17	209	960.50.275	960.50.325
.18	221	960.50.275	960.50.350
.20	234	960.50.300	960.50.350
.21	246	960.50.300	960.50.375
.22	259	960.50.325	960.50.375
.23	271	960.50.325	960.50.400
.25	284	960.50.350	960.50.400
.26	296	960.50.350	960.50.425
.27	309	960.50.375	960.50.425
.28	321	960.50.375	960.50.450
.30	334	960.50.400	960.50.450
.31	346	960.50.400	960.50.475
.32	359	960.50.425	960.50.475
.33	371	960.50.425	960.50.500
.35	384	960.50.450	960.50.500
.36	396	960.50.450	960.50.525
.37	409	960.50.475	960.50.525
.38	421	960.50.475	960.50.550
.40	434	960.50.500	960.50.550
.41	446	960.50.500	960.50.575
.42	459	960.50.525	960.50.575
.43	471	960.50.525	960.50.600
.45	484	960.50.550	960.50.600
.46	496	960.50.550	960.50.625
.47	509	960.50.575	960.50.625
.48	521	960.50.575	960.50.650
.50	534	960.50.600	960.50.650
.51	546	960.50.600	960.50.675
.52	559	960.50.625	960.50.675
.53	571	960.50.625	960.50.700
.55	584	960.50.650	960.50.700
.60	634	960.50.700	960.50.750

15250/15350

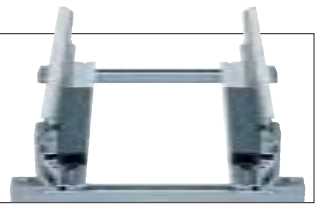
Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	84	upon request	960.50.200
.06	102	upon request	960.50.225
.07	109	upon request	960.50.225
.087	121	upon request	960.50.250
.09	131	upon request	960.50.250
.10	134	upon request	960.50.250
.11	142	960.50.200	960.50.250
.112	147	960.50.200	960.50.275
.12	159	960.50.225	960.50.275
.137	171	960.50.225	960.50.300
.15	184	960.50.250	960.50.300
.162	197	960.50.250	960.50.325
.17	202	960.50.250	960.50.325
.18	209	960.50.275	960.50.325
.187	222	960.50.275	960.50.350
.20	234	960.50.300	960.50.350
.212	247	960.50.300	960.50.375
.23	259	960.50.325	960.50.375
.237	272	960.50.325	960.50.400
.25	284	960.50.350	960.50.400
.262	297	960.50.350	960.50.425
.28	309	960.50.375	960.50.425
.29	322	960.50.375	960.50.450
.30	334	960.50.400	960.50.450
.312	347	960.50.400	960.50.475
.325	359	960.50.425	960.50.475
.337	372	960.50.425	960.50.500
.350	384	960.50.450	960.50.500
.362	397	960.50.450	960.50.525
.375	409	960.50.475	960.50.525
.387	422	960.50.475	960.50.550
.400	434	960.50.500	960.50.550

E6.80

Width index e-chain®	B_{Ri} [mm]	Part No. attached inwards	Part No. attached outwards
.05	104	upon request	960.50.225
.06	119	upon request	960.50.250
.07	129	upon request	960.50.250
.08	141	960.50.200	960.50.275
.10	154	960.50.225	960.50.275
.11	167	960.50.225	960.50.300
.12	179	960.50.250	960.50.300
.13	192	960.50.250	960.50.325
.15	204	960.50.275	960.50.325
.16	217	960.50.275	960.50.350
.17	229	960.50.300	960.50.350
.18	242	960.50.300	960.50.375
.20	254	960.50.325	960.50.375
.21	267	960.50.325	960.50.400
.22	279	960.50.350	960.50.400
.23	292	960.50.350	960.50.425
.25	304	960.50.375	960.50.425
.26	317	960.50.375	960.50.450
.27	329	960.50.400	960.50.450
.28	342	960.50.400	960.50.475
.30	354	960.50.425	960.50.475
.31	367	960.50.425	960.50.500
.32	379	960.50.450	960.50.500
.33	392	960.50.450	960.50.525
.35	404	960.50.475	960.50.525
.36	417	960.50.475	960.50.550
.37	429	960.50.500	960.50.550
.38	442	960.50.500	960.50.575
.40	454	960.50.525	960.50.575
.41	467	960.50.525	960.50.600
.42	479	960.50.550	960.50.600
.43	492	960.50.550	960.50.625
.45	504	960.50.575	960.50.625
.46	517	960.50.575	960.50.650
.47	529	960.50.600	960.50.650
.48	542	960.50.600	960.50.675
.50	554	960.50.625	960.50.675
.51	567	960.50.625	960.50.700
.52	579	960.50.650	960.50.700
.53	592	960.50.650	960.50.725
.55	604	960.50.675	960.50.725
.60	654	960.50.725	960.50.775

Heavy-Duty version for high load applications

This Aluminum SuperTrough is also available for plant manufacturing as add-on item with special Heavy-Duty brackets for safe connection: Installation set Part No. 975.50. You can configure the Heavy-Duty version at our online-catalog with the respective e-chain® you've chosen. More information about the Aluminum Super-Trough ▶www.igus.eu/eu/salun



Aluminum SuperTrough | Basic | Fixed end module

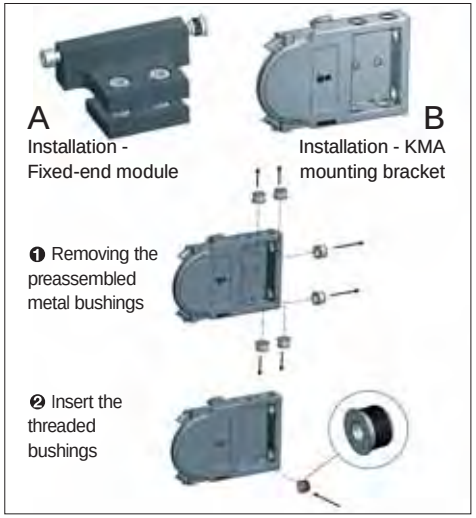
Quick and simple fastening onto the Aluminum SuperTrough

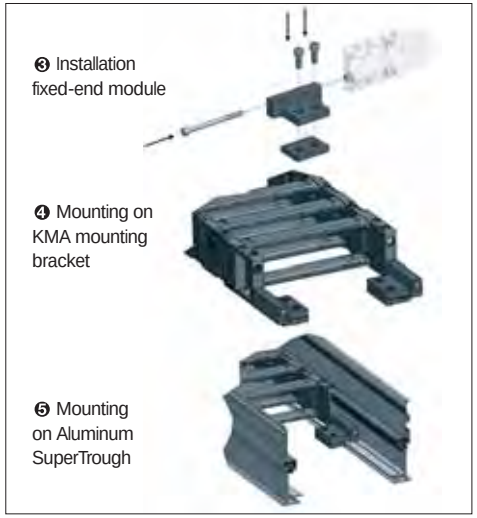


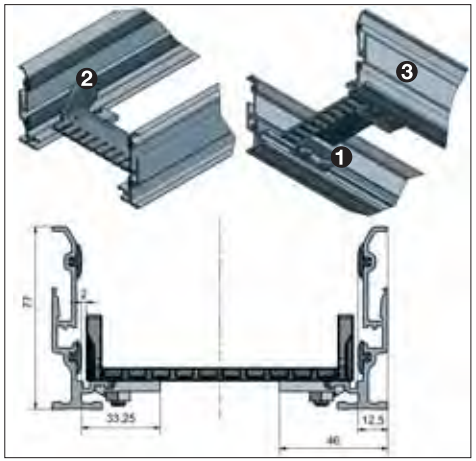
New in this catalog

Optimised fixed end module

The fixed end module allows a KMA to be fastened to a Aluminum SuperTrough without additional drilling. The fixed end module is attached to the trough by tightening the screws. As a result, customers can save assembly time and minimise defects that may result from unassisted drilling into the trough. The new, optimised fixed end module is made from plastic and is therefore lighter and much more affordable than the original metal version. It fulfills the same requirements as the conventional metal version.







Fixed end clamp to attach the e-chain® into the smallest Aluminum SuperTrough 970.30.SL

For mounting brackets from series: 10, 15/R15, B15, 1500. The fixed end clamp enables quick and simple attachment by clamping onto the Aluminum SuperTrough without drilling.

- Quick attachment of the e-chain® to the Aluminum SuperTrough
- The mounting point of the e-chain® can be changed quickly

Fixed end clamp principle:

❶ Fixed end clamp 970.80
❷ Mounting bracket
❸ Aluminum SuperTrough 970.30.SL

Aluminum SuperTrough | Basic | Fixed end module

Fixed end module | Fixed end clamp | Product range

Part No.	For Aluminum SuperTrough	For e-chain® Series		Application including inner width (*Bi*)	Mounting Bracket
970.80[1]	970.30.SL | 970.31.SL	10, B15, 15/R15	(Fixed end clamp)	.050	one-piece
970.80[1]	970.30.SL | 970.32.SL	1500	(Fixed end clamp)	.050	one-piece
971.80.4[1] New*	971.30.SL | 971.31.SL	2500, 255		.07	KMA
972.80.4[1] New*	972.02.30.SL | 972.02.31.SL	E4.28/R4.28, E6.35		.06	KMA
972.80.4[1] New*	972.30.SL | 972.31.SL	E4.32/H4.32/R4.32, E4.38L/R4.38L, E6.40/R6.40		.06	KMA
972.80.4[1] New*	972.30.SL | 972.32.SL	2700, R58		.06	KMA
973.81.5[1] New*	973.30.SL | 973.31.SL	E4.42/H4.42/R4.42, E4.48L/R4.48L, E6.52/R6.52		.10	KMA
973.80.5[1] New*	973.30.SL | 973.31.SL	3500, R68		.100	KMA
974.81.5[1] New*	974.30.SL | 974.31.SL	14040/14140/R18840, 14240/14340		.10	KMA
974.80.5[1] New*	974.30.SL | 974.31.SL	E4.56/H4.56/R4.56, E6.62		.10	KMA
975.80[2]	975.30.SL | 975.31.SL	E4.80/H4.80/R4.80, E6.80		.10	KMA
975.81[2]	975.30.SL | 975.31.SL	15050/15150/R19850, 15250/15350		.10	KMA

1) Material: polymer 2) Material: Aluminum AlMg3, seawaterresistant
Material screw kits: Standard steel, galvanized. Optional stainless steel: V4A, material 1.4571 (AISI 316Ti)
*New in this catalog

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)







Fixed-end module -
Simple fastening of the e-chain® without drilling

Aluminum SuperTrough | Test examples



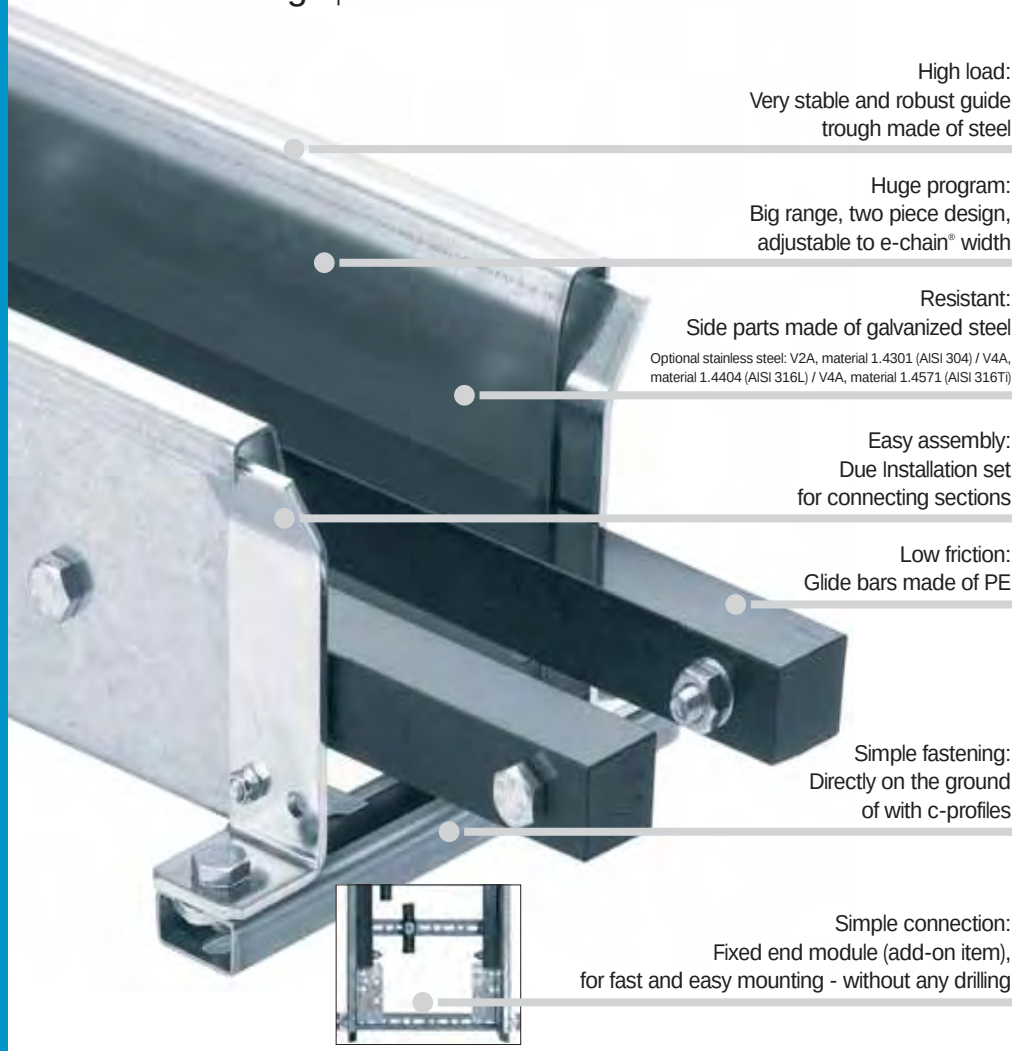


The igus® Aluminum SuperTrough has been used in test setups since 2005.
Test setup Axis 1: Speed 1.5 m/s, Travel: 18 m, Mileage so far: about 50,000 km (test runs since 2005)



Steel guide trough

Very stable and rugged for Heavy-Duty applications



High load:
Very stable and robust guide trough made of steel

Huge program:
Big range, two piece design, adjustable to e-chain® width

Resistant:
Side parts made of galvanized steel

Optional stainless steel: V2A, material 1.4301 (AISI 304) / V4A, material 1.4404 (AISI 316L) / V4A, material 1.4571 (AISI 316Ti)

Easy assembly:
Due Installation set for connecting sections

Low friction:
Glide bars made of PE

Simple fastening:
Directly on the ground of with c-profiles

Simple connection:
Fixed end module (add-on item), for fast and easy mounting - without any drilling

Very stable and rugged for Heavy-Duty applications - Steel guide trough

If the igus® installation sets are used, the guide troughs are particularly easy to assemble. All steel guide troughs are constructed according to the same basic principle. On the following pages, you will find information about dimensions, weights and accessories according to the trough size. All sizes use a common C-profile on which the guide parts are assembled. The assembly brackets used vary in height only.

Installation Guide-PDF with detailed assembly information ► www.igus.eu/eu/installation-guide-pdf

Steel

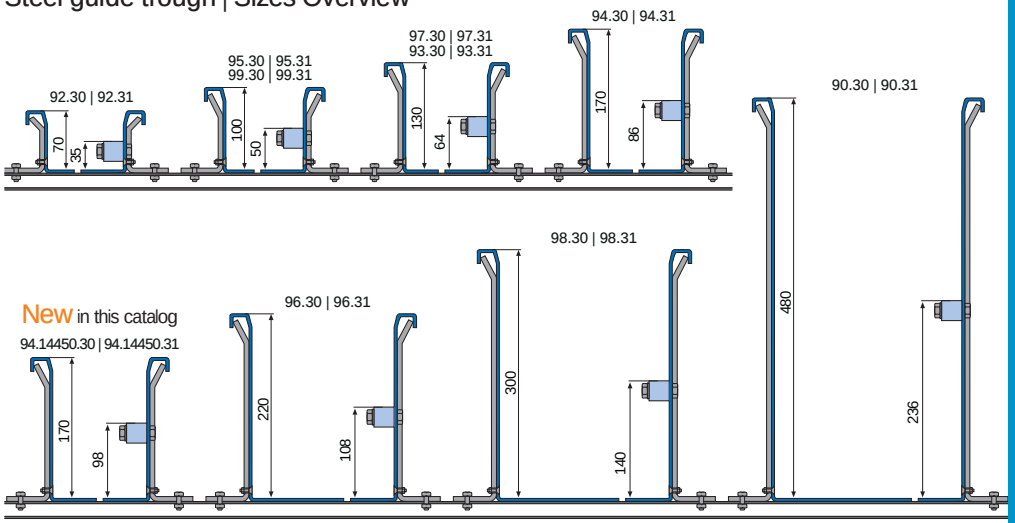
Series Part No.	Outer trough height H_{Ra} [mm]	Installation set* Part No.	Side part material	Page
			Steel guide troughs very stable and rugged for Heavy-Duty applications	
92.30 | 92.31	70	92.50	Galvanized steel 1)	1216
95.30 | 95.31	100	95.50	Galvanized steel 1)	1218
99.30 | 99.31	100	95.50	Galvanized steel 1)	1220
97.30 | 97.31	130	93.50	Galvanized steel 1)	1222
93.30 | 93.31	130	93.50	Galvanized steel 1)	1224
94.30 | 94.31	170	94.50	Galvanized steel 1)	1226
94.14550.30 | 94.14550.31 New *	170	94.50	Galvanized steel 1)	1228
96.30 | 96.31	220	96.50	Galvanized steel 1)	1230
98.30 | 98.31	300	98.50	Galvanized steel 1)	1232
90.30 | 90.31	480	90.50	Galvanized steel 1)	1234
91.10 - 91.71 2)	48	–	Galvanized steel	1237

*New in this catalog

1) Optional in stainless steel: V2A, material 1.4301 (AISI 304) / V4A, material 1.4404 (AISI 316L) / V4A, material 1.4571 (AISI 316Ti)

2) Steel guide troughs, one-piece. Only for Series 10, 15 and B15

Steel guide trough | Sizes Overview



Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Steel Guide Trough | Parts

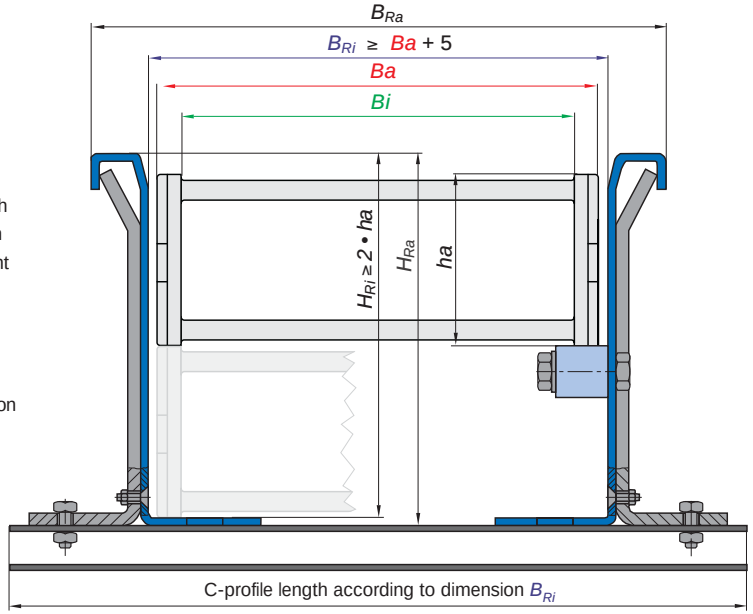
Components

- = Guide trough [1)]
- = Glide bar
- = Installation set
- = C-profile [2)]

Ba	=	Outer e-chain® width
Bi	=	Inner e-chain® width
ha	=	e-chain® outer height
H_{Ri}	=	Inner trough height
H_{Ra}	=	Outer trough height
B_{Ri}	=	Inner trough width
B_{Ra}	=	Outer trough width
n_{Mon}	=	Number of installation sets (left/right)
n_{Ri}	=	Number of trough sets (left/right)

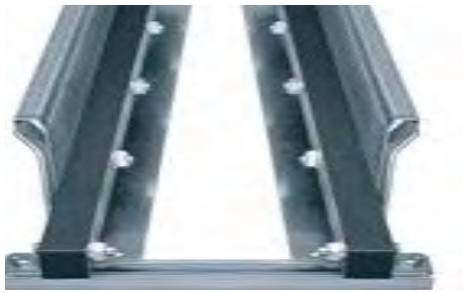
$H_{Ri} \geq$ 2 x ha

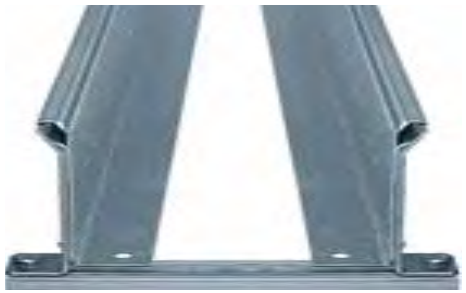
$B_{Ri} \geq$ Ba + 5



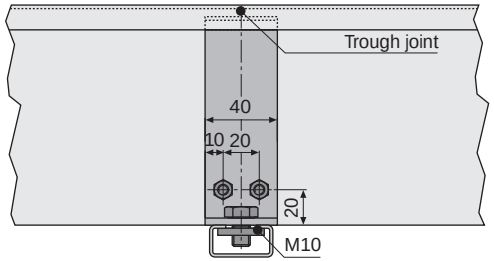
1) Guide trough side parts, galvanized steel. Optional stainless steel: V2A, material 1.4301 (AISI 304) / V4A, material 1.4404 (AISI 316L) / V4A, material 1.4571 (AISI 316Ti)
2) C-profile also available in stainless steel V2A, material 1.4301 (AISI 304)

Steel Guide Trough | Features





Steel Guide Trough without and with glide bars available



Side view of trough joint. All dimensions, apart from the height, apply to all sizes



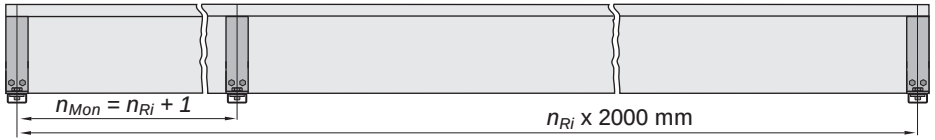
Installation set for joint and attachment surface connections secure connection without misalignment and without welding

Steel Guide Trough | Configuration

Steel Guide Trough | Configuration according to your requirements

Quick and easy assemble the right trough for your application

- Selection of the suitable guide trough according to the e-chain® Series and e-chain® width *Bi*
- Determine the feeding point of the cables
- Determine travel distance and thus the length of the required guide trough and the number of trough pieces. (Standard length of a trough side plate: 2000 mm). The length of the guide trough - for axial feeding - is calculated from half the travel length with and half the travel length without the glide bar
- Number and selection of the assembly kit
  The quantity of the assembly kit is calculated from the number of the trough pieces + 1 kit:



- The assembly kit matches the igus c-profile option
- If you have opted for an e-chain® with KMA mounting brackets, we offer you a fixed-end module for the quick and simple fastening of the e-chain® in the trough without holes

Installation Guide-PDF with detailed assembly information
►www.igus.eu/eu/installation-guide-pdf

Order example | Based on Part No. 94.30 | 94.31

Order example: Length of travel 30 m -
Center mounted for Series E4.56.20.300.0 with B_{Ri} = 239

Guide trough set (set of 2 trough side parts, incl. glide strips) **without** glide bar		
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No.	94.30
Guide trough set (set of 2 trough side parts, incl. glide strips) **with** glide bar		
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No.	94.31
Installation set complete (guide trough-sets + 1)		
Order text: 17 installation sets	Part No.	94.50.350
Module for the fixed end		
Order text: 1 set	Part No.	94.80.01

Calculation - travel center mounted: Half travel length, rounded down to full 2 m sections = X m guide trough length without glide bars + X m guide trough length with glide bars + installation sets (number of trough pieces + 1)

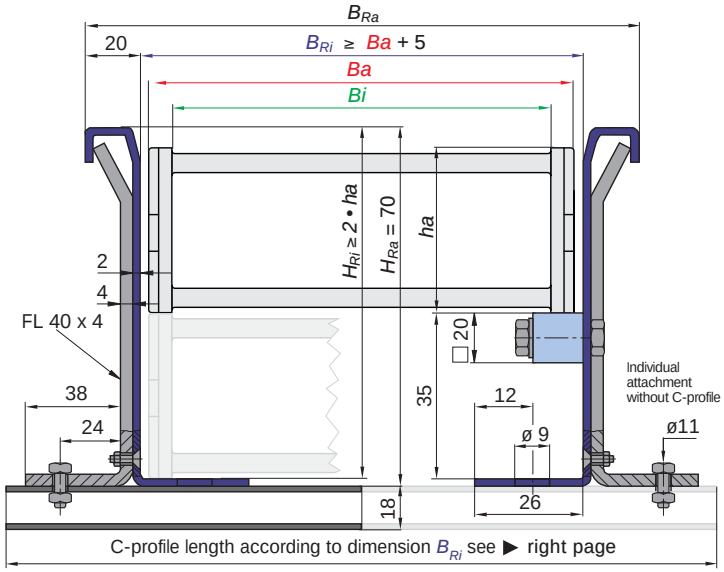
Steel Guide Trough | 92.30 | 92.31 | Heavy-Duty

Trough height: 70 mm | Product range

For the following igus® Series

E2/000 (E2 medium)
- 2500
- 255

E6
- E6.29/R6.29



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	92.30.E[1] / E44[2] / E45[3]	≈ 7,60 kg
Set of 2 trough side parts, with glide bars, 2 m section	92.31.E[1] / E44[2] / E45[3]	≈ 9,60 kg
Installation sets - consisting of part		
1 Installation set without C-profile	92.50	≈ 0,34 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	92.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 92.50.200

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	92.11.E[1] / E44[2] / E45[3]	≈ 3,80 kg
1 Glide bar, individual, each 2 m	92.01	≈ 0,75 kg
1 Glide bar, individual, each 2 m + 11 screw sets	92.20	≈ 0,98 kg
Single parts, installation set		
11 Screw sets for 2 m sections	92.21	≈ 0,23 kg
1 Clamping bracket, individual	92.51	≈ 0,12 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1236)	90.80.01	≈ 7,60 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.200.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

2500

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.02	46	upon request
.03	59	92.50. 175
.05	78	92.50. 200
.07	98	92.50. 225
.09	110	92.50. 225
.10	124	92.50. 250
.12	146	92.50. 275

255

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.03	59	92.50. 175
.05	78	92.50. 200
.07	98	92.50. 225
.10	124	92.50. 250

E6.29/R6.29

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.030	51	upon request
.040	61	92.50. 175
.050	71	92.50. 200
.060	81	92.50. 200
.070	91	92.50. 200
.080	101	92.50. 225
.090	111	92.50. 225
.100	121	92.50. 250
.110	131	92.50. 250
.120	141	92.50. 250



igus® steel guide trough used in a robotics application

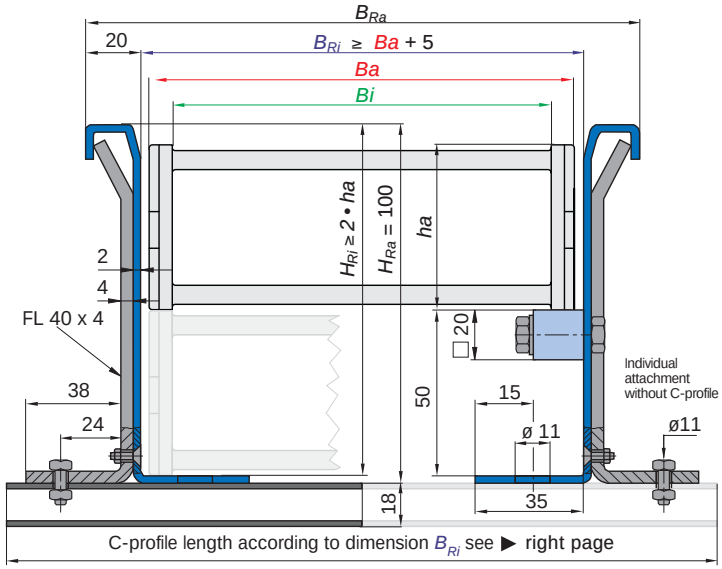
Steel Guide Trough | 95.30 | 95.31 | Heavy-Duty

Trough height: 100 mm | Product range

For the following igus® Series

E2/000
- 2700

E2
- R58



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	95.30.E[1] / E44[2] / E45[3]	≈ 10,00 kg
Set of 2 trough side parts, with glide bars, 2 m section	95.31.E[1] / E44[2] / E45[3]	≈ 12,00 kg
Installation sets - consisting of part		
1 Installation set without C-profile	95.50	≈ 0,41kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	95.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 95.50.200

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	95.11.E[1] / E44[2] / E45[3]	≈ 5,00 kg
1 Glide bar, individual, each 2 m	92.01	≈ 0,75 kg
1 Glide bar, individual, each 2 m + 11 screw sets	92.20	≈ 0,98 kg
Single parts, installation set		
11 Screw sets for 2 m sections	92.21	≈ 0,23 kg
1 Clamping bracket, individual	95.51	≈ 0,16 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (For Series R58, upon request. Detailed information ▶ page 1236)	95.80.01	≈ 10,00 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.200.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

2700

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	71	95.50. 200
.06	86	95.50. 200
.07	96	95.50. 225
.09	111	95.50. 225
.10	121	95.50. 250
.12	146	95.50. 275
.15	171	95.50. 300
.17	199	95.50. 325

R58

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.050	71	95.50. 200
.075	96	95.50. 225
.100	121	95.50. 250
.125	146	95.50. 275
.150	171	95.50. 300
.175	196	95.50. 325
.200	221	95.50. 350



igus® steel guide trough used in a shelf conveyor application, Series E2/000 and chainflex® cables

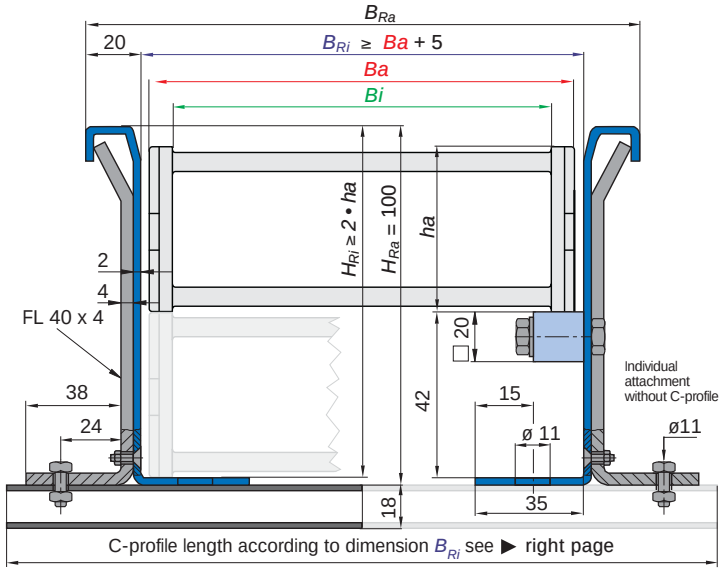
Steel Guide Trough | 99.30 | 99.31 | Heavy-Duty

Trough height: 100 mm | Product range

For the following igus® Series

E4.1
- E4.28/R4.28

E6
- E6.35



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	99.30.E[1] / E44[2] / E45[3]	≈ 10,00 kg
Set of 2 trough side parts, with glide bars, 2 m section	99.31.E[1] / E44[2] / E45[3]	≈ 12,00 kg
Installation sets - consisting of part		
1 Installation set without C-profile	95.50	≈ 0,41kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	95.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 92.50.200

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	99.11.E[1] / E44[2] / E45[3]	≈ 5,00 kg
1 Glide bar, individual, each 2 m	92.01	≈ 0,75 kg
1 Glide bar, individual, each 2 m + 11 screw sets	92.20	≈ 0,98 kg
Single parts, installation set		
11 Screw sets for 2 m sections	92.21	≈ 0,23 kg
1 Clamping bracket, individual	95.51	≈ 0,16 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1236)	99.80.01	≈ 10,00 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.50.200

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

E4.28/R4.28

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.040	65	upon request
.050	75	95.50. 200
.062	87	95.50. 200
.070	95	95.50. 200
.075	100	95.50. 225
.087	112	95.50. 225
.100	125	95.50. 250
.125	150	95.50. 275
.150	175	95.50. 300
.175	200	95.50. 325
.200	225	95.50. 350
.225	250	95.50. 375
.250	275	95.50. 400
.275	300	95.50. 425
.300	325	95.50. 450

E6.35

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.030	55	upon request
.040	65	upon request
.050	75	95.50. 200
.060	85	95.50. 200
.070	95	95.50. 200
.080	105	95.50. 225
.090	115	95.50. 225
.100	125	95.50. 250
.110	135	95.50. 250
.120	145	95.50. 250



Light weight and high stability: Polymer e-chain® tames stiff hydraulic hoses

Steel Guide Trough | 97.30 | 97.31 | Heavy-Duty

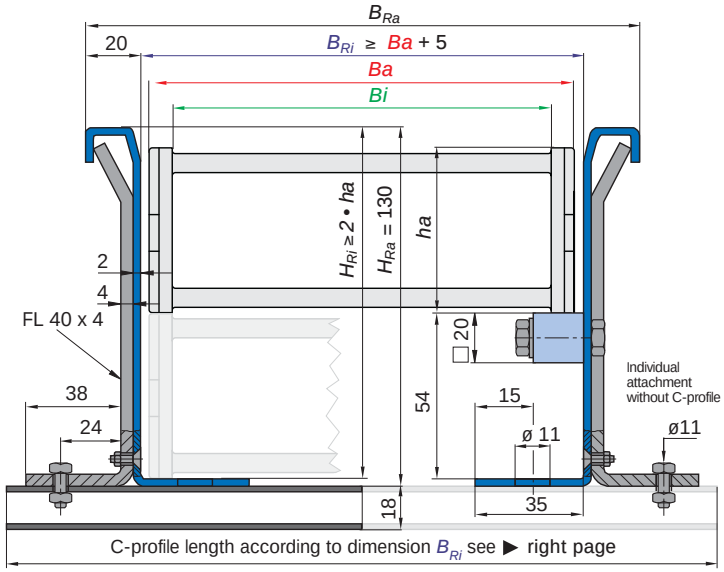
Trough height: 130 mm | Product range

For the following igus® Series

E4.1
- E4.32/H4.32/R4.32

E4.1 light
- E4.38L/R4.38L

E6
- E6.40/R6.40



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	97.30.E[1] / E44[2] / E45[3]	≈ 11,80 kg
Set of 2 trough side parts, with glide bars, 2 m section	97.31.E[1] / E44[2] / E45[3]	≈ 13,60 kg
Installation sets - consisting of part		
1 Installation set without C-profile	93.50	≈ 0,49 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	93.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 93.50.350

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	97.11.E[1] / E44[2] / E45[3]	≈ 5,90 kg
1 Glide bar, individual, each 2 m	92.01	≈ 0,75 kg
1 Glide bar, individual, each 2 m + 11 screw sets	92.20	≈ 0,98 kg
Single parts, installation set		
11 Screw sets for 2 m sections	92.21	≈ 0,23 kg
1 Clamping bracket, individual	93.51	≈ 0,20 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1236)	97.80.01	≈ 11,80 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.350

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

E4.32/H4.32/R4.32

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	78	93.50. 200
.06	96	93.50. 225
.07	103	93.50. 225
.087	115	93.50. 225
.10	128	93.50. 250
.11	136	93.50. 250
.112	141	93.50. 250
.12	153	93.50. 275
.137	166	93.50. 275
.15	178	93.50. 300
.162	191	93.50. 300
.17	196	93.50. 325
.18	203	93.50. 325
.187	216	93.50. 325
.20	228	93.50. 350
.212	241	93.50. 350
.23	253	93.50. 375
.237	266	93.50. 375
.25	278	93.50. 400
.262	291	93.50. 400
.28	303	93.50. 425
.29	316	93.50. 425
.30	328	93.50. 450
.312	341	93.50. 450
.325	353	93.50. 475
.337	366	93.50. 475
.350	378	93.50. 500
.362	391	93.50. 500
.375	403	93.50. 525
.387	416	93.50. 525
.400	428	93.50. 550

E4.38L/R4.38L

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
050.	71	93.50 200
062.*	83	93.50 200
075.	96	93.50 225
087.*	108	93.50 225
100.	121	93.50 250
112.*	133	93.50 250
125.	146	93.50 275
137.*	158	93.50 275
150.	171	93.50 300
162.*	183	93.50 300
175.*	196	93.50 325
187.*	208	93.50 325
200.*	221	93.50 350
212.*	233	93.50 350
225.*	246	93.50 375
237.*	258	93.50 375
250.*	271	93.50 400
262.*	283	93.50 400
275.*	296	93.50 425
287.*	308	93.50 425
300.*	321	93.50 450
312.*	333	93.50 450
325.*	346	93.50 475
337.*	358	93.50 475
350.*	371	93.50 500
362.*	383	93.50 500
375.*	396	93.50 525
387.*	408	93.50 525
400.*	421	93.50 550

*Width available upon request, please consult igus® for delivery time!

E6.40/R6.40

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.040	65	upon request
.050	75	93.50. 200
.062	87	93.50. 200
.070	95	93.50. 225
.075	100	93.50. 225
.087	112	93.50. 225
.100	125	93.50. 250
.125	150	93.50. 275
.150	175	93.50. 300
.175	200	93.50. 325
.200	225	93.50. 350
.225	250	93.50. 375
.250	275	93.50. 400
.275	300	93.50. 425
.300	325	93.50. 450





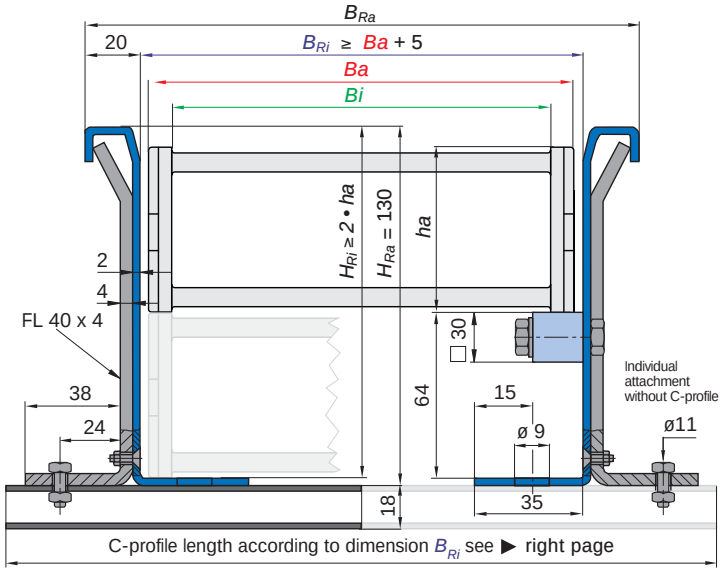
igus® System E4 with extension link at a ship loader for the coal unloading. Travel 105 m, speed 240 m/min, load 53 kg/m

Steel Guide Trough | 93.30 | 93.31 | Heavy-Duty

Trough height: 130 mm | Product range

For the following igus® Series

- E2/000
  - 3500
- E2
  - R68
- E4.1
  - E4.42/H4.42/R4.42
- E4.1 light
  - E4.48L/R4.48L
- E6
  - E6.52/R6.52



Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	93.30.E[1] / E44[2] / E45[3]	≈ 11,80 kg
Set of 2 trough side parts, with glide bars, 2 m section	93.31.E[1] / E44[2] / E45[3]	≈ 16,20 kg
Installation sets - consisting of part		
1 Installation set without C-profile	93.50	≈ 0,49 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	93.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 93.50.350

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	93.11.E[1] / E44[2] / E45[3]	≈ 5,90 kg
1 Glide bar, individual, each 2 m	93.01	≈ 1,68 kg
1 Glide bar, individual, each 2 m + 11 screw sets	93.20	≈ 2,22 kg
Single parts, installation set		
11 Screw sets for 2 m sections	93.21	≈ 0,54 kg
1 Clamping bracket, individual	93.51	≈ 0,20 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1236)	93.80.01	≈ 11,80 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.350

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

3500

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.050	75	93.50. 200
.075	100	93.50. 225
.100	125	93.50. 250
.115	140	93.50. 250
.125	150	93.50. 275
.150	175	93.50. 300
.175	200	93.50. 325
.200	225	93.50. 350
.225	250	93.50. 375
.250	275	93.50. 400

R68

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.050	73	93.50. 200
.075	98	93.50. 225
.100	123	93.50. 250
.115	138	93.50. 250
.125	148	93.50. 275
.150	173	93.50. 300
.175	198	93.50. 325
.200	223	93.50. 350
.225	248	93.50. 375
.250	273	93.50. 400

E4.42/H4.42/R4.42

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	81	93.50. 200
.06	99	93.50. 225
.07	106	93.50. 225
.087	119	93.50. 250
.10	131	93.50. 250
.11	139	93.50. 250
.112	144	93.50. 275
.12	156	93.50. 275
.137	169	93.50. 300
.15	181	93.50. 300
.162	194	93.50. 325
.17	199	93.50. 325
.18	206	93.50. 325
.187	219	93.50. 350
.20	231	93.50. 350
.212	244	93.50. 375
.23	256	93.50. 375
.237	269	93.50. 400
.25	281	93.50. 400
.262	294	93.50. 425
.28	306	93.50. 425
.29	319	93.50. 450
.30	331	93.50. 450
.312	344	93.50. 475
.325	356	93.50. 475
.337	369	93.50. 500
.350	381	93.50. 500
.362	394	93.50. 525
.375	407	93.50. 525
.387	419	93.50. 550
.400	431	93.50. 550

E4.48L/R4.48L

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
050.	75	93.50 200
062.*	87	93.50 200
075.	100	93.50 225
087.*	112	93.50 225
100.	125	93.50 250
112.*	137	93.50 250
125.	150	93.50 275
137.*	162	93.50 275
150.	175	93.50 300
162.*	187	93.50 300
175.*	200	93.50 325
187.*	212	93.50 325
200.*	225	93.50 350
212.*	237	93.50 350
225.*	250	93.50 375
237.*	262	93.50 375
250.*	275	93.50 400
262.*	287	93.50 400
275.*	300	93.50 425
287.*	312	93.50 425
300.*	325	93.50 450
312.*	337	93.50 450
325.*	350	93.50 475
337.*	362	93.50 475
350.*	375	93.50 500
362.*	387	93.50 500
375.*	400	93.50 525
387.*	412	93.50 525
400.*	425	93.50 550

*Width available upon request, please consult igus® for delivery time!

E6.52/R6.52

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.040	69	upon request
.050	79	93.50. 200
.062	91	93.50. 200
.070	99	93.50. 225
.075	104	93.50. 225
.087	116	93.50. 225
.100	129	93.50. 250
.125	154	93.50. 275
.150	179	93.50. 300
.175	204	93.50. 325
.200	229	93.50. 350
.225	254	93.50. 375
.250	279	93.50. 400
.275	304	93.50. 425
.300	329	93.50. 450



Travel up to 195 m with the igus® System E4, safely guided in an igus® steel trough

Steel Guide Trough | 94.30 | 94.31 | Heavy-Duty

Trough height: 170 mm | Product range

For the following igus® Series

E4.1
- E4.56/H4.56/R4.56

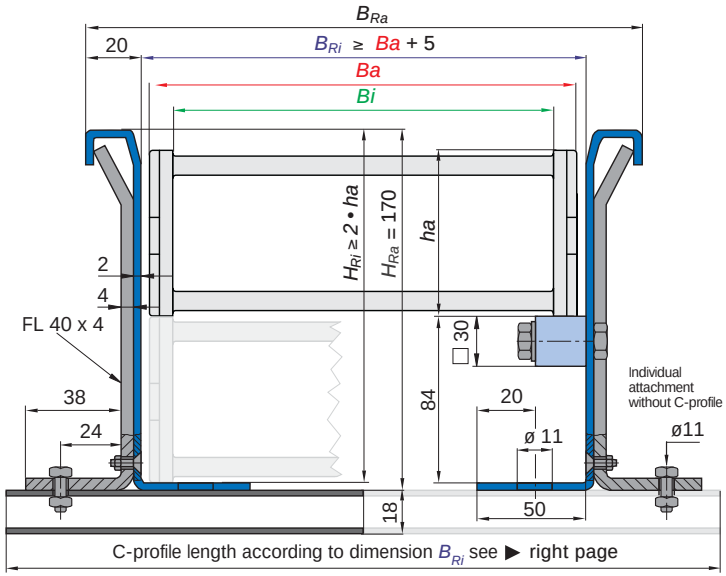
E4/light
- 14040/14140/R18840
- 14240/14340

E6
- E6.62



Option:
With reinforced mounting angles for very rugged and extreme applications

Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!



Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	94.30.E[1] / E44[2] / E45[3]	≈ 14,70 kg
Set of 2 trough side parts, with glide bars, 2 m section	94.31.E[1] / E44[2] / E45[3]	≈ 19,00 kg
Installation sets - consisting of part		
1 Installation set without C-profile	94.50	≈ 0,58 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	94.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 94.50.350

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	94.11.E[1] / E44[2] / E45[3]	≈ 7,35 kg
1 Glide bar, individual, each 2 m	93.01	≈ 1,68 kg
1 Glide bar, individual, each 2 m + 11 screw sets	93.20	≈ 2,22 kg
Single parts, installation set		
11 Screw sets for 2 m sections	93.21	≈ 0,54 kg
1 Clamping bracket, individual	94.51	≈ 0,25 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶ page 1236)	94.80.01	≈ 14,70 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.350.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

E4.56

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	89	upon request
.06	104	94.50.225
.07	114	94.50.225
.08	121	94.50.225
.10	139	94.50.250
.11	152	94.50.275
.12	164	94.50.275
.13	177	94.50.300
.15	189	94.50.300
.16	202	94.50.325
.17	214	94.50.325
.18	227	94.50.350
.20	239	94.50.350
.21	252	94.50.375
.22	264	94.50.375
.23	277	94.50.400
.25	289	94.50.400
.26	302	94.50.425
.27	314	94.50.425
.28	327	94.50.450
.30	339	94.50.450
.31	352	94.50.475
.32	364	94.50.475
.33	377	94.50.500
.35	389	94.50.500
.36	402	94.50.525
.37	414	94.50.525
.38	427	94.50.550
.40	439	94.50.550
.41	452	94.50.575
.42	464	94.50.575
.43	477	94.50.600
.45	489	94.50.600
.46	502	94.50.625
.47	514	94.50.625
.48	527	94.50.650
.50	539	94.50.650
.51	552	94.50.675
.52	564	94.50.675
.53	577	94.50.700
.55	589	94.50.700
.60	639	94.50.750

14040/14140/R18840

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	81	upon request
.06	96	upon request
.07	106	94.50.225
.10	131	94.50.250
.11	144	94.50.275
.12	156	94.50.275
.13	169	94.50.300
.15	181	94.50.300
.16	194	94.50.325
.17	206	94.50.325
.18	219	94.50.350
.20	231	94.50.350
.21	244	94.50.375
.22	256	94.50.375
.23	269	94.50.400
.25	281	94.50.400
.26	294	94.50.425
.27	306	94.50.425
.28	319	94.50.450
.30	331	94.50.450
.31	344	94.50.475
.32	356	94.50.475
.33	369	94.50.500
.35	381	94.50.500
.36	394	94.50.525
.37	406	94.50.525
.38	419	94.50.550
.40	431	94.50.550
.41	444	94.50.575
.42	456	94.50.575
.43	469	94.50.600
.45	481	94.50.600
.46	494	94.50.625
.47	506	94.50.625
.48	519	94.50.650
.50	531	94.50.650
.51	544	94.50.675
.52	556	94.50.675
.53	569	94.50.700
.55	581	94.50.700
.60	631	94.50.750

14240/14340

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	81	upon request
.06	99	upon request
.07	106	94.50.225
.087	119	94.50.250
.10	131	94.50.250
.11	139	94.50.250
.112	144	94.50.275
.12	156	94.50.275
.137	169	94.50.300
.15	181	94.50.300
.162	194	94.50.325
.17	199	94.50.325
.18	206	94.50.325
.187	219	94.50.350
.20	231	94.50.350
.212	244	94.50.375
.23	256	94.50.375
.237	269	94.50.400
.25	281	94.50.400
.262	294	94.50.425
.28	306	94.50.425
.29	319	94.50.450
.30	331	94.50.450
.312	344	94.50.475
.325	356	94.50.475
.337	369	94.50.500
.350	381	94.50.500
.362	394	94.50.525
.375	406	94.50.525
.384	419	94.50.550
.400	431	94.50.550

E6.62

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	91	upon request
.06	109	.94.50 225
.07	116	94.50.225
.087	128	94.50.250
.10	141	94.50.250
.11	149	94.50.275
.112	153	94.50.275
.12	166	94.50.275
.137	178	94.50.300
.15	191	94.50.300
.162	203	94.50.325
.17	209	94.50.325
.18	216	94.50.325
.187	228	94.50.350
.20	241	94.50.350
.212	253	94.50.375
.23	266	94.50.375
.237	278	94.50.400
.25	291	94.50.400
.262	303	94.50.425
.28	316	94.50.425
.29	328	94.50.450
.30	341	94.50.450
.312	353	94.50.475
.325	366	94.50.475
.337	378	94.50.500
.350	391	94.50.500
.362	403	94.50.525
.375	416	94.50.525
.387	428	94.50.550
.400	441	94.50.550



180 m travel, 30 kg/m fill weight. Two igus® E4 rol e-chains®

Steel Guide Trough | 94.14550.30 | 94.14550.31 | Heavy-Duty

Trough height: 170 mm | Product range | New in this catalog

For the following igus® Series

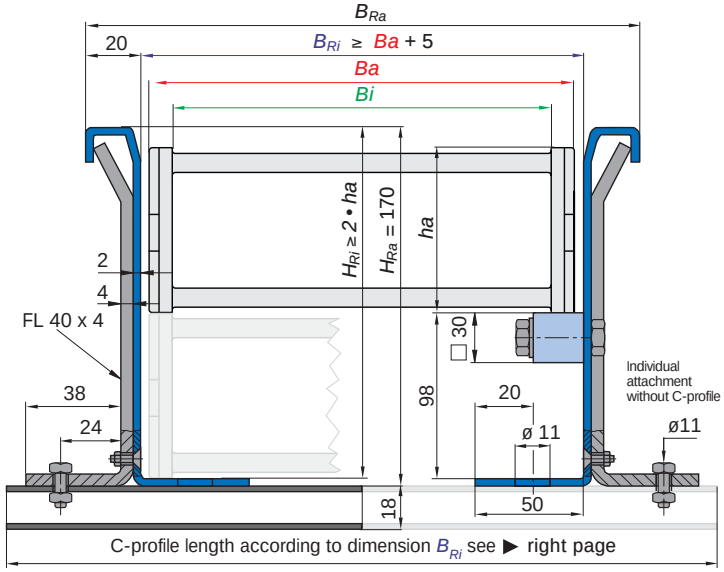
E4/light

● 14550/14650/R19050



Option:
With reinforced mounting angles for very rugged and extreme applications

Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!



Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	94.14550.30.E[1] / E44[2] / E45[3]	≈ 14,70 kg
Set of 2 trough side parts, with glide bars, 2 m section	94.14550.31.E[1] / E44[2] / E45[3]	≈ 19,00 kg
Installation sets - consisting of part		
1 Installation set without C-profile	94.50	≈ 0,58 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	94.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 94.50.350

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	94.14550.11.E[1] / E44[2] / E45[3]	≈ 7,35 kg
1 Glide bar, individual, each 2 m	93.01	≈ 1,68 kg
1 Glide bar, individual, each 2 m + 11 screw sets	93.20	≈ 2,22 kg
Single parts, installation set		
11 Screw sets for 2 m sections	93.21	≈ 0,54 kg
1 Clamping bracket, individual	94.51	≈ 0,25 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶ page 1236)	94.14550.80.01	≈ 14,70 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.350.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

14550/14650/R19050		
Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	82	upon request
.06	97	upon request
.07	107	94.50 225
.08	119	94.50 250
.10	132	94.50 250
.11	144	94.50 275
.12	157	94.50 275
.13	169	94.50 300
.15	182	94.50 300
.16	194	94.50 325
.17	207	94.50 325
.18	219	94.50 350
.20	232	94.50 350
.21	244	94.50 375
.22	257	94.50 375
.23	269	94.50 400
.25	282	94.50 400
.26	294	94.50 425
.27	307	94.50 425
.28	319	94.50 450
.30	332	94.50 450
.31	344	94.50 475
.32	357	94.50 475
.33	369	94.50 500
.35	382	94.50 500
.36	394	94.50 525
.37	407	94.50 525
.38	419	94.50 550
.40	432	94.50 550
.41	444	94.50 575
.42	457	94.50 575
.43	469	94.50 600
.45	482	94.50 600
.46	494	94.50 625
.47	507	94.50 625
.48	519	94.50 650
.50	532	94.50 650
.51	544	94.50 675
.52	557	94.50 675
.53	569	94.50 700
.55	582	94.50 700
.60	632	94.50 750



System E4 with extension links -long travel application onboard West Navigator (Norway)

Steel Guide Trough | 96.30 | 96.31 | Heavy-Duty

Trough height: 220 mm | Product range

For the following igus® Series

E4.1
- E4.80

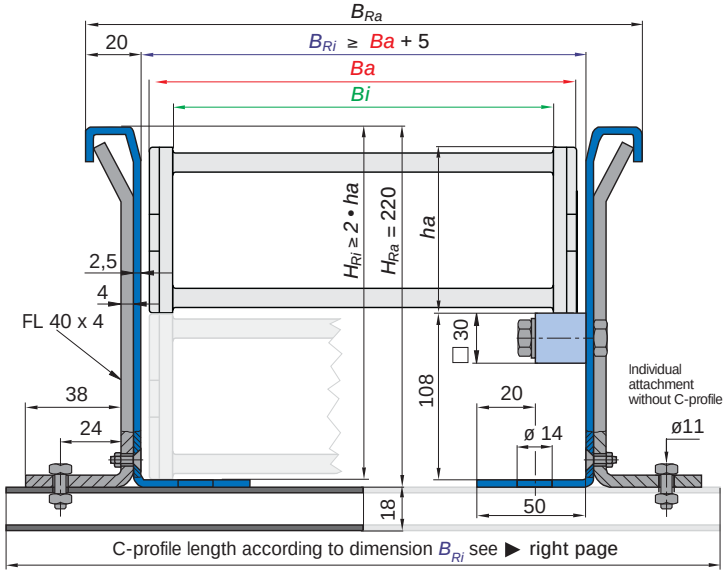
E4/light
- 15050/15150/R19850
- 15250/15350

E6
- E6.80



Option:
With reinforced mounting angles for very rugged and extreme applications

Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!



Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	96.30.E[1] / E44[2] / E45[3]	≈ 22,80 kg
Set of 2 trough side parts, with glide bars, 2 m section	96.31.E[1] / E44[2] / E45[3]	≈ 27,20 kg
Installation sets - consisting of part		
1 Installation set without C-profile	96.50	≈ 0,72 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	96.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 96.50.375

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	96.11.E[1] / E44[2] / E45[3]	≈ 11,4 kg
1 Glide bar, individual, each 2 m	93.01	≈ 1,68 kg
1 Glide bar, individual, each 2 m + 11 screw sets	93.20	≈ 2,22 kg
Single parts, installation set		
11 Screw sets for 2 m sections	93.21	≈ 0,54 kg
1 Clamping bracket, individual	96.51	≈ 0,31 kg
1 Countersunk-head screw M6 x 14, individual	92.53	
1 Hexagon nut M6, individual	92.54	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1236)	96.80.01	≈ 22,80 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.375.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

E4.80

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	105	96.50. 225
.06	120	96.50. 250
.07	130	96.50. 250
.10	155	96.50. 275
.11	168	96.50. 300
.12	180	96.50. 300
.13	193	96.50. 325
.15	205	96.50. 325
.16	218	96.50. 350
.17	230	96.50. 350
.18	243	96.50. 375
.20	255	96.50. 375
.21	268	96.50. 400
.22	280	96.50. 400
.23	293	96.50. 425
.25	305	96.50. 425
.26	318	96.50. 450
.27	330	96.50. 450
.28	343	96.50. 475
.30	355	96.50. 475
.31	368	96.50. 500
.32	380	96.50. 500
.33	393	96.50. 525
.35	405	96.50. 525
.36	418	96.50. 550
.37	430	96.50. 550
.38	443	96.50. 575
.40	455	96.50. 575
.41	468	96.50. 600
.42	480	96.50. 600
.43	493	96.50. 625
.45	505	96.50. 625
.46	518	96.50. 650
.47	530	96.50. 650
.48	543	96.50. 675
.50	555	96.50. 675
.51	568	96.50. 700
.52	580	96.50. 700
.53	593	96.50. 725
.55	605	96.50. 725
.60	655	96.50. 775

15050/15150/R19850

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	85	upon request
.06	100	upon request
.07	110	96.50. 225
.10	135	96.50. 250
.11	148	96.50. 275
.12	160	96.50. 275
.13	173	96.50. 300
.15	185	96.50. 300
.16	198	96.50. 325
.17	210	96.50. 325
.18	223	96.50. 350
.20	235	96.50. 350
.21	248	96.50. 375
.22	260	96.50. 375
.23	273	96.50. 400
.25	285	96.50. 400
.26	298	96.50. 425
.27	310	96.50. 425
.28	323	96.50. 450
.30	335	96.50. 450
.31	348	96.50. 475
.32	360	96.50. 475
.33	373	96.50. 500
.35	385	96.50. 500
.36	398	96.50. 525
.37	410	96.50. 525
.38	423	96.50. 550
.40	435	96.50. 550
.41	448	96.50. 575
.42	460	96.50. 575
.43	473	96.50. 600
.45	485	96.50. 600
.46	498	96.50. 625
.47	510	96.50. 625
.48	523	96.50. 650
.50	535	96.50. 650
.51	548	96.50. 675
.52	560	96.50. 675
.53	573	96.50. 700
.55	585	96.50. 700
.60	635	96.50. 750

15250/15350

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	85	upon request
.06	103	96.50 225
.07	110	96.50 225
.087	122	96.50 250
.09	132	96.50 250
.10	135	96.50 250
.11	143	96.50 275
.112	148	96.50 275
.12	160	96.50 275
.137	172	96.50 300
.15	185	96.50 300
.162	198	96.50 325
.17	203	96.50 325
.18	210	96.50 325
.187	223	96.50 350
.20	235	96.50 350
.212	248	96.50 375
.23	260	96.50 375
.237	273	96.50 400
.25	285	96.50 400
.262	298	96.50 425
.28	310	96.50 425
.29	323	96.50 450
.30	335	96.50 450
.312	348	96.50 475
.325	360	96.50 475
.337	373	96.50 500
.350	385	96.50 500
.362	398	96.50 525
.375	410	96.50 525
.387	423	96.50 550
.400	435	96.50 550

E6.80

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	105	96.50. 225
.06	120	96.50. 250
.07	130	96.50. 250
.10	155	96.50. 275
.11	167	96.50. 300
.12	180	96.50. 300
.13	192	96.50. 325
.15	205	96.50. 325
.16	217	96.50. 350
.17	230	96.50. 350
.18	242	96.50. 375
.20	255	96.50. 375
.21	267	96.50. 400
.22	280	96.50. 400
.23	292	96.50. 425
.25	305	96.50. 425
.26	317	96.50. 450
.27	330	96.50. 450
.28	342	96.50. 475
.30	355	96.50. 475
.31	367	96.50. 500
.32	380	96.50. 500
.33	392	96.50. 525
.35	405	96.50. 525
.36	417	96.50. 550
.37	430	96.50. 550
.38	442	96.50. 575
.40	455	96.50. 575
.41	470	96.50. 600
.42	480	96.50. 600
.43	492	96.50. 625
.45	505	96.50. 625
.46	517	96.50. 650
.47	530	96.50. 650
.48	542	96.50. 675
.50	555	96.50. 675
.51	567	96.50. 700
.52	580	96.50. 700
.53	592	96.50. 725
.55	605	96.50. 725
.60	655	96.50. 775



igus® E4 rol e-chain® and steel guide trough

Steel Guide Trough | 98.30 | 98.31 | Heavy-Duty

Trough height: 300 mm | Product range

For the following igus® Series

E4.1

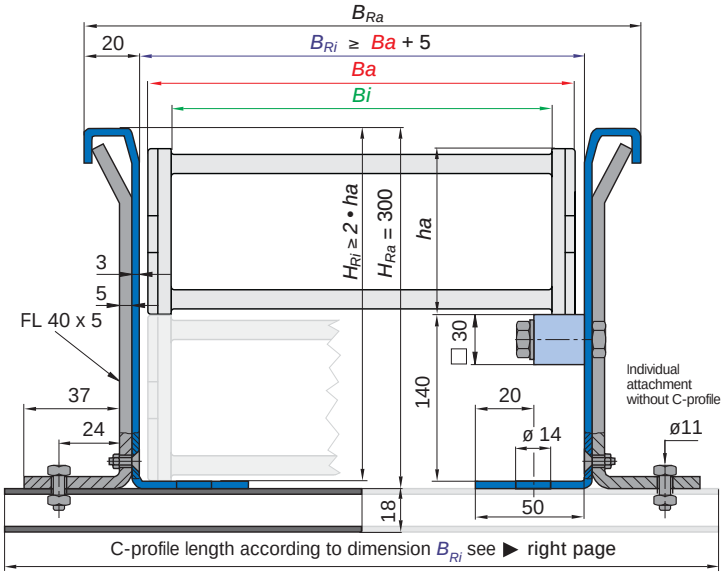
- E4.112/H4.112/R4.112

E4/light

- 1640/R1608



Option:
With reinforced mounting angles for very rugged and extreme applications



C-profile length according to dimension B_{Ri} see ▶ right page

Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	98.30.E[1] / E44[2] / E45[3]	≈ 34,60 kg
Set of 2 trough side parts, with glide bars, 2 m section	98.31.E[1] / E44[2] / E45[3]	≈ 39,00 kg
Installation sets - consisting of part		
1 Installation set without C-profile	98.50	≈ 1,16 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	98.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 98.50.350

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	98.11.E[1] / E44[2] / E45[3]	≈ 17,3 kg
1 Glide bar, individual, each 2 m	93.01	≈ 1,68 kg
1 Glide bar, individual, each 2 m + 11 screw sets	93.20	≈ 2,22 kg
Single parts, installation set		
11 Screw sets for 2 m sections	93.21	≈ 0,54 kg
1 Clamping bracket, individual	98.51	≈ 0,52 kg
1 Countersunk-head screw M8 x 20, individual	92.05	
1 Hexagon nut M8, individual	92.04	
1 Hexagon-head screw M10 x 16, individual	92.55	
1 Glide nut M10, individual	92.56	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	92.52.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶page 1236)	98.80.01	≈ 34,6 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.375.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

E4.112/H4.112/R4.112

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	107	98.50. 225
.06	122	98.50. 250
.07	132	98.50. 250
.10	157	98.50. 275
.11	169	98.50. 300
.12	182	98.50. 300
.13	194	98.50. 325
.15	207	98.50. 325
.16	219	98.50. 350
.17	232	98.50. 350
.18	244	98.50. 375
.20	257	98.50. 375
.21	269	98.50. 400
.22	282	98.50. 400
.23	294	98.50. 425
.25	307	98.50. 425
.26	319	98.50. 450
.27	332	98.50. 450
.28	344	98.50. 475
.30	357	98.50. 475
.31	369	98.50. 500
.32	382	98.50. 500
.33	394	98.50. 525
.35	407	98.50. 525
.36	419	98.50. 550
.37	432	98.50. 550
.38	444	98.50. 575
.40	457	98.50. 575
.41	469	98.50. 600
.42	482	98.50. 600
.43	494	98.50. 625
.45	507	98.50. 625
.46	519	98.50. 650
.47	532	98.50. 650
.48	544	98.50. 675
.50	557	98.50. 675
.51	569	98.50. 700
.52	582	98.50. 700
.53	594	98.50. 725
.55	607	98.50. 725
.60	657	98.50. 775

1640/R1608

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.05	89	upon request
.06	104	98.50. 225
.07	114	98.50. 250
.08	124	98.50. 250
.10	139	98.50. 275
.11	151	98.50. 275
.12	164	98.50. 300
.13	176	98.50. 300
.15	189	98.50. 325
.16	201	98.50. 325
.17	214	98.50. 350
.18	226	98.50. 350
.20	239	98.50. 375
.21	251	98.50. 375
.22	264	98.50. 400
.23	276	98.50. 400
.25	289	98.50. 425
.26	301	98.50. 425
.27	314	98.50. 450
.28	326	98.50. 450
.30	339	98.50. 475
.31	351	98.50. 475
.32	364	98.50. 500
.33	376	98.50. 500
.35	389	98.50. 525
.36	401	98.50. 525
.37	414	98.50. 550
.38	426	98.50. 550
.40	439	98.50. 575
.41	451	98.50. 575
.42	464	98.50. 600
.43	476	98.50. 600
.45	489	98.50. 625
.46	501	98.50. 625
.47	514	98.50. 650
.48	526	98.50. 650
.50	539	98.50. 675
.51	551	98.50. 675
.52	564	98.50. 700
.53	576	98.50. 700
.55	589	98.50. 725
.60	639	98.50. 775



Rig skidding application on the Claymore, North Sea

Steel Guide Trough | 90.30 | 90.31 | Heavy-Duty

Trough height: 480 mm | Product range

For the following igus® Series

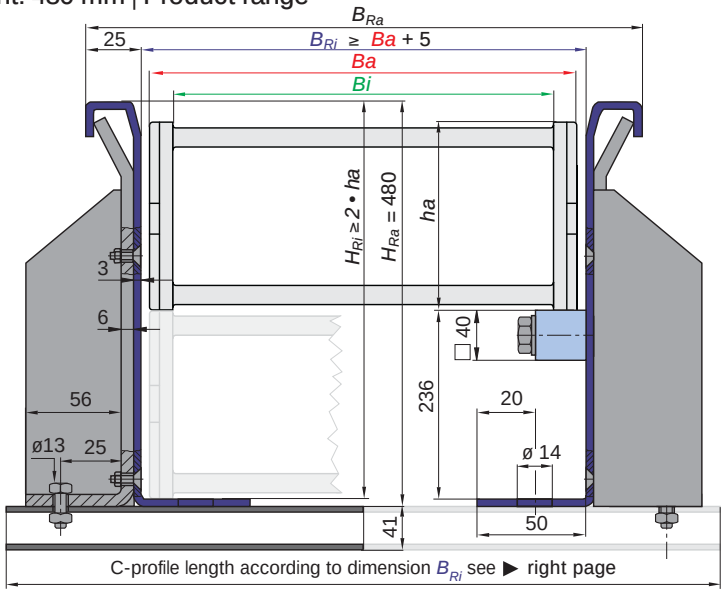
E4.1

- 800
- 840



This igus® steel guide trough has reinforced mounting angles for very rugged and extreme applications

Note: The inner width of the guide through and the C-profile length of the assembly kit can differ according to the bracket you choose. Please call us!



C-profile length according to dimension B_{Ri} see ▶ right page

Steel Guide Trough | Complete sets

Trough side parts sets	Part No.	Weight
Set of 2 trough side parts, without glide bars, 2 m section	90.30.E[1] / E44[2] / E45[3]	≈ 53,40 kg
Set of 2 trough side parts, with glide bars, 2 m section	90.31.E[1] / E44[2] / E45[3]	≈ 59,40 kg
Installation sets - consisting of part		
1 Installation set without C-profile	90.50	≈ 0,41 kg
1 Installation set with C-profile (C-profile length according to dimension B_{Ri})	90.50.XXX*	upon request

* Please add the C-profile length as shown on the tables on the right page. Example: 90.50.450

Steel Guide Trough | Components as single parts

Single parts, trough	Part No.	Weight
1 Trough side part, individual, 2 m section	90.11.E[1] / E44[2] / E45[3]	≈ 26,7 kg
1 Glide bar, individual, each 2 m	90.01	≈ 1,68 kg
1 Glide bar, individual, each 2 m + 11 screw sets	90.20	≈ 2,22 kg
Single parts, installation set		
11 Screw sets for 2 m sections	90.21	≈ 0,54 kg
1 Clamping bracket, individual	90.51	≈ 0,52 kg
1 Countersunk-head screw M8 x 25, individual	MAT0040014	
1 Hexagon nut M8, individual	MAT0040012	
1 Hexagon-head screw M12 x 30, individual	MAT0040384	
1 Glide nut M12, individual	MAT0040385	
1 C-profile, individual (C-profile length according to dimension B_{Ri})	IE70.41-41.XXX*.E[1]	≈ 0,90 kg/m
Additional option for simple fastening of the e-chain® without drilling		
1 Set Fixed end module (Detailed information ▶ page 1236)	90.80.01	≈ 53,40 kg

* Please add the C-profile length as shown on the tables on the right page. Example: 92.52.450.E

1) Trough side parts + C-profile - Also available in stainless steel V2A, material 1.4301 (AISI 304). Please add index ".E" to the Part No.
2) Trough side parts - Also available in stainless steel V4A, material 1.4404 (AISI 316L). Please add index ".E44" to the Part No.
3) Trough side parts - Also available in stainless steel V4A, material 1.4571 (AISI 316Ti). Please add index ".E45" to the Part No.

Steel Guide Trough | C-profile lengths

C-profile length according to dim. B_{Ri}

800

Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.20	265	90.50. 450
.25	315	90.50. 500
.30	365	90.50. 550
.32	390	90.50. 575
.35	415	90.50. 600
.40	465	90.50. 650
.45	515	90.50. 700
.50	565	90.50. 750
.55	615	90.50. 800
.60	665	90.50. 850

840

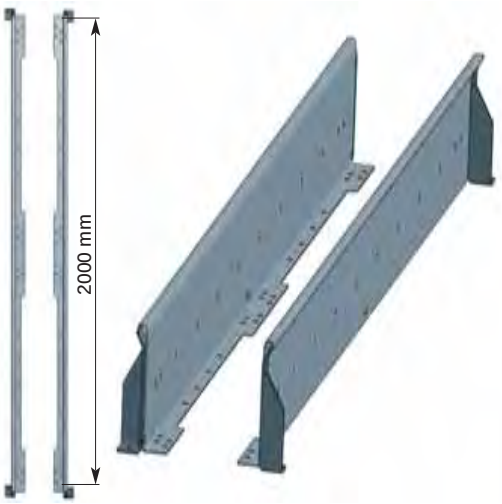
Width index e-chain®	B_{Ri} [mm]	Part No. Installation set
.13	165	90.50. 350
.15	178	90.50. 350
.16	190	90.50. 375
.17	203	90.50. 375
.18	215	90.50. 400
.20	228	90.50. 400
.21	240	90.50. 425
.22	253	90.50. 425
.23	265	90.50. 450
.25	278	90.50. 450
.26	290	90.50. 475
.27	303	90.50. 475
.28	315	90.50. 500
.30	328	90.50. 500
.31	340	90.50. 525
.32	353	90.50. 525
.33	365	90.50. 550
.35	378	90.50. 550
.36	390	90.50. 575
.37	403	90.50. 575
.38	415	90.50. 600
.40	428	90.50. 600
.41	440	90.50. 625
.42	453	90.50. 625
.43	465	90.50. 650
.45	478	90.50. 650
.46	490	90.50. 675
.47	503	90.50. 675
.48	515	90.50. 700
.50	528	90.50. 700
.51	540	90.50. 725
.52	553	90.50. 725
.53	565	90.50. 750
.55	578	90.50. 750
.60	628	90.50. 800



Assembling of an E4 e-chain® Series 800 in an igus® steel guide trough

Steel Guide Trough | Fixed end module

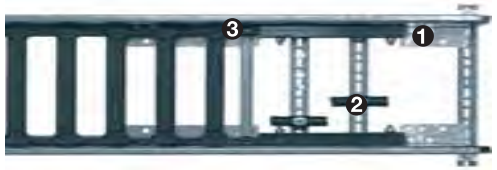
Fixed end module | Quick and simple fastening onto the Steel Guide Trough



Until now, the steel trough had to be modified on site to fit the mounting brackets at the stationary end of the e-chain®. That is now history. With its prefabricated boreholes, the 2.000 mm long kit can be used for middle-feed, end-feed and opposed installation.

❶ Fast fixation of mounting brackets thanks to prefabricated boreholes
❷ Fast installation of C-profile for strain relief
❸ Fast bolting of glide bars

Industries: Power plants, coal conveyors, mining, composting plants, raw material storage, gipsumplants, etc.



Part No.	For Steel Guide Trough	For e-chain® Series
90.80.01*	90.30 | 90.31	800, 840
92.80.01*	92.30 | 92.31	2500, 255, E6.29/R6.29
93.80.01	93.30 | 93.31	3500, R68, E4.42/H4.42/R4.42, E4.48L/R4.48L, E6.52/R6.52
94.80.01	94.30 | 94.31	E4.56/H4.56/R4.56, 14040/14140 /R18840, 14240/14340, E6.62
95.80.01*	95.30 | 95.31	2700
96.80.01	96.30 | 96.31	E4.80/H4.80/R4.80, 15050/5150/R19850, E6.80
97.80.01	97.30 | 97.31	E4.32/H4.32/R4.32, E4.38L/R4.38L, E6.40/R6.40
98.80.01	98.30 | 98.31	E4.112/H4.112/R4.112, 1640/R1608
99.80.01	99.30 | 99.31	E4.28/R4.28, 220/R760, E6.35
94.14550.80.01*	94.14550.30 | 94.14550.31	14550/14650/R19050

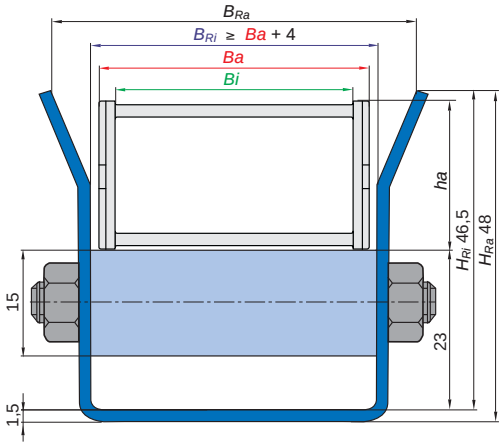
*Available upon request, please consult igus® for delivery time!



Fixed end module - length 2000 mm

Steel Guide Trough | One-piece, U-shaped

Special solution for Series 10, B15 and 15



Components

- = Guide trough
- = Glide bar
- = Installation set

Ba = Outer e-chain® width
Bi = Inner e-chain® width
ha = e-chain® outer height
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width

For the following igus® Series

E2 mini
- 10
- B15

zipper
- 15 / R15

For Series 10, 15 and B15 are one-piece, U-shaped steel guide troughs available. They have got a continuous glide bar for the transition from area with the glide bars to the area without glide bars. Available from stock are the guide troughs for the e-chains® with an outer width up to 60 mm. For the e-chains® with a width of more than 60 mm special solutions are on short call. For this trough sizes are no installation sets necessary as the guide troughs are made of a single U-profile. The solution for the trough joint is specific for every application.

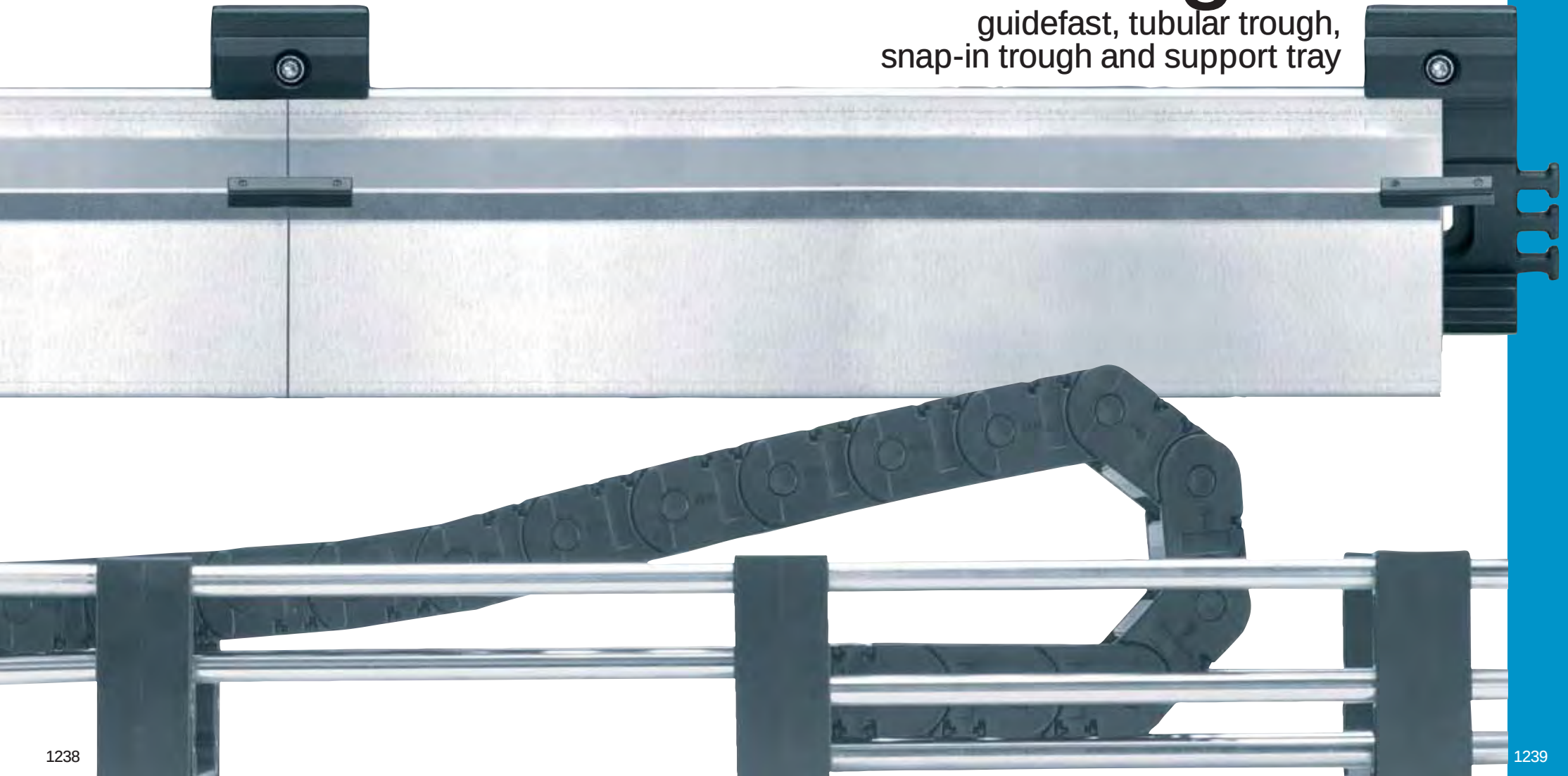


For Series 10.015/15.015/B15.015	Part No.	Dim. B_{Ra} [mm]	Dim. B_{Ri} [mm]	Weight
Trough without glide bar, 2-m section	91.10	40,5	30	1,50 kg/m
Trough with glide bar, 2-m section	91.11	40,5	30	2,10 kg/m
For Series 10.025/15.025/B15.025	**Part No.**	**Dim. B_{Ra} [mm]**	**Dim. B_{Ri} [mm]**	**Weight**
Trough without glide bar, 2-m section	91.20	50,5	40	1,65 kg/m
Trough with glide bar, 2-m section	91.21	50,5	40	2,35 kg/m
For Series 10.038/15.038/B15.038	**Part No.**	**Dim. B_{Ra} [mm]**	**Dim. B_{Ri} [mm]**	**Weight**
Trough without glide bar, 2-m section	91.30	62,5	52	1,80 kg/m
Trough with glide bar, 2-m section	91.31	62,5	52	2,70 kg/m
For Series 10.050/15.050/B15.050	**Part No.**	**Dim. B_{Ra} [mm]**	**Dim. B_{Ri} [mm]**	**Weight**
Trough without glide bar, 2-m section	91.40	72,5	62	1,90 kg/m
Trough with glide bar, 2-m section	91.41	72,5	62	3,15 kg/m
For Series 10.5/15.5/B15.5	**Part No.**	**Dim. B_{Ra} [mm]**	**Dim. B_{Ri} [mm]**	**Weight**
Trough without glide bar, 2-m section	91.50	89,5	79	2,15 kg/m
Trough with glide bar, 2-m section	91.51	89,5	79	4,30 kg/m
For Series 10.6/15.6/B15.6	**Part No.**	**Dim. B_{Ra} [mm]**	**Dim. B_{Ri} [mm]**	**Weight**
Trough without glide bar, 2-m section	91.60	106,5	96	≈ 2,40 kg/m
Trough with glide bar, 2-m section	91.61	106,5	96	≈ 4,60 kg/m
For Series 10.7/15.7/B15.7	**Part No.**	**Dim. B_{Ra} [mm]**	**Dim. B_{Ri} [mm]**	**Weight**
Trough without glide bar, 2-m section	91.70	126,5	116	≈ 2,80 kg/m
Trough with glide bar, 2-m section	91.71	126,5	116	≈ 5,20 kg/m

Material galvanized steel.

Further Guide Troughs

guidefast, tubular trough, snap-in trough and support tray





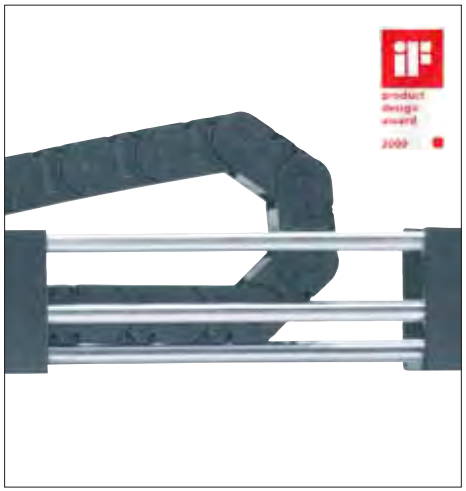
For crane girders and indoor cranes - guidefast guide trough

- Save up to 80% installation time compared to standard trough systems
- Fits virtually any standard crane girder
- Simplified installation, permanently installed cable can be fixed at the trough brackets
- With polymer glide bars for centre fed applications

Product range with order options

► from page 1242 or online

► www.igus.eu/eu/guidefast



Lets light and dirt through - Tubular trough system RS

- Resistant to dirt - wear debris falls through
- More translucent than sheet metal constructions
- Easy and fast assembly and cost-effective
- Easy and space saving delivery

Product range with order options

► from page 1246 or online

► www.igus.eu/eu/Tubulartrough



Simple and cost-effective - Snap-in trough system SP

- Smaller than conventional troughs
- Easy and fast assembly
- No sharp metal edges in the internal area because of covered connectors
- Cost-effective because of easy assembly

Product range with order options

►from page 1252 or online

►www.igus.eu/eu/Snap-in-trough



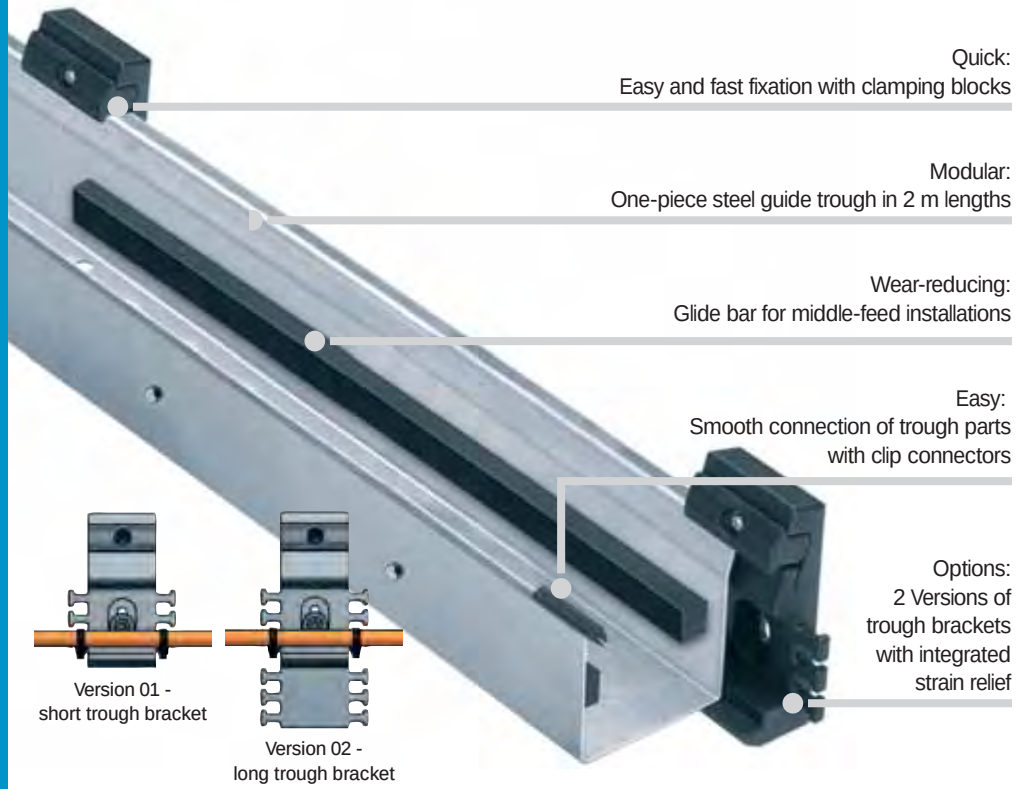
Support tray tool kit - For support of the lower run

- Simple one-piece support trays according to your requirements and specification
- Complete system, ready to install
- No more costly self-made designs
- Easy installation onto your machine, on profiles or wall-mount brackets

Product range with order options

►from page 1258 or online

►www.igus.eu/eu/supporttray



Quickly installed as a modular kit solution, for crane girders and indoor cranes - guidefast

- Mounted on the side of the crane girder - the welding of brackets onto the girder can be omitted.
- Save up to 80% installation time compared to standard trough systems
- Fits virtually any standard crane girder
- 2 versions of brackets with integrated strain relief for assembly of static cables on the crane girder - possible ± 5 mm vertical adjustment of brackets
- Suitable for any side-mounted application - not only on cranes
- Easy to install due to preassembled hole patterns of e-chain® brackets
- Standard material: galvanized steel, optional: stainless steel V2A, material 1.4301 (AiSI 304) or black powder coating
- Long-term tested to withstand vibration and rough environment

Typical industries and applications

- Crane manufacturers (mainly indoor cranes)
- Applications where the lateral installation of the guide trough is beneficial

Trough profile* Part No. **without** glide bar	For E2/000 e-chain®	Inner trough width B_{Ri} [mm]	Complete width [mm]	Material	Page
 **guidefast - without glide bar** for E2/000 Series: ● 1500 ● 2500 ● 2700					
GF91.30.025.2000	1500.025.	42,5	81	galvanized steel*	1244
GF91.30.050.2000	1500.050.	67,5	106	galvanized steel*	1244
GF92.30.05. 2000	2500.05.	77	115,5	galvanized steel*	1244
GF92.30.07. 2000	2500.07.	97	135,5	galvanized steel*	1244
GF92.30.10. 2000	2500.10.	123	161,5	galvanized steel*	1244
GF95.30.05. 2000	2700.05.	70	108,5	galvanized steel*	1244
GF95.30.07. 2000	2700.07.	95	133,5	galvanized steel*	1244
GF95.30.10. 2000	2700.10.	120	158,5	galvanized steel*	1244
 **guidefast - with glide bar** for E2/000 Series: ● 1500 ● 2500 ● 2700					
GF91.31.025.2000	1500.025.	42,5	81	galvanized steel*	1244
GF91.31.050.2000	1500.050.	67,5	106	galvanized steel*	1244
GF92.31.05. 2000	2500.05.	77	115,5	galvanized steel*	1244
GF92.31.07. 2000	2500.07.	97	135,5	galvanized steel*	1244
GF92.31.10. 2000	2500.10.	123	161,5	galvanized steel*	1244
GF95.31.05. 2000	2700.05.	70	108,5	galvanized steel*	1244
GF95.31.07. 2000	2700.07.	95	133,5	galvanized steel*	1244
GF95.31.10. 2000	2700.10.	120	158,5	galvanized steel*	1244

*Standard material: Galvanized steel. Also available as stainless steel-version V2A, material 1.4301 (AISI 304) or black powder coating



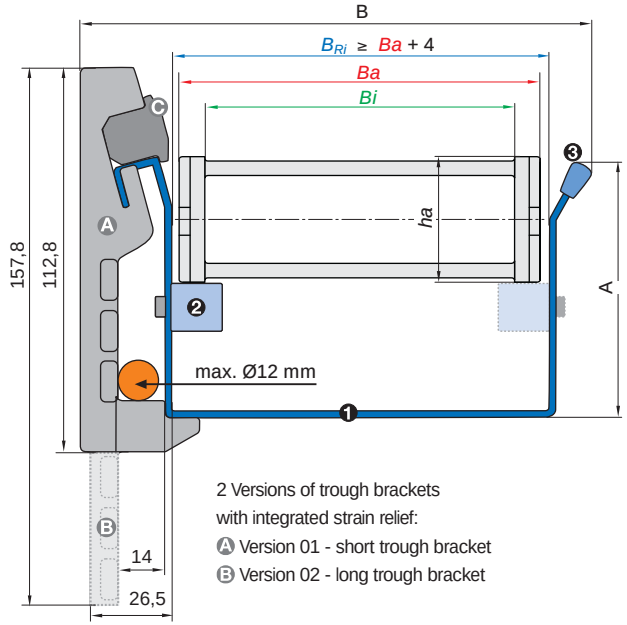
guidefast - Attachment to the crane girder through welded bolts or nut/thread, here with version 02 long trough bracket

guidefast guide trough | Parts

Standard-length from stock 2000 mm

For the following igus® Series

E2/000
- 1500
- 2500
- 2700



Components - Set guidefast guide trough
1. Trough profile, 2 m section
2. Glide bar, polymer, 2 m section, optional
3. Clip connector, Part No. 908.467

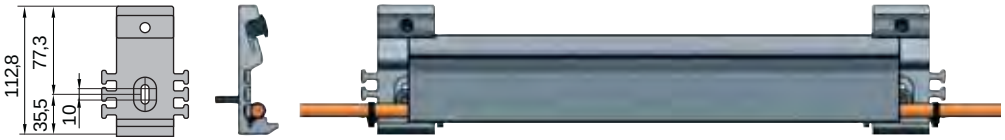
Components - Set trough bracket
- A Version 01 - short trough bracket
- B Version 02 - long trough bracket
- C Clamping blocks,Part No. G9.2.10

Ba = Outer e-chain® width
Bi = Inner e-chain® width
ha = e-chain® outer height
B_{Ri} = Inner trough width = B_{Ri} ≥ **Ba + 4**

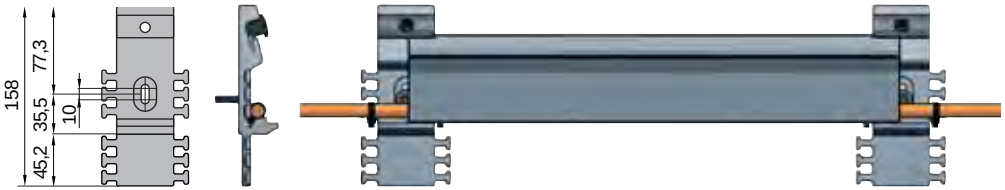
2 Versions of trough brackets with integrated strain relief:
- A Version 01 - short trough bracket
- B Version 02 - long trough bracket



2 Versions of trough brackets with integrated strain relief



Version 01 - short trough bracket Part No. GF9.2.12 with integrated strain relief, possible ± 5 mm vertical adjustment

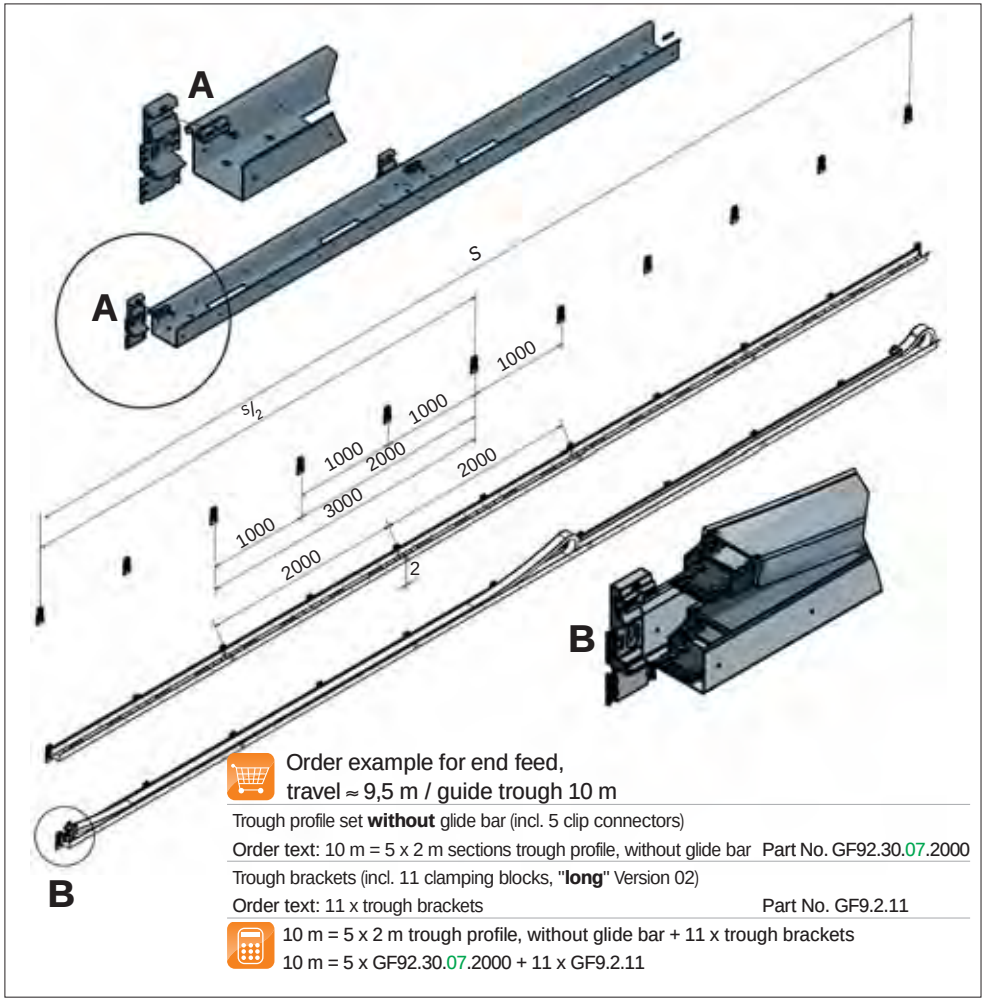


Version 02 - long trough bracket Part No. GF9.2.11 with integrated strain relief, possible ± 5 mm vertical adjustment

guidefast guide trough | Product range

For E2/000 e-chain®	Trough profile* **without** glide bar Set incl. clip connectors	Trough profile* **with** glide bar Set incl. clip connectors	Guidefast backet **"short"** Version 01 Set incl. clamping blocks	Guidefast backet **"long"** Version 02 Set incl. clamping blocks	B_{Ri} [mm]	Dim. A [mm]	Dim. B [mm]
1500.025. ▶	GF91.30.025.2000	GF91.31.025.2000	GF9.2.12	GF9.2.11	42.5	61	81
1500.050. ▶	GF91.30.050.2000	GF91.31.050.2000	GF9.2.12	GF9.2.11	67.5	61	106
2500.05. ▶	GF92.30.05. 2000	GF92.31.05. 2000	GF9.2.12	GF9.2.11	77	75	115.5
2500.07. ▶	GF92.30.07. 2000	GF92.31.07. 2000	GF9.2.12	GF9.2.11	97	75	135.5
2500.10. ▶	GF92.30.10. 2000	GF92.31.10. 2000	GF9.2.12	GF9.2.11	123	75	161.5
2700.05. ▶	GF95.30.05. 2000	GF95.31.05. 2000	GF9.2.12	GF9.2.11	70	105	108.5
2700.07. ▶	GF95.30.07. 2000	GF95.31.07. 2000	GF9.2.12	GF9.2.11	95	105	133.5
2700.10. ▶	GF95.30.10. 2000	GF95.31.10. 2000	GF9.2.12	GF9.2.11	120	105	158.5

*Standard material galvanized steel. Also available as stainless steel-version V2A, material 1.4301 (AISI 304) or black powder coating

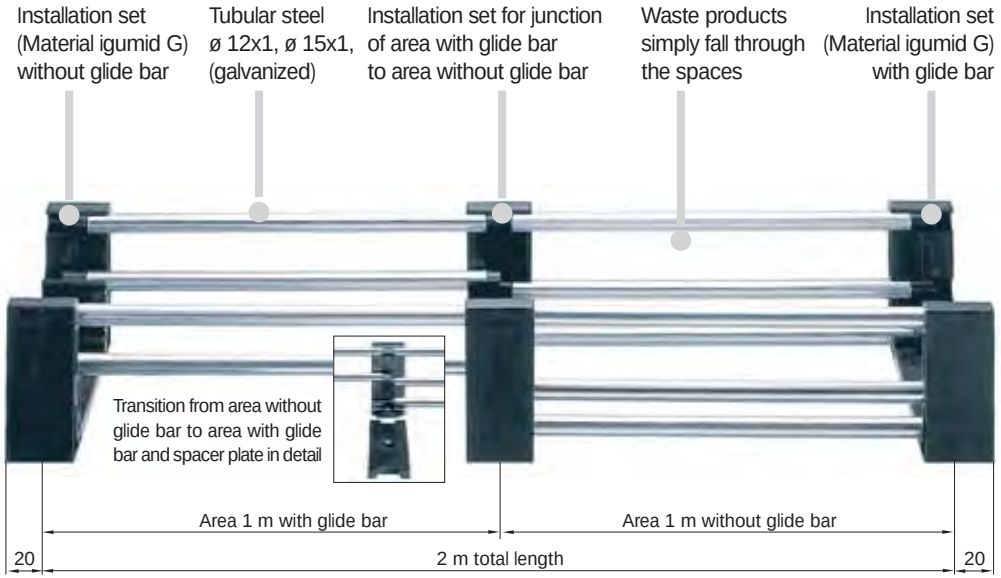


Order example for end feed,
travel ≈ 9,5 m / guide trough 10 m

Trough profile set **without** glide bar (incl. 5 clip connectors)
Order text: 10 m = 5 x 2 m sections trough profile, without glide bar Part No. GF92.30.07.2000

Trough brackets (incl. 11 clamping blocks, "**long**" Version 02)
Order text: 11 x trough brackets Part No. GF9.2.11

10 m = 5 x 2 m trough profile, without glide bar + 11 x trough brackets
10 m = 5 x GF92.30.07.2000 + 11 x GF9.2.11



Lets light and dirt through - Tubular trough system RS

igus® tubular trough are simple and reasonable options to safely guide e-chains®. Recommended for less demanding applications and applications with travel speeds less than 2 m/s, as well as travel distances less than 50 m..

- For application areas where dirt, chips occur - the waste products simply fall through the spaces
- The tubes are available in galvanized steel or polymer
- Very easy assembly - the elements are pushed together and clipped in
- No difficult setting of the correct width - the fitting spacers are delivered with the complete order
- Junction installation set for junction of area without glide bar to area with glide bar

Typical industries and applications

- For application areas with dirt or chips

iF product design award
2000 System RS

Part No. **without** glide bar	Part No. **with** glide bar	For e-chain® Series	Outer trough height H_{Ra} [mm]	Page
Tubular Trough System RS Lets light and dirt through				
92.70.	92.71.	2500 ● 255	90	1248
93.70.	93.71.	3500	146	1249
95.70.	95.71.	2700	126,3	1250



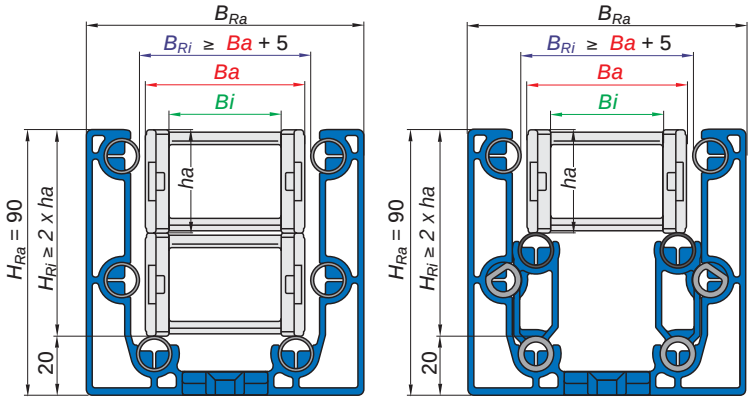
Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Tubular Trough System RS | 92.70 | 92.71

Trough height: 90 mm | Product range

For the following igus® Series

E2/000
- 2500
- 255



Installation set **without** glide bar

Installation set **with** glide bar

For 1 m trough without glide bars 6 tubes 1 meter long are required. For 1 m trough with glide bars 4 tubes 1 meter long are required.

Dimensions

XXX	Bi	Ba	B_{Ra}	B_{Ri}
02*	25	41	81	45
03	38	54	94	58
05	57	73	113	77
07	77	93	133	97
09	89	105	145	109
10	103	119	159	123
12	125	141	181	145

*spacer plate upon request

XXX = e-chain® width

Tubular Trough | Components

Component	Part No.	Weight
Installation set **without** glide bars	92.70.XXX	≈ 0,15
Installation set **with** glide bars	92.71.XXX	≈ 0,12
Installation set junction	92.74.XXX	
Fastening set	92.77.2	
Tubular steel, diameter ø 12 x 1 galvanized:	92.80	≈ 0,28
(L = 985) for clearance Installation set 1 m		

Supplement Part No. with the required width XXX in the dimension table. Example: 92.71.200

Order Example: Inner width 57 mm.
For 8 m trough the following parts are required:

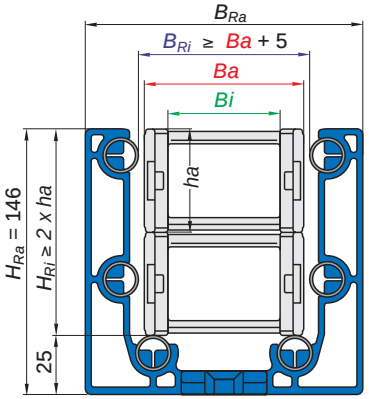
Area **with** glide bar:	4 x Installation set	Part No. 92.71.05
	+ tube: 4 x 4 piece	Part No. 92.80
Area **without** glide bar:	4 x Installation set	Part No. 92.70.05
	+ tube: 4 x 6 piece	Part No. 92.80
1 x Installation set junction		Part No. 92.74.05

Tubular Trough System RS | 93.70 | 93.71

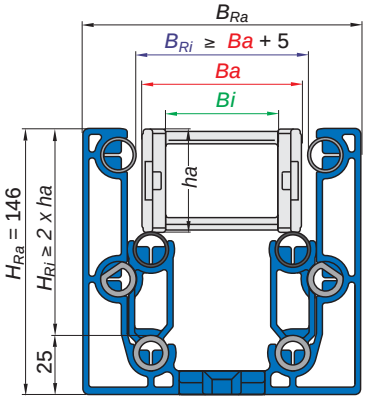
Trough height: 146 mm | Product range

For the following igus® Series

E2/000
- 3500



Installation set **without** glide bar



Installation set **with** glide bar

For 1 m trough without glide bars 6 tubes 1 meter long are required. For 1 m trough with glide bars 4 tubes 1 meter long are required.

Tubular Trough | Components

Component	Part No.	Weight
Installation set **without** glide bars	93.70.XXX	≈ 0,25
Installation set **with** glide bars	93.71.XXX	≈ 0,20
Installation set junction	93.74.XXX	
Fastening set	92.77.2	
Tubular steel, diameter ø 15 x 1 galvanized:	93.80	≈ 0,50
(L = 985) for clearance Installation set 1 m		

Supplement Part No. with the required width XXX in the dimension table. Example: 93.71.050

Dimensions

XXX	Bi	Ba	B_{Ra}	B_{Ri}
050	50	70	130	75
075	75	95	155	100
100	100	120	180	125
115	115	135	195	140
125	125	145	205	150
150	150	170	230	175
175	175	195	255	200
200	200	220	280	225
225	225	245	305	250
250	250	270	330	275

XXX = e-chain® width

Order Example: Inner width 50 mm.
For 8 m trough the following parts are required:

Area **with** glide bar:	4 x Installation set	Part No. 93.71.050
	+ tube: 4 x 4 Stück	Part No. 93.80
Area **without** glide bar:	4 x Installation set	Part No. 93.70.050
	+ tube: 4 x 6 piece	Part No. 93.80
1 x Installation set junction		Part No. 93.74.050

Tubular Trough System RS | 95.70 | 95.71

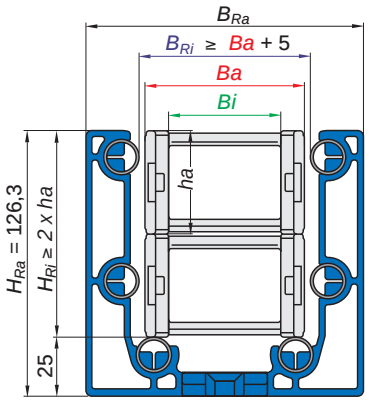
Trough height: 126,3 mm | Product range

For the following igus® Series

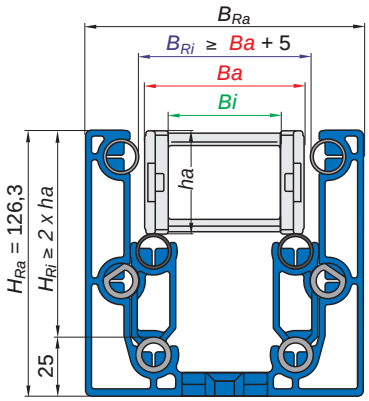
E2/000

● 2700

For 1 m trough without glide bars 6 tubes 1 meter long are required. For 1 m trough with glide bars 4 tubes 1 meter long are required.



Installation set **without** glide bar



Installation set **with** glide bar

Dimensions

XXX	Bi	Ba	B_{Ra}	B_{Ri}
05	50	66	124	71
06*	65	81	139	86
07	75	91	149	96
09*	90	106	164	111
10	100	116	174	121
12	125	141	199	146
15	150	166	224	171
17	175	194	252	199
20	200	219	277	224

*spacer plate upon request

XXX = e-chain® width

Tubular Trough | Components

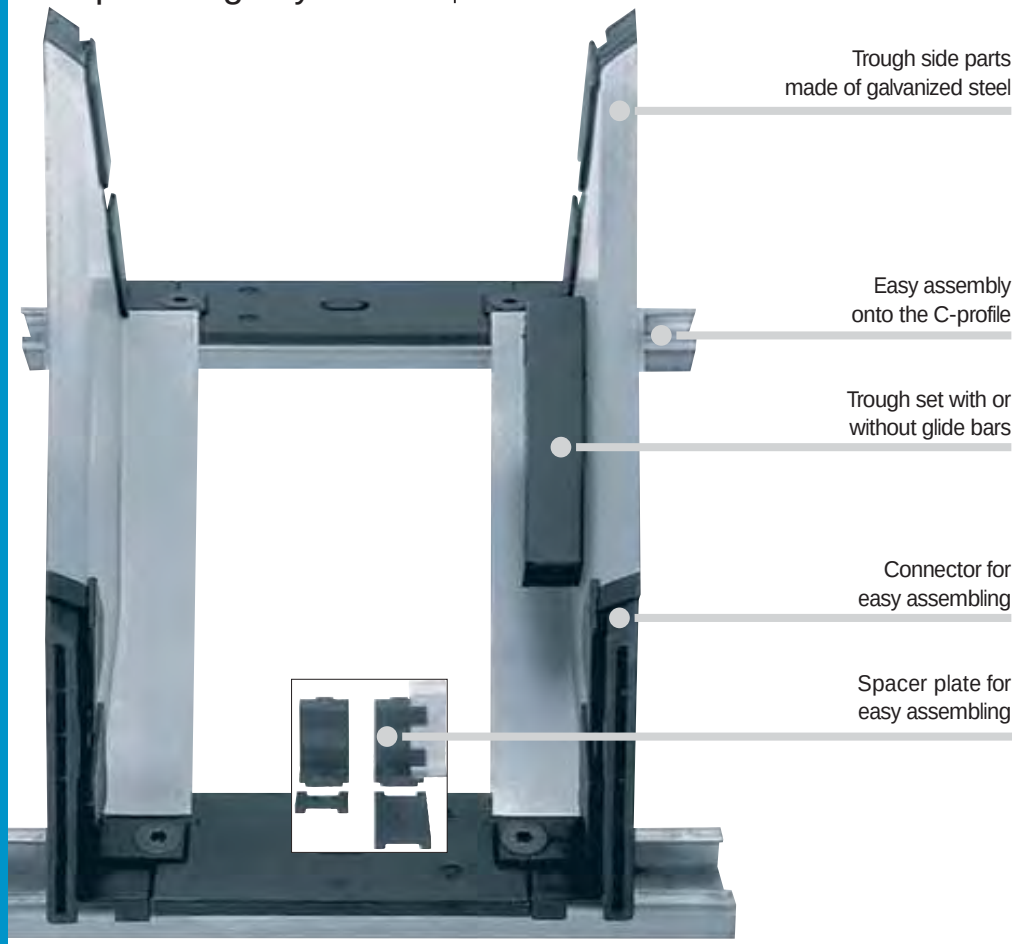
Component	Part No.	Weight
Installation set **without** glide bars	95.70.XXX	≈ 0,21
Installation set **with** glide bars	95.71.XXX	≈ 0,17
Installation set junction	95.74.XXX	
Fastening set	92.77.2	
Tubular steel, diameter ø 15 x 1 galvanized:	93.80	≈ 0,50
(L = 985) for clearance Installation set 1 m		

Supplement Part No. with the required width XXX in the dimension table. Example: 95.71.200

Order Example: Inner width 50 mm.
For 8 m trough the following parts are required:

Area **with** glide bar:	4 x Installation set	Part No. 95.71.05
	+ tube: 4 x 4 piece	Part No. 93.80
Area **without** glide bar:	4 x Installation set	Part No. 95.70.05
	+ tube: 4 x 6 piece	Part No. 93.80
1 x Installation set junction		Part No. 95.74.05

My Sketches



Simple and cost-effective - Snap-in trough System SP

The igus® snap-in trough system SP is a very simple and cost-effective trough-system made from galvanized steel to guide e-chains® up to 50 m lenghts at low speeds.

- Smaller than conventional troughs
- Easy and fast assembly
- Fixed inner width due to spacer
- No sharp metal edges in the internal area because of covered connectors
- Cost-effective because of easy assembly

Typical industries and applications

- For simple applications with less installation space

Part No. **without** glide bar	Part No. **with** glide bar	For e-chain® Series	Outer trough height H_{Ra} [mm]	Page
		**Snap-in trough System SP** simple and cost-effective		
91.930	91.931	10 ● B15/B15i ● 15/R15	55,5	1254
92.930	92.931	2500 ● 255	76,6	1255
93.930	93.931	3500	138,6	1256
95.930	95.931	2700	106,6	1257

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

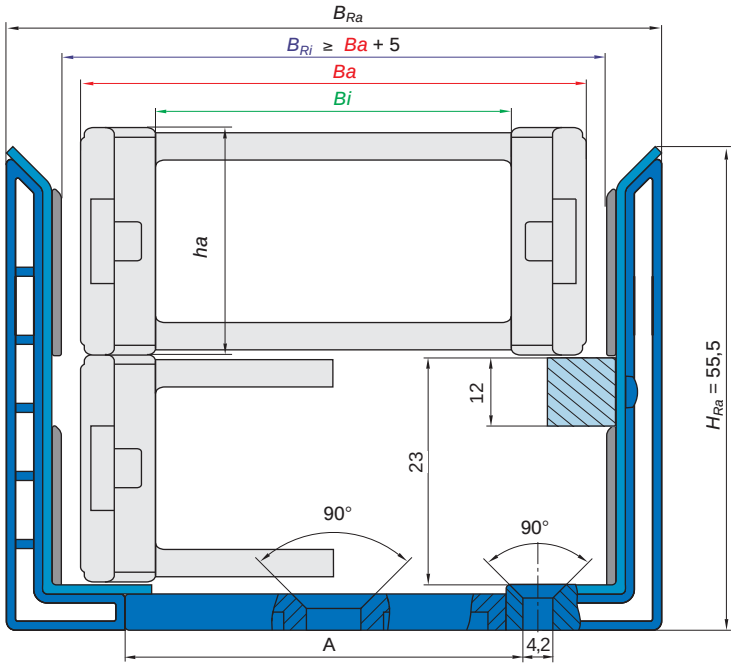
Snap-in trough System SP | 91.930 | 91.931

Trough height: 55,5 mm | Product range

For the following igus® Series

E2
- 10
- B15/B15i

zipper
- 15/R15



Dimensions

XXX		B_{Ra}	B_{Ri}
015	21	46	29,6
025	31	56	39,6
038	43	68	51,6
050	55	80	63,6
05	71	96	79,6
06	88	113	96,6
07	108	133	116,6

XXX = e-chain® width

Snap-in trough | Components

Component	Part No.	Weight
Trough set **without** glide bars, 2 glide strips of 1 m	91.930	≈ 1,50
Trough set **with** glide bars, 2 glide strips of 1 m	91.931	≈ 1,90
Glide bar set, 2 glide bars, 1 m section	91.920	
Screw set	91.921	
Installation set **with** spacer plate	91.950.XXX	≈ 0,05
Installation set **without** spacer plate	91.950	≈ 0,03

Supplement Part No. with the required width XXX in the dimension table. Example: 91.950.050

Order Example: Series 15, inner width 50 mm.
For 20 m trough the following parts are required:

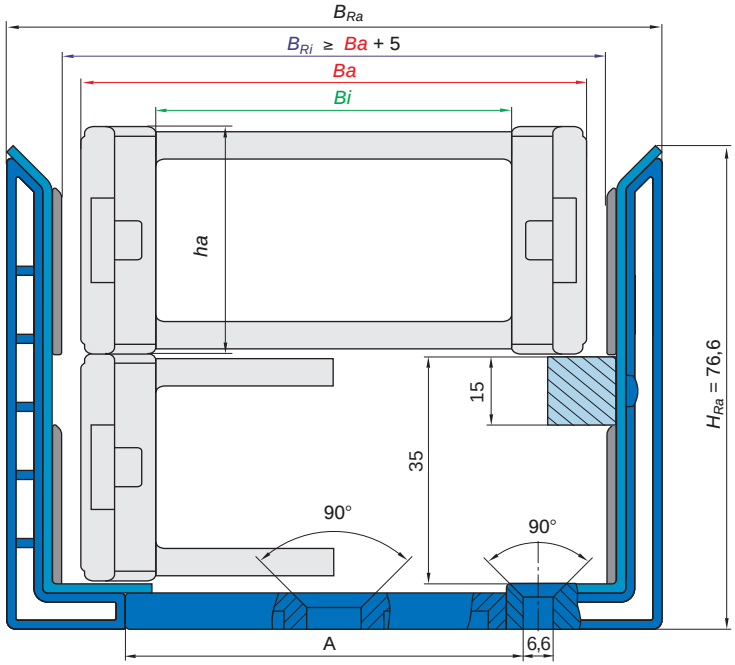
10 m, Trough set without glide bars (5 x 2 m)	Part No. 91.931
10 m, Trough set with glide bars (5 x 2 m)	Part No. 91.931
Installation set **with** spacer plate	Part No. 91.950.05

Snap-in trough System SP | 92.930 | 92.931

Trough height: 76,6 mm | Product range

For the following igus® Series

E2/000
- 2500



Snap-in trough | Components

Component	Part No.	Weight
Trough set **without** glide bars, 2 glide strips of 1 m	92.930	≈ 5,50
Trough set **with** glide bars, 2 glide strips of 1 m	92.931	≈ 6,50
Glide bar set, 2 glide bars, 1 m section	92.920	
Screw set	92.921	
Installation set **with** spacer plate	92.950.XXX	≈ 0,10
Installation set **without** spacer plate	92.950	≈ 0,08

Supplement Part No. with the required width XXX in the dimension table. Example: 91.950.05

Dimensions

XXX		B_{Ra}	B_{Ri}
02*	14	67	43
03	27	80	56
05	46	99	75
07	66	119	95
09	78	131	107
10	92	145	121
12	114	167	143

*spacer plate upon request

XXX = e-chain® width

Order Example: Series 2500, inner width 50 mm.
For 20 m trough the following parts are required:

10 m, Trough set without glide bars (5 x 2 m)	Part No. 92.931
10 m, Trough set with glide bars (5 x 2 m)	Part No. 92.931
Installation set **with** spacer plate	Part No. 92.950.05

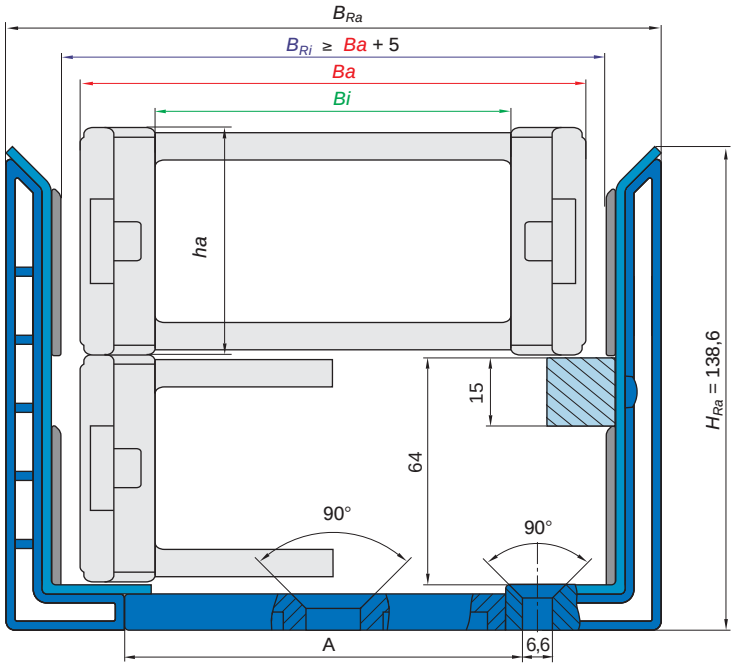
Snap-in trough System SP | 93.930 | 93.931

Trough height: 138,6 mm | Product range

For the following igus® Series

E2/000

● 3500



Dimensions

XXX		B_{Ra}	B_{Ri}
050	40	102	74
075	65	127	99
100	90	152	124
115	105	167	139
125	115	177	149
150	140	202	174
175	165	227	199
200	190	252	224
225	215	277	249
250	240	302	274

XXX = e-chain® width

Snap-in trough | Components

Component	Part No.	Weight
Trough set **without** glide bars, 2 glide strips of 1 m	93.930	≈ 9,00
Trough set **with** glide bars, 2 glide strips of 1 m	93.931	≈ 10,0
Glide bar set, 2 glide bars, 1 m section	93.920	
Screw set	93.921	
Installation set **with** spacer plate	93.950.XXX	≈ 0,20
Installation set **without** spacer plate	93.950	≈ 0,16

Supplement Part No. with the required width XXX in the dimension table. Example: 93.950.050

Order Example: Series 3500, inner width 50 mm.
For 20 m trough the following parts are required:

10 m, Trough set without glide bars (5 x 2 m)	Part No. 93.931
10 m, Trough set with glide bars (5 x 2 m)	Part No. 93.931
Installation set **with** spacer plate	Part No. 93.950.050

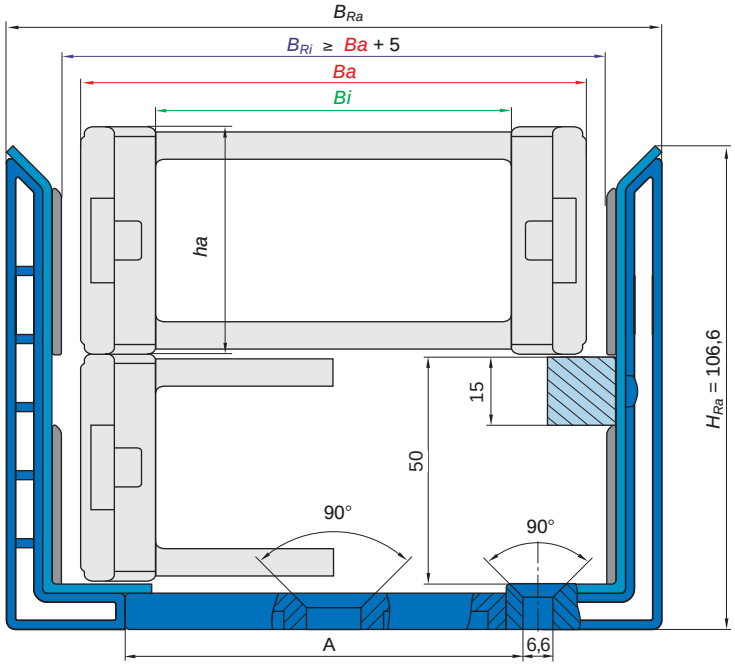
Snap-in trough System SP | 95.930 | 95.931

Trough height: 106,6 mm | Product range

For the following igus® Series

E2/000

● 2700



Snap-in trough | Components

Component	Part No.	Weight
Trough set **without** glide bars, 2 glide strips of 1 m	95.930	≈ 7,10
Trough set **with** glide bars, 2 glide strips of 1 m	95.931	≈ 8,10
Glide bar set, 2 glide bars, 1 m section	95.920	
Screw set	95.921	
Installation set **with** spacer plate	95.950.XXX	≈ 0,11
Installation set **without** spacer plate	95.950	≈ 0,13

Supplement Part No. with the required width XXX in the dimension table. Example: 95.950.05

Dimensions

XXX		B_{Ra}	B_{Ri}
05	40	94	70
06*	55	109	85
07	65	119	95
09*	80	134	110
10	90	144	120
12	115	169	145
15	140	194	170
17	165	229	195
20	190	244	220

*spacer plate upon request

XXX = e-chain® width

Order Example: Series 2700, inner width 50 mm.
For 20 m trough the following parts are required:

10 m, Trough set without glide bars (5 x 2 m)	Part No. 95.931
10 m, Trough set with glide bars (5 x 2 m)	Part No. 95.931
Installation set **with** spacer plate	Part No. 93.950.05



Noise and wear reducing, safe guiding of the lower run of your e-chain® in standard applications

Flexible one-piece solution, for a large selection of igus® E2/000 and E4.1 series e-chains®

Simple design - easy mounting to all types of profiles and wall brackets

Complete system with all needed parts as one unit

Light weight material - available in the color of your choice



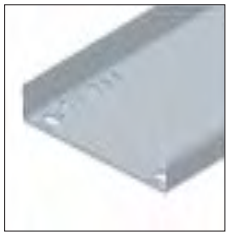
Option 01 - with connection-rail



Option 02 - with bracket



Option 03 - without rail (upon request)

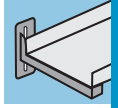


Option 04 - customized (upon request)

For support of the lower run - Support tray tool kit

Simple one-piece support trays for the lower e-chain® run, according with your requirements and specification. Your width, height and color - we supply the fitting e-chain®, together with the support tray system. Ready to install onto your machine or application. Save on procurement and design time.

- Complete system, ready to install
- No more costly self-made designs
- Easy installation onto your machine, on profiles or wall-mount brackets
- igus® support tray - in 2 types and 4 options available
- For many widths available from stock, with many mounting possibilities



Support tray Part No.	Width e-chain®*	Outer trough width B_{Ra} [mm]	Inner trough width B_{Ri} [mm]	Material	Page
 **Support Tray - Type 01 for Series:** ● 2400/2450/2480/2500 ● 2600/2650/2680/2700 ● E4.21 ● E4.28/R4.28 ● E4.32/H4.32/R4.32 ● E4.38L/R4.38L ● E6.29/R6.29 ● E6.35 ● E6.40/R6.40 ● E61.29					
S9.010/011.05.XXXX.0	.05 / .050	89	80	Steel, black	1260
S9.010/011.07.XXXX.0	.07 / .070	114	105	Steel, black	1260
S9.010/011.10.XXXX.0	.10 / .100	139	130	Steel, black	1260
S9.010/011.15.XXXX.0	.15 / .150	185	175	Steel, black	1260
 **Support Tray - Type 02 for Series:** ● 3400/3450/3480/3500 ● E4.42/H4.42/R4.42 ● E4.48L/R4.48L ●E4.56/H4.56/R4.56 ● E4.80/H4.80/R4.80 ● 14040/14140/R18840 ● 14240/14340 ● 14550/14650/19050 ● 15050/15150/R19850 ● 15250/15350 ● E6.52/R6.52 ● E6.62 ● E6.80 ● E61.52					
S9.020/021.10.XXXX.0	.10 / .100	167	156	Steel, black	1262
S9.020/021.15.XXXX.0	.15 / .150	217	206	Steel, black	1262
S9.020/021.20.XXXX.0	.20 / .200	267	256	Steel, black	1262
S9.020/021.25.XXXX.0	.25 / .250	317	306	Steel, black	1262

*depends on width-index



Support tray with bracket for easy mounting on your application

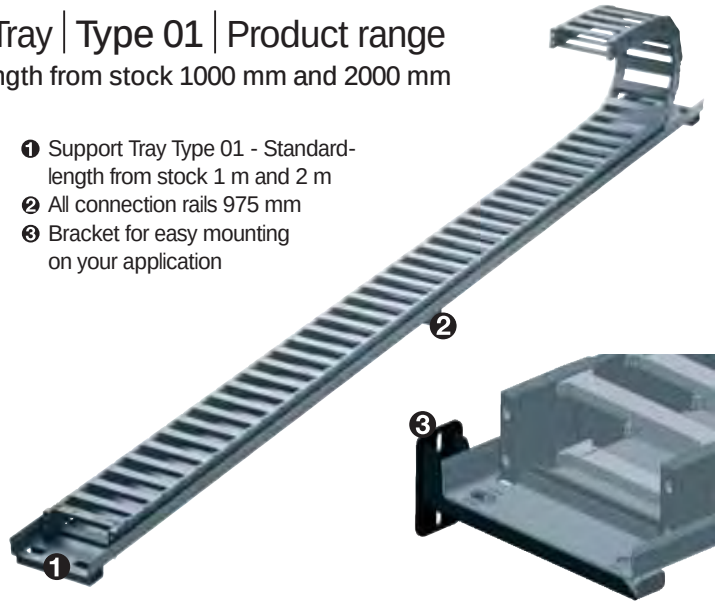
Support Tray | Type 01 | Product range

Standard-length from stock 1000 mm and 2000 mm

For the following igus® Series

- E2/000
- 2400/2450/2480/2500
- 2600/2650/2680/2700
- E4.1
- E4.21
- E4.28/R4.28
- E4.32/H4.32/R4.32
- E4.1 light
- E4.38L/R4.38L
- E6
- E6.29/R6.29
- E6.35
- E6.40/R6.40
- E6
- E61.29

❶ Support Tray Type 01 - Standard-length from stock 1 m and 2 m
❷ All connection rails 975 mm
❸ Bracket for easy mounting on your application



System	Suitable for the following series ▼	Width-index	B_{Ra} [mm]	B_{Ri} [mm]	Part No. Support-tray, single	Part No. Support-tray with bracket	Part No. single bracket
E2/000	2400/2450/2480/2500	.05	89	80	S9.010.05.XXXX.0	S9.011.05.XXXX.0	907.724.05.0
		.07	114	105	S9.010.07.XXXX.0	S9.011.07.XXXX.0	907.724.07.0
		.10	139	130	S9.010.10.XXXX.0	S9.011.10.XXXX.0	907.724.10.0
E2/000 **E4.1** **E4.1 light**	2600/2650/2680/2700 E4.32/H4.32/R4.32 E4.38L/R4.38L	.05	89	80	S9.010.05.XXXX.0	S9.011.05.XXXX.0	907.724.05.0
		.07	114	105	S9.010.07.XXXX.0	S9.011.07.XXXX.0	907.724.07.0
		.10	139	130	S9.010.10.XXXX.0	S9.011.10.XXXX.0	907.724.10.0
		.15	185	175	S9.010.15.XXXX.0	S9.011.15.XXXX.0	907.724.15.0
E4.1 **E6** **E6** **E6.1**	E4.21 E6.29/R6.29 E6.35 E61.29	.050	89	80	S9.010.05.XXXX.0	S9.011.05.XXXX.0	907.724.05.0
		.070	114	105	S9.010.07.XXXX.0	S9.011.07.XXXX.0	907.724.07.0
		.100	139	130	S9.010.10.XXXX.0	S9.011.10.XXXX.0	907.724.10.0
E4.1 **E6**	E4.28/R4.28 E6.40/R6.40	.050	89	80	S9.010.05.XXXX.0	S9.011.05.XXXX.0	907.724.05.0
		.070	114	105	S9.010.07.XXXX.0	S9.011.07.XXXX.0	907.724.07.0
		.100	139	130	S9.010.10.XXXX.0	S9.011.10.XXXX.0	907.724.10.0
		.150	185	175	S9.010.15.XXXX.0	S9.011.15.XXXX.0	907.724.15.0

Please replace XXXX by the standard lengths 1000 or 2000 mm available from stock!

The lengths and widths mentioned here are available from stock in the standard black color. For other lengths, widths and colors, please contact us.

Order key

Part No. structure **1000** mm S9.010.07.1000.0

- Support tray
- without bracket
- e-chain®- width
- Length 1000 mm
- Color, powdered black

Order key

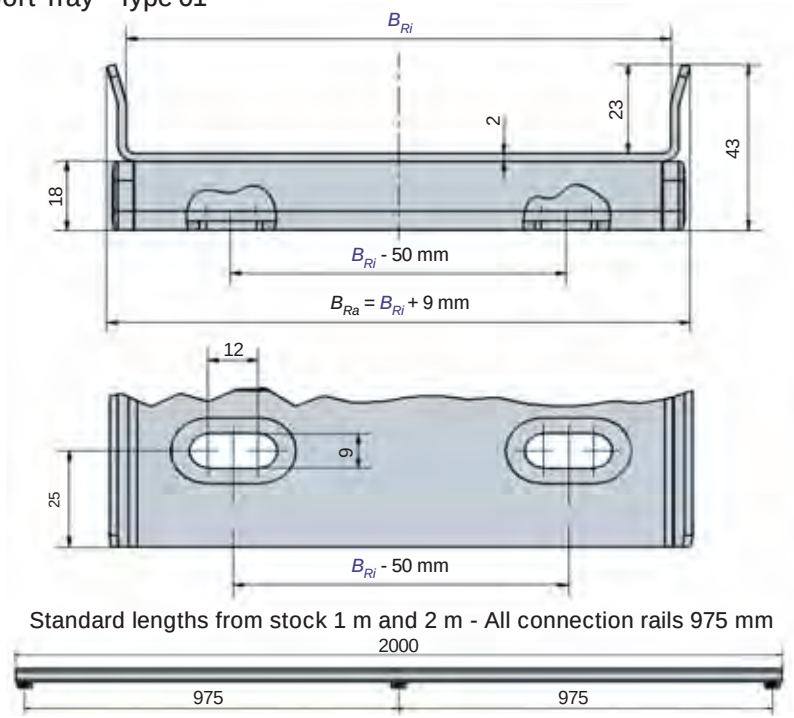
Part No. structure **2000** mm S9.011.15.2000.0

- Support tray
- with bracket
- e-chain®- width
- Length 2000 mm
- Color, powdered black

Support Tray | Type 01 | Dimensions

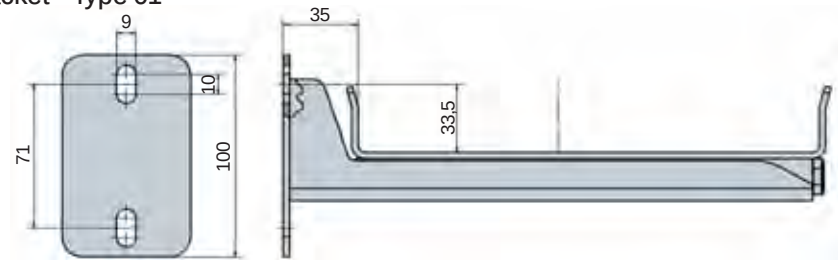
Dimensions and mounting holes

Support Tray - Type 01



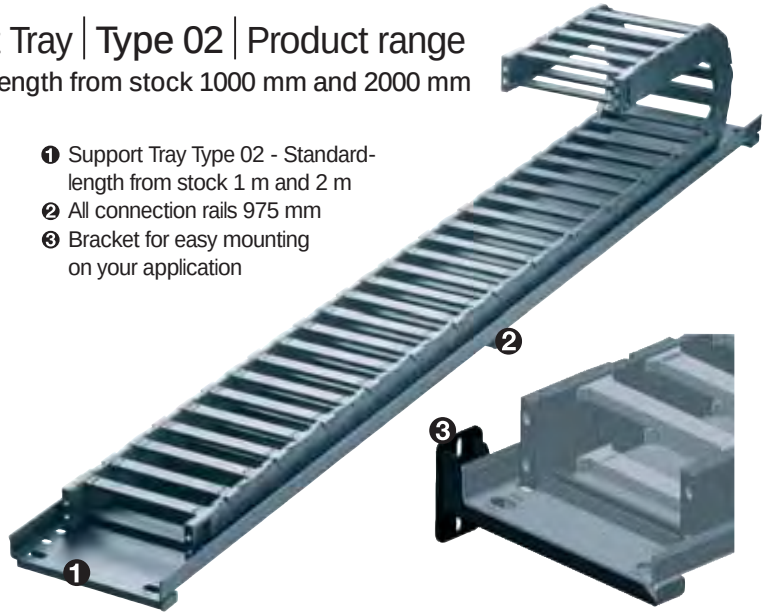
Standard lengths from stock 1 m and 2 m - All connection rails 975 mm

Bracket - Type 01



Support Tray | Type 02 | Product range

Standard-length from stock 1000 mm and 2000 mm



❶ Support Tray Type 02 - Standard-length from stock 1 m and 2 m
❷ All connection rails 975 mm
❸ Bracket for easy mounting on your application

For the following igus® Series

- E2/000
- 3400/3450/3480/3500
- E4.1
- E4.42/H4.42/R4.42
- E4.56/H4.56/R4.56
- E4.80/H4.80/R4.80
- E4.1 light
- E4.48L/R4.48L
- E4/light
- 14040/14140/R18840
- 14240/14340
- 14550/14650/19050
- 15050/15150/R19850
- 15250/15350
- E6
- E6.52
- E6.62
- E6.80
- E6.1
- E61.52

System	Suitable for the following series ▼	Width-index	B_{Ra} [mm]	B_{Ri} [mm]	Part No. Support-tray, single	Part No. Support-tray with bracket	Part No. single bracket
E4.1	E4.42/H4.42/R4.42	.10	167	156	S9.020.10.XXXX.0	S9.021.10.XXXX.0	907.759.010.0
E4.1	E4.56/H4.56/R4.56	.15	217	206	S9.020.15.XXXX.0	S9.021.15.XXXX.0	907.759.015.0
E4.1	E4.80/H4.80/R4.80	.20	267	256	S9.020.20.XXXX.0	S9.021.20.XXXX.0	907.759.020.0
E4.1 light	E4.48L/R4.48L	.25	317	306	S9.020.25.XXXX.0	S9.021.25.XXXX.0	907.759.025.0
E4/light	14040/14140/R18840						
E4/light	14240/14340						
E4/light	14550/14650/19050						
E4/light	15050/15150/R19850						
E4	15250/15350						
E6	E6.62						
E6	E6.80						
E2/000	3400/3450/3480/3500	.100	167	156	S9.020.10.XXXX.0	S9.021.10.XXXX.0	907.759.010.0
E6	E6.52/R6.52	.150	217	206	S9.020.15.XXXX.0	S9.021.15.XXXX.0	907.759.015.0
E6.1	E61.52	.200	267	256	S9.020.20.XXXX.0	S9.021.20.XXXX.0	907.759.020.0
		.250	317	306	S9.020.25.XXXX.0	S9.021.25.XXXX.0	907.759.025.0

Please replace XXXX by the standard lengths 1000 or 2000 mm available from stock!

The lengths and widths mentioned here are available from stock in the standard black color. For other lengths, widths and colors, please contact us.

Order key

Part No. structure **1000** mm S9.020.20.1000.0

- Support tray without bracket
- e-chain®- width
- Length 1000 mm
- Color, powdered black

Order key

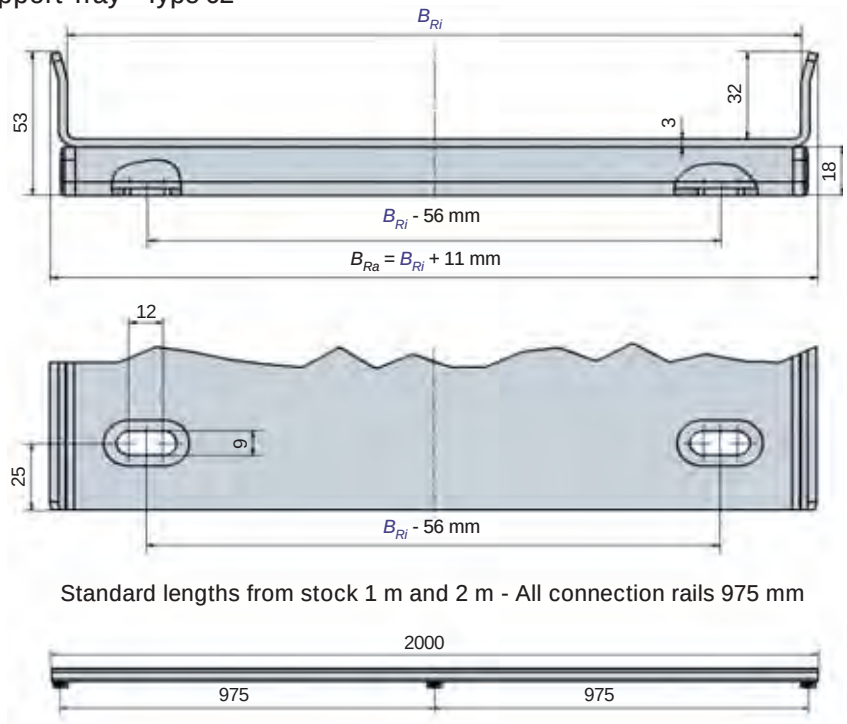
Part No. structure **2000** mm S9.021.20.2000.0

- Support tray with bracket
- e-chain®- width
- Length 2000 mm
- Color, powdered black

Support Tray | Type 02 | Dimensions

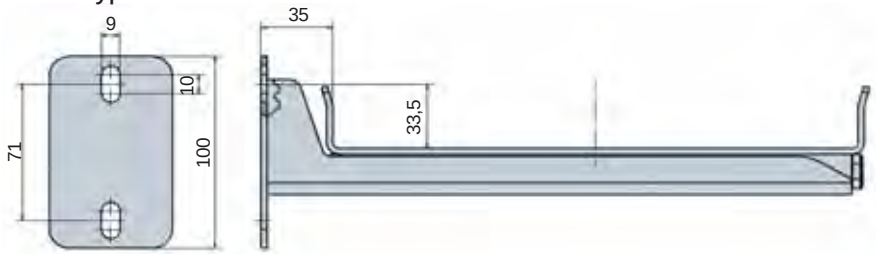
Dimensions and mounting holes

Support Tray - Type 02



Standard lengths from stock 1 m and 2 m - All connection rails 975 mm

Bracket - Type 02



e-chains®
for long travels

E4/4HD | P4 | rol e-chain® | autoglide





Extremely high additional fill weights on long travels - E4/4HD "Heavy-Duty"

System E4/4HD was designed for the most demanding tasks.

- Fer extremely high additional fill weights on long travels
- In heavy pollution or high humidity, the E4/4HD provides the required stability
- Extremely high torsional stiffness due to the "tongue and groove" design
- A longer service life is enabled by the particularly large glide surfaces
- Ideal for "Heavy-Duty" applications

► **www.igus.eu/eu/E4HD**



57% less energy consumption - System P4 profile-rol e-chain®

Safe, low-noise, abrasion-resistant energy supply system on long travels up to 800 m and more

- Long travels up to 800 m and more, high fill weights up to 30 kg/m
- For very long travels and high travel speeds up to >10 m/s
- Identical pitch of the e-chain® link with or without roller
- Smooth, low noise operation
- autoglide crossbars provide a safe guiding
- Large modular tool box system with interior separations of the System E4

► **www.igus.eu/eu/P4**



Rolling instead of gliding, long travels up to 800 m - rol e-chain®

Special solution for long travels. Reduce push-pull forces over 75%, gliding

- Major reduction in drive power for moving the e-chain®
- Travels up to 800 m on E4/4 rol e-chain®
- Speeds up to 6 m/s possible
- Various roller types for optimum application adaption
- Can be used even in dirty environments

► **www.igus.eu/eu/role**



Self-guiding e-chainsystems®, guide troughs not required - autoglide

Safe, low-noise, abrasion-resistant energy supply system on long travels up to 80 m and more

- In 4 Versionen erhältlich
- Travels up to 80 m and travel speeds up to 2,5 m/s
- Cost-effective solution, guide troughs not required!
- Very quick installation times for long travels!
- Small installation width, silent operation

► **www.igus.eu/eu/autoglide**



For extremely high additional fill weights on long travels - E4/4HD

The E4/4HD system was designed for the most demanding tasks. The E4/4HD provides the required stability in long travels, with high additional weights, heavy pollution or high humidity. The extremely sturdy side plates allow high loads, the stable tongue and groove ensures extremely high torsional stiffness. A longer service life is enabled by the particularly large glide surfaces.

- For extremely high additional fill weights and long travels
- Ideal for "Heavy-Duty" applications

Typical industries and applications

● RTG, quay cranes, many other cranes ● heavy machinery ● steel mills ● shipyards ● composting plants ● farms ● general mechanical engineering, etc.

E4/4HD - High torsional rigidity

ESD classification: Electrically conductive ESD/ATEX version upon request

System E4/4HD proved with long travels

e-tubes available as special design with HT material for 850°C (1562° F) hot chips

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Travels max. [m]	Page
 **Crossbars every link** for especially demanding applications							
4040HD	56	50 - 600	104 - 654	84	135 - 400	350	1272
5050HD	80	50 - 600	110 - 660	108	150 - 500	500	1278
 **e-tubes** fully enclosed, excellent cable protection							
R8840HD	56	75 - 462	129 - 516	84	150 - 400	350	1272
R9850HD	80	75 - 462	135 - 522	108	150 - 500	500	1278

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

The E4 e-chain® opener reduces assembly time

e-chain® opener tools for convenient opening and closing of E4 series igus® e-chains® ● Especially for e-chains® with many crossbars the assembly is much easier ● Especially in areas difficult to access mounting is simplified big savings in assembly time. More information ▶**www.igus.eu/E4savetime**



AX - Special e-chains® for fine dust applications

For long travel applications and fine dust applications, we have developed a special e-chainsystem® with exterior, dirt-repellent stop dogs ● Exterior stop dogs prevent the settling of dust, dirt, chips, flour, etc. ● Mounting brackets and accessories available. More information ▶www.igus.eu/eu/4040AX



Technical data

Gliding speed	max. 10 [m/s]
Acceleration	max. 50 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

Order example | Order key

Order example for complete e-chain® Series 4040HD (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 11 links	4040HD.30.300.0
+ Mounting brackets 1 set		40400HD.12.E
+ Interior separation	with 2 separators assembled every 2nd link	2 x 56.1.1

Order text: 1,0 m 4040HD.30.300.0 + 40400HD.12.E + 2 x 56.1.1

Order key
4040HD.30.300.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



The maintenance-free Series 4040 protects the igus® chainflex® motor and signal cables during the lifting and lowering movements of the tidal turbine and also protects them against agressive ambient conditions. The travel distance amounts to approx. 20 m in vertical direction above and under water

E4/4HD | 4040HD·8840HD | Product range

56 56

Heavy-Duty, high additional fill weights on long travels



e-chains®| Series 4040HD | crossbars every link, openable along both radii
e-tubes | Series 8840HD | fully enclosed, hinged, snap-open removable lids

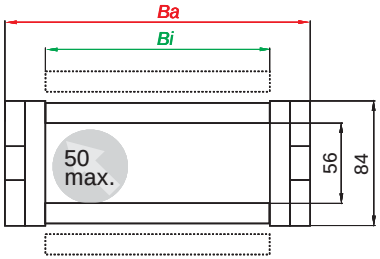
Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	4040HD [kg/m]	8840HD [kg/m]
4040HD.	–	05. R.0	50	104	≈ 5,03	–
4040HD.	–	06. R.0	65	119	≈ 5,12	–
4040HD.	8840HD.	07. R.0[1)]	75	129	≈ 5,19	≈ 5,64
4040HD.	–	08. R.0	87	141	≈ 5,27	–
4040HD.	8840HD.	10. R.0	100	154	≈ 5,36	≈ 5,93
4040HD.	–	11. R.0	112	166	≈ 5,48	–
4040HD.	8840HD.	12. R.0	125	179	≈ 5,56	≈ 6,29
4040HD.	–	13. R.0	137	191	≈ 5,69	–
4040HD.	8840HD.	15. R.0	150	204	≈ 5,73	≈ 6,67
4040HD.	–	16. R.0	162	216	≈ 5,84	–
4040HD.	8840HD.	17 .R.0	175	229	≈ 5,97	≈ 6,98
4040HD.	–	18. R.0	187	241	≈ 6,09	–
4040HD.	8840HD.	20. R.0	200	254	≈ 6,14	≈ 7,29
4040HD.	–	21. R.0	212	266	≈ 6,21	–
4040HD.	–	22. R.0	225	279	≈ 6,28	–
4040HD.	–	23. R.0	237	291	≈ 6,39	–
4040HD.	8840HD.	25. R.0	250	304	≈ 6,50	≈ 8,02
4040HD.	–	26. R.0	262	316	≈ 6,59	–
4040HD.	8840HD.	27. R.0	275	329	≈ 6,70	≈ 8,38
4040HD.	–	28. R.0	287	341	≈ 6,75	–
4040HD.	8840HD.	30. R.0	300	354	≈ 6,91	≈ 8,68
4040HD.	–	31. R.0	312	366	≈ 6,94	–
4040HD.	–	32. R.0	325	379	≈ 7,05	–
4040HD.	–	33. R.0	337	391	≈ 7,17	–
4040HD.	8840HD.	35. R.0	350	404	≈ 7,37	≈ 9,38
4040HD.	–	36. R.0	362	416	≈ 7,28	–
4040HD.	–	37. R.0	375	429	≈ 7,38	–
4040HD.	–	38. R.0	387	441	≈ 7,49	–
4040HD.	8840HD.	40. R.0	400	454	≈ 7,76	≈ 10,38
4040HD.	–	41. R.0	412	466	≈ 7,68	–
4040HD.	–	42. R.0	425	479	≈ 7,98	–
4040HD.	–	43. R.0	437	491	≈ 7,82	–
4040HD.	–	45. R.0	450	504	≈ 8,15	–
4040HD.	8840HD.	46. R.0	462	516	≈ 8,10	≈ 10,85
4040HD.	–	47. R.0	475	529	≈ 8,14	–
4040HD.	–	48. R.0	487	541	≈ 8,39	–
4040HD.	–	50. R.0	500	554	≈ 8,48	–
4040HD.	–	51. R.0	512	566	≈ 8,40	–
4040HD.	–	52. R.0	525	579	≈ 8,57	–
4040HD.	–	53. R.0	537	591	≈ 8,66	–
4040HD.	–	55. R.0	550	604	≈ 9,08	–
4040HD.	–	60. R.0	600	654	≈ 9,31	–

*Radius not available for e-tubes [1)] Removable lid only, no hinged option

Available bending radii R [mm] 135* | 150 | 200 | 250 | 300 | 350 | 400

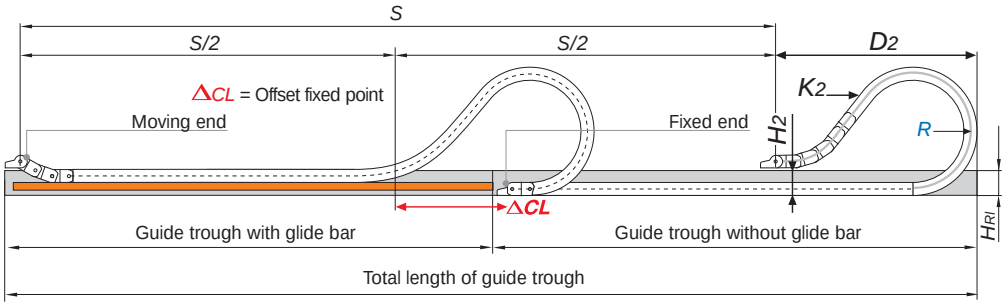
Supplement Part No. with required radius (R). Example: 4040HD.30.300.0

E4/4HD | 4040HD·8840HD | Dimensions



Inner height 56 mm
Pitch 91 mm/link
Links/m 11 (1001 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 350 m | Fill weight 16 kg/m



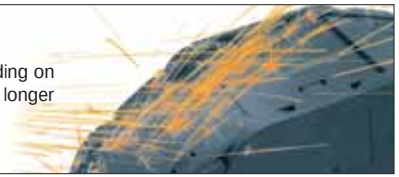
Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	135*	150	200	250	300	350	400
H_2	266	266	266	266	266	266	266
D_2	390	450	710	920	1180	1440	1530
K_2	728	819	1274	1638	2002	2366	2548
ΔCL	124	159	359	509	709	909	959

*Radius not available for e-tubes

Hot Chips up to 850°C

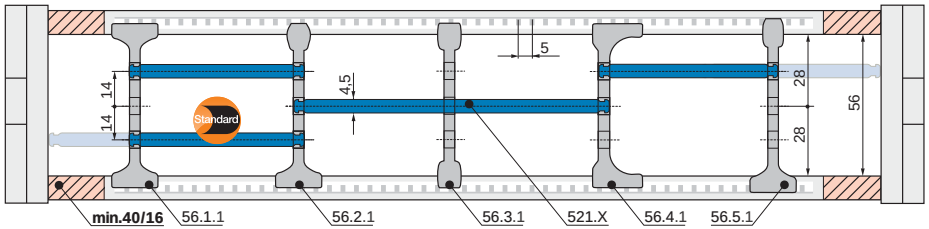
e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ►www.igus.eu/eu/HT



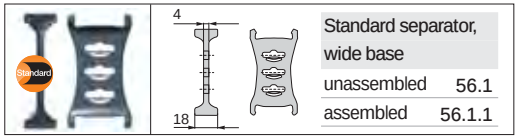
E4/4HD | 4040HD·8840HD | Interior separation | Standard

New generation interior separation

All elements of the previous interior separation can still be ordered ►www.igus.eu/eu/4040HD



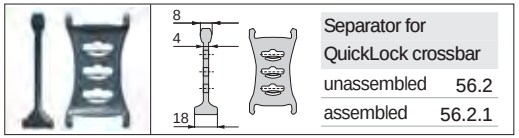
Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	56.1
assembled	56.1.1

Standard - for all applications

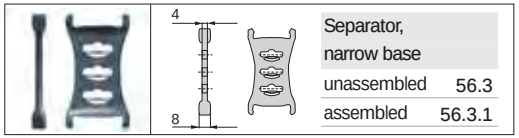
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	56.2
assembled	56.2.1

For even faster installation

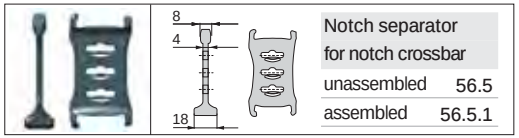
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	56.3
assembled	56.3.1

For many thin cables

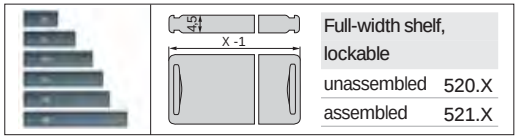
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	56.5
assembled	56.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

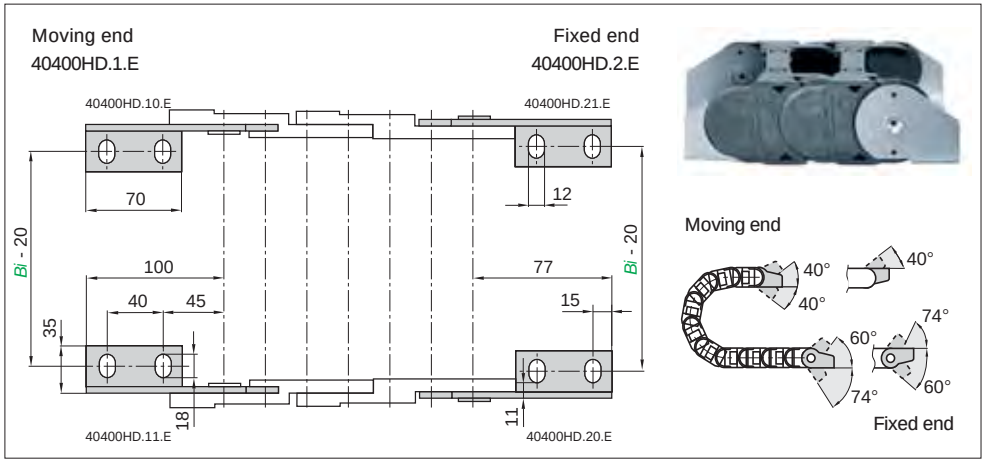
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

Lockable full-width shelves



Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450

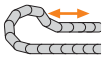
4040HD·8840HD | Steel mounting brackets pivoting



Steel pivoting | Recommended for gliding applications on long travels

Part No.	Mounting bracket pivoting
40400HD.12.E	assembled set of stainless steel mounting brackets
40400HD.1.E	Mounting brackets Moving end
40400HD.2.E	Mounting brackets Fixed end

Note: By ordering steel mounting brackets in combination with an e-chain®, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

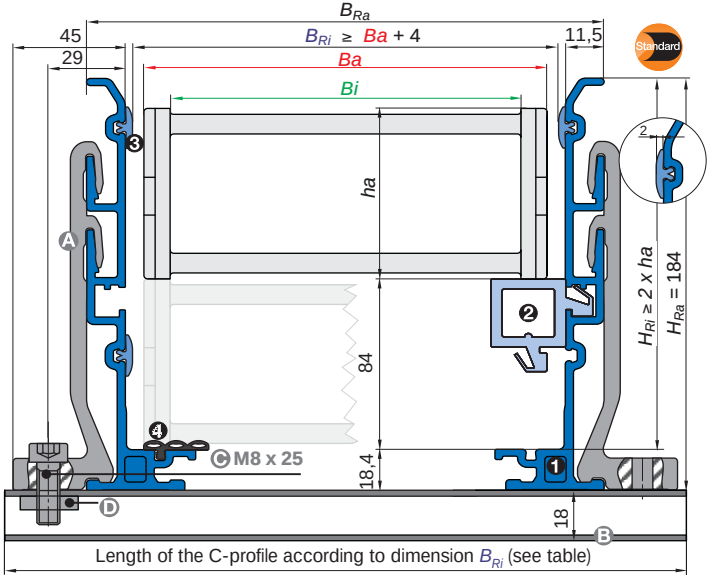
Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

Aluminum SuperTrough | "Heavy-Duty"

Part No. 974.30.SL | 974.31.SL | Trough height: 184 mm

Installation set "Heavy-Duty" with C-Profile

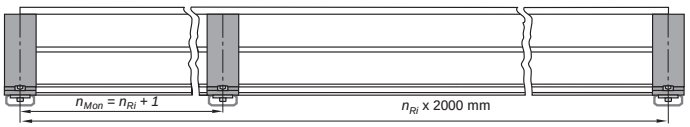
For Width Index	B_{Ri} [mm]	Part No. Installation set
.05	108	974.50.225
.06	123	974.50.250
.07	133	974.50.250
.08	145	974.50.275
.10	158	974.50.275
.11	170	974.50.300
.12	183	974.50.300
.13	195	974.50.325
.15	208	974.50.325
.16	220	974.50.350
.17	233	974.50.350
.18	245	974.50.375
.20	258	974.50.375
.21	270	974.50.400
.22	283	974.50.400
.23	295	974.50.425
.25	308	974.50.425
.26	320	974.50.450
.27	333	974.50.450
.28	345	974.50.475
.30	358	974.50.475
.31	370	974.50.500
.32	383	974.50.500
.33	395	974.50.525
.35	408	974.50.525
.36	420	974.50.550
.37	433	974.50.550
.38	445	974.50.575
.40	458	974.50.575
.41	470	974.50.600
.42	483	974.50.600
.43	495	974.50.625
.45	508	974.50.625
.46	520	974.50.650
.47	533	974.50.650
.48	545	974.50.675
.50.	558	974.50.675
.51	570	974.50.700
.52	583	974.50.700
.53	595	974.50.725
.55	608	974.50.725
.60	658	974.50.775



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 25 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m - Center mounted for Series 4040HD.30.300.0 with B_{Ri} = 358

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 974.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 974.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 974.50.475
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 974.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

● Trough set ● Installation set ● Glide bar ● C-Profile
Ba = Outer width e-chains® Bi = Inner width e-chains®
B_{Ri} = Inner trough width B_{Ra} = Outer trough width H_{Ri} = Inner trough height H_{Ra} = Outer trough height n_{Mon} = Number of installation sets n_{Ri} = Number of trough sets



igus® E4 e-chains® in a Container-Crane. High loads and high speeds also at difficult weather conditions

P4 - profile-rol e-chain®, 57% less energy consumption

● Safe, low-noise, abrasion-resistant energy supply system on long travels up to 800 m and more ● High additional fill weights up to 30 kg/m ● High speeds up to 10 m/s ● Identical pitch of the e-chain® link with or without roller ● Integrated captive roller in the side part ● autoglide crossbars provide for a safe guiding

More information ▶ from page 1284 or www.igus.eu/eu/P4



rol e-chain® - Rolling instead of gliding

Special solution for long travels. Reduce push-pull forces over 75% (gliding) ● Travels up to 800 m ● Travel speeds up to 6 m/s ● For long travels and high speeds ● Various roller types for optimum application adaption

More information ▶ from page 1304 or www.igus.eu/eu/role



autoglide - Self-guiding e-chainsystems®

autoglide: self-guiding e-chains®, without the need of guide troughs ● 4 versions available ● Travels up to 80 m and travel speeds up to 2,5 m/s ● Cost-effective solution ● Very quick installation times for long travels ● Small installation width, silent operation

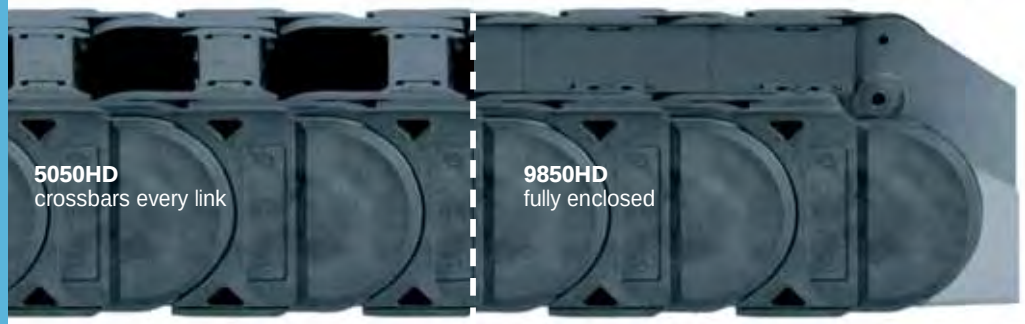
More information ▶ from page 1320 or www.igus.eu/eu/autoglide



E4/4HD | 5050HD·9850HD | Product range



Heavy-Duty, high additional fill weights on long travels



e-chains®| Series 5050HD | crossbars every link, openable along both radii
e-tubes | Series 9850HD | fully enclosed, hinged, hinged, snap-open removable lids

Part No. e-chains®	Part No. e-tubes			Bi [mm]	Ba [mm]	5050HD [kg/m]	9850HD [kg/m]
5050HD.	–	05. R.0		50	110	≈ 6,65	–
5050HD.	–	06. R.0		65	125	≈ 6,74	–
5050HD.	9850HD.	07 R.0[1)]		75	135	≈ 6,81	≈ 7,25
5050HD.	–	08. R.0		87	147	≈ 6,89	–
5050HD.	9850HD.	10. R.0		100	160	≈ 6,99	≈ 7,55
5050HD.	–	11. R.0		112	172	≈ 7,10	–
5050HD.	9850HD.	12. R.0		125	185	≈ 7,18	≈ 7,91
5050HD.	–	13. R.0		137	197	≈ 7,32	–
5050HD.	9850HD.	15. R.0		150	210	≈ 7,35	≈ 8,29
5050HD.	–	16. R.0		162	222	≈ 7,47	–
5050HD.	9850HD.	17. R.0		175	235	≈ 7,60	≈ 8,60
5050HD.	–	18. R.0		187	247	≈ 7,71	–
5050HD.	9850HD.	20. R.0		200	260	≈ 7,77	≈ 8,91
5050HD.	–	21. R.0		212	272	≈ 7,84	–
5050HD.	–	22. R.0		225	285	≈ 7,91	–
5050HD.	–	23. R.0		237	297	≈ 8,02	–
5050HD.	9850HD.	25. R.0		250	310	≈ 8,13	≈ 9,64
5050HD.	–	26. R.0		262	322	≈ 8,22	–
5050HD.	9850HD.	27 R.0		275	335	≈ 8,32	≈ 10,00
5050HD.	–	28. R.0		287	347	≈ 8,38	–
5050HD.	9850HD.	30. R.0		300	360	≈ 8,53	≈ 10,30

Part No. e-chains®	Part No. e-tubes			Bi [mm]	Ba [mm]	5050HD [kg/m]	9850HD [kg/m]
5050HD.	–	31. R.0		312	372	≈ 8,57	–
5050HD.	–	32. R.0		325	385	≈ 8,67	–
5050HD.	–	33. R.0		337	397	≈ 8,79	–
5050HD.	9850HD.	35. R.0		350	410	≈ 8,99	≈ 11,00
5050HD.	–	36. R.0		362	422	≈ 8,90	–
5050HD.	–	37. R.0		375	435	≈ 9,00	–
5050HD.	–	38. R.0		387	447	≈ 9,11	–
5050HD.	9850HD.	40. R.0		400	460	≈ 9,38	≈ 12,00
5050HD.	–	41. R.0		412	472	≈ 9,31	–
5050HD.	–	42. R.0		425	485	≈ 9,60	–
5050HD.	–	43. R.0		437	497	≈ 9,44	–
5050HD.	–	45. R.0		450	510	≈ 9,55	–
5050HD.	9850HD.	46. R.0		462	522	≈ 9,72	≈ 12,47
5050HD.	–	47. R.0		475	535	≈ 9,76	–
5050HD.	–	48. R.0		487	547	≈ 10,01	–
5050HD.	–	50. R.0		500	560	≈ 10,11	–
5050HD.	–	51. R.0		512	572	≈ 10,02	–
5050HD.	–	52. R.0		525	585	≈ 10,19	–
5050HD.	–	53. R.0		537	597	≈ 10,29	–
5050HD.	–	55. R.0		550	610	≈ 10,71	–
5050HD.	–	60. R.0		600	660	≈ 10,94	–

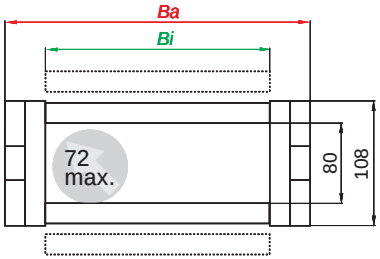
*[1)] Removable lid only, no hinged option

Available bending radii *R* [mm] 150 | 200 | 250 | 300 | 350 | 400 | 500

Supplement Part No. with required radius (R). Example: 5050HD.30.300.0

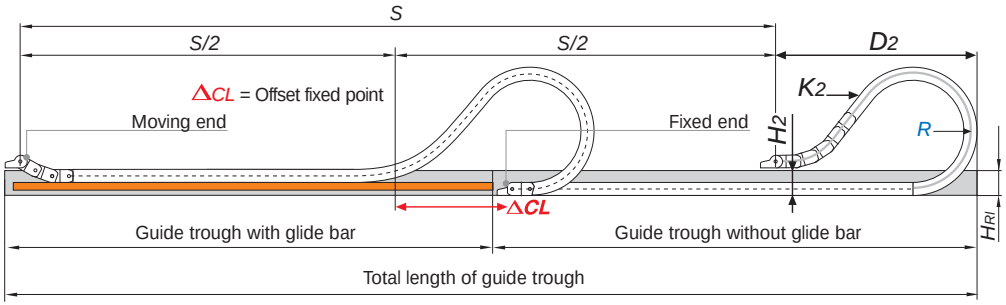
E4/4HD | 5050HD·9850HD | Dimensions





Inner height 80 mm
Pitch 91 mm/link
Links/m 11 (1001 mm)
Chain length $^{S}/_{2} + K_2$

Gliding applications | Long travels up to max. 500 m | Fill weight 30 kg/m

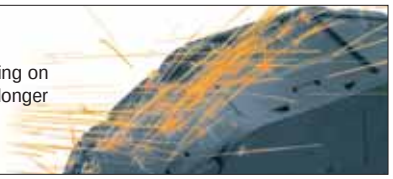


Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	150	200	250	300	350	400	500
H_2	242	242	242	242	242	242	242
D_2	550	800	950	1200	1550	1700	2175
K_2	910	1274	1638	2002	2457	2730	3458
ΔCL	209	409	509	709	1009	1109	1484

Hot Chips up to 850°C

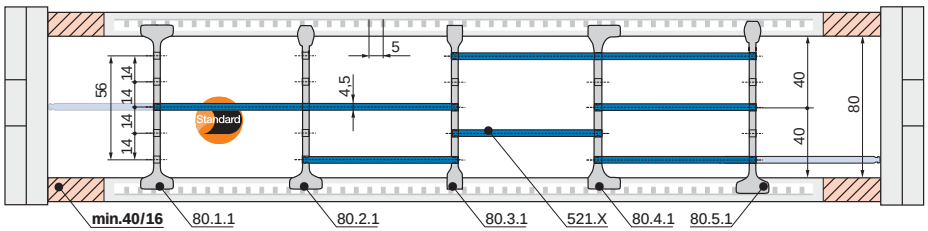
e-tubes that repel hot chips, up to 850ºC. Some applications, depending on amount and size of the chips, can burn or melt the surface. That is no longer the case with the igus® igumid HT material.
More information ►www.igus.eu/eu/HT



E4/4HD | 5050HD·9850HD | Interior separation | Standard

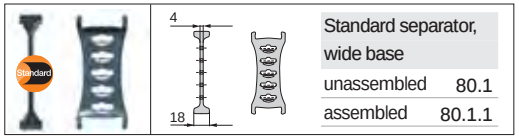
New generation interior separation

All elements of the previous interior separation can still be ordered ►www.igus.eu/eu/5050HD



Note: Please observe a lateral spacing to the side links! **e-tube: 40 mm** | **e-chain®: 16 mm**

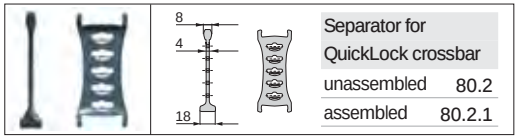
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	80.1
assembled	80.1.1

Standard - for all applications

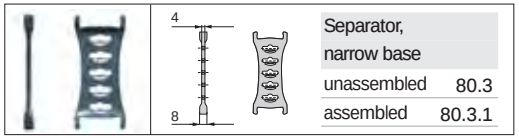
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	80.2
assembled	80.2.1

For even faster installation

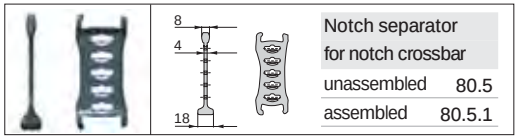
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	80.3
assembled	80.3.1

For many thin cables

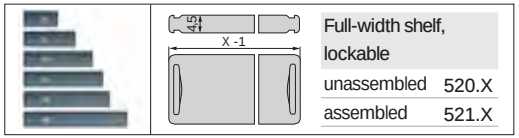
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	80.5
assembled	80.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

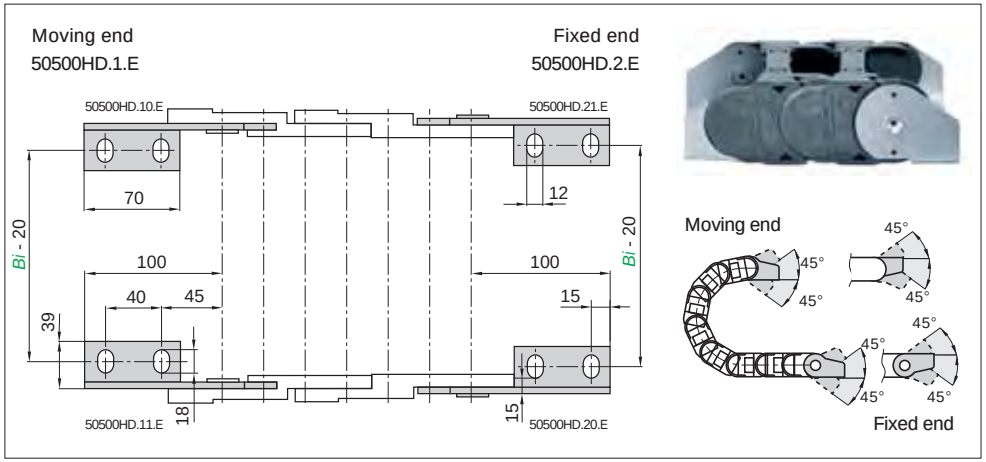
Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.

Lockable full-width shelves



Width X [mm]	unassembled	assembled
050	520.050	521.050
065	520.065	521.065
075	520.075	521.075
100	520.100	521.100
125	520.125	521.125
150	520.150	521.150
175	520.175	521.175
200	520.200	521.200
225	520.225	521.225
250	520.250	521.250
300	520.300	521.300
450	520.450	521.450

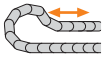
5050HD·9850HD | Steel mounting brackets pivoting



Steel pivoting | Recommended for gliding applications on long travels

Part No.	Mounting bracket pivoting
50500HD.12.E	assembled set of stainless steel mounting brackets
50500HD.1.E	Mounting brackets Moving end
50500HD.2.E	Mounting brackets Fixed end

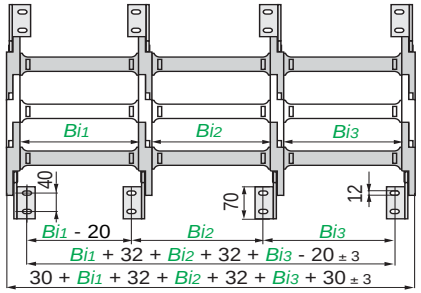
Note: By ordering steel mounting brackets in combination with an e-chain®, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive
- Stainless steel version available - please add index **.E**
  (Material: stainless steel 1.4301)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148





Extension links | for extremely wide e-chains® up to 3,0

- The extension link design allows virtually limitless side-by-side attachment
- High fill weights necessitate extremely wide e-chains® (up to 3000 mm)
- The unsupported length FL_G max. can be increased when additional loads are required
- Suitable for unsupported and gliding applications in a guide trough
- Attachement with KMA or steel mounting brackets

Order example - 3 chambers
5050HD.*Bi1* / *Bi2* / *Bi3*.*R*.0 =
5050HD.10 / 20 / 10.200.0
Extension link - single-part order
522HD.*R* (please indicate radius)

P4 - profile-rol e-chain®, 57% less energy consumption

● Safe, low-noise, abrasion-resistant energy supply system on long travels up to 800 m and more ● High additional fill weights up to 30 kg/m ● High speeds up to 10 m/s ● Identical pitch of the e-chain® link with or without roller ● Integrated captive roller in the side part ● autoglide crossbars provide for a safe guiding
More information ▶from page 1284 or www.igus.eu/eu/P4



rol e-chain® - Rolling instead of gliding

Special solution for long travels. Reduce push-pull forces over 75% (gliding) ● Travels up to 800 m ● Travel speeds up to 6 m/s ● For long travels and high speeds ● Various roller types for optimum application adaption
More information ▶from page 1304 or www.igus.eu/eu/role



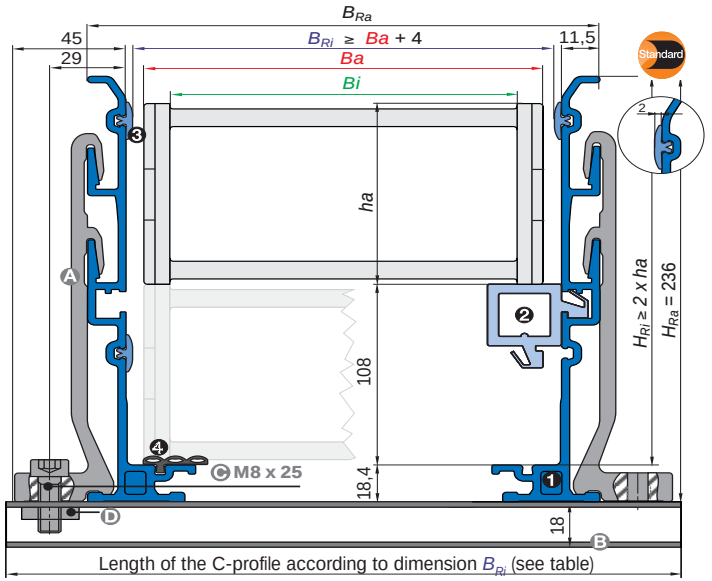
autoglide - Self-guiding e-chainsystems®

autoglide: self-guiding e-chains®, without the need of guide troughs ● 4 versions available ● Travels up to 80 m and travel speeds up to 2,5 m/s ● Cost-effective solution ● Very quick installation times for long travels ● Small installation width, silent operation
More information ▶from page 1320 or www.igus.eu/eu/autoglide



Aluminum SuperTrough | "Heavy-Duty"

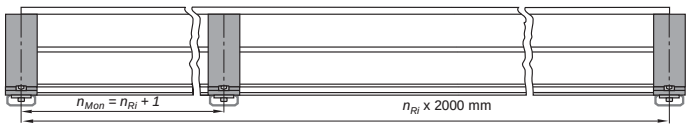
Part No. 975.30.SL | 975.31.SL | Trough height: 236 mm



● Components, trough "Basic": ❶ Trough side parts, aluminum, 2 m ❷ Glide bar, plastic, 2 m ❸ Glide strips, plastic, 2 m (without glide strips on request) ❹ Optional: Silencer profile, rubber ● Components, installation set "Basic": Ⓐ Bottom clamp, aluminum Ⓑ C-profile, galvanized steel ▶ table Ⓒ Screw M8 x 25 Ⓓ Sliding nut M8 Ⓔ Interface connector, plastic

Order example: Length of travel 30 m -
Center mounted for Series 5050HD.30.300.0 with B_{Ri} = 364

Guide trough set **without** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough without glide bar (8 x 2 m sections)	Part No. 975.30.SL
Guide trough set **with** glide bar (set of 2 trough side parts, incl. glide strips)	
Order text: 16 m guide trough with glide bar (8 x 2 m sections)	Part No. 975.31.SL
Installation set "Basic" complete (guide trough-sets + 1)	
Order text: 17 installation sets	Part No. 975.50.475
Option: For an additional noise dampening with silencer profile, please add Index A - Example:	Part No. 975.30.SLA



Principle sketch: Number of installation sets to be installed = Number of trough sections + 1

● Trough set ● Installation set ● Glide bar
● C-Profile
Ba = Outer width e-chains®
Bi = Inner width e-chains®
B_{Ri} = Inner trough width
B_{Ra} = Outer trough width
H_{Ri} = Inner trough height
H_{Ra} = Outer trough height
n_{Mon} = Number of installation sets
n_{Ri} = Number of trough sets

Installation set "Heavy-Duty" with C-Profile

For Width Index	B_{Ri} [mm]	Part No. Installation set
.05	114	975.50.250
.06	129	975.50.250
.07	139	975.50.275
.08	151	975.50.275
.10	164	975.50.300
.11	176	975.50.300
.12	189	975.50.325
.13	201	975.50.325
.15	214	975.50.350
.16	226	975.50.350
.17	239	975.50.375
.18	251	975.50.375
.20	264	975.50.400
.21	276	975.50.400
.22	289	975.50.425
.23	301	975.50.425
.25	314	975.50.450
.26	326	975.50.450
.27	339	975.50.475
.28	351	975.50.475
.30	364	975.50.500
.31	376	975.50.500
.32	389	975.50.525
.33	401	975.50.525
.35	414	975.50.550
.36	426	975.50.550
.37	439	975.50.575
.38	451	975.50.575
.40	464	975.50.600
.41	476	975.50.600
.42	489	975.50.625
.43	501	975.50.625
.45	514	975.50.650
.46	526	975.50.650
.47	539	975.50.675
.48	551	975.50.675
.50.	564	975.50.700
.51	576	975.50.700
.52	589	975.50.725
.53	601	975.50.725
.55	614	975.50.750
.60	664	975.50.800

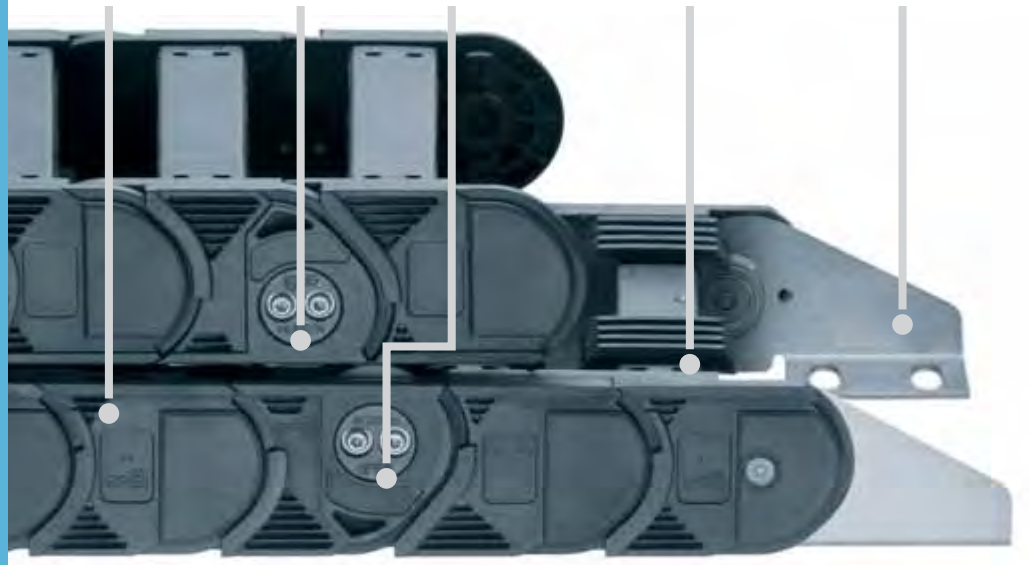
Low vibration: Offset operation of upper and lower run

Low maintenance: Tribo-optimized plastic rollers

Low noise: Special roller- / e-chain® links -design

Secure guidance: comb style auto-glide crossbars

Robust: Steel mounting brackets



57% less energy consumption - System P4, profile-rol e-chain®

Safe, low-noise, abrasion-resistant energy supply system on long travels up to 800 m and more

With the low-maintenance igus® System P4, a secure energy supply system can be implemented on long travels up to 800 m for cranes or conveyor systems. The upper run and lower run roll staggered on each other. Thus the tribo-optimized plastic rollers don't overrun, but roll on a continuous, wide roll-through surface. The P4 profile-rol e-chain® is safely guided by the comb-shaped autoglide crossbars and the special trough system. Systems of this type should be designed by our system design engineers. We will be more than willing to submit an offer to you. Please contact us about this.

- Long travels up to 800 m and more, high fill weights up to 30 kg/m
- For very long travels and high travel speeds up to >10 m/s
- Identical pitch of the e-chain® link with or without roller
- Smooth, low noise operation
- Integrated captive roller in the side part
- autoglide crossbars provide for a safe guiding in very long travels
- Large modular tool box system with interior separations of the System E4

iF product design award
2007 igus® System P4

Typical industries and applications

● Cranes ● Warehousing ● Plant construction ● Materials handling

Find a video online
▶ www.igus.eu/P4_movie

Energy efficient polymer e-chains® and cables reduce consumption by up to 57%

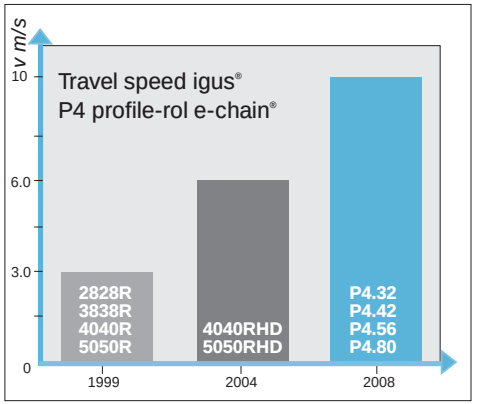
With the right materials and clever design, the energy consumption can be drastically reduced, as now proven by current tests and sample calculations in the e-chain® and cable laboratory at igus®. igus® e-chains® and chainflex® cables reduce the required drive power and extend the application's service life.

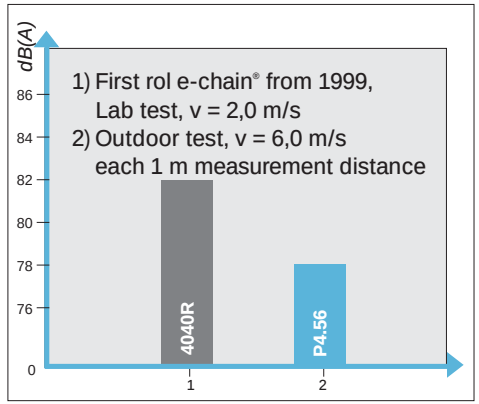
Better cables, stronger and rolling e-chains®	System P4 -57%	
Rolling instead of gliding	rol e-chain® -37%	
Stronger e-chains®	E4.1 -17%	
Optimized cables	chainflex® -17%	
Gliding application	Standard 100%	

System P4 + chainflex® = **–57%** less energy consumption

Sample calculations online
▶ www.igus.eu/eu/energyefficiency

System P4 | igus® profile-rol e-chain® tests





Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Travels max. [m]	Page
							
				System P4 - profile-rol e-chain® Safe, low-noise, abrasion-resistant on long travels			
P4.32	32	100 - 200	132 - 232	54	150 - 250	500	1288
P4.42	42	100 - 200	154 - 254	64	100 - 350	600	1292
P4.56	56	180 - 400	250 - 470	84	250 - 350	800	1296
P4.80	80	180 - 400	256 - 476	108	250 - 350	800	1300

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

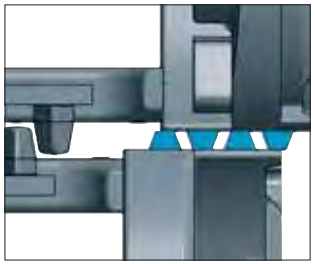
System P4 | Features | Accessories



Optimized interior separation program, cables last up to 4 times longer



Robust steel mounting brackets available



Offset operation of upper and lower run, rresulting in continuous roll-through surface



- Extension link for heavy fill weights
- 2 inner heights available (56, 80 mm)
- 50% higher fill weight possible
- Maximum rigidity
- Divides cross section into compartments (electric/hydraulic)



- Tribo-optimized plastic rollers for all P4 systems
- Wear optimized
- Long cycle life
- Improved rolling
- Lower noise and vibration
- Same pitch for roller links / e-chain® links



- Guide trough system
- Special geometry in combination with autoglide cross bars allows for offset upper and lower run
- Strong installation kits for long cycle life
- Stainless trough segments resist corrosion and seawater

Technical data

Gliding speed, rolling	max. >10 [m/s]
Acceleration, rolling	max. 50 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

Order example | Order key

Order example for complete e-chain® Series P4.32 (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 18 links	P4.32.15.150.0
+ Mounting brackets	1 set (with strain relief)	P4.32100.34.VS.E45
+ Interior separation	with 2 separators assembled every 2nd link	2 x 32.1.1

Order text: 1,0 m P4.32.15.150.0 + P4.32100.34.VS.E45 + 2 x 32.1.1

Order key
P4.32.15.150.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

System P4 | Series P4.32 | Product range

32

profile-rol e-chain® with comb style autoglide crossbars, medium inner height



P4.32 | openable along both radii, crossbars every link | comb style autoglide crossbars

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]
P4.32. 10 .R.0	100	132	| 075*| 100*| 125*| 150 | 200 | 250 | 300*	≈ 2,71
P4.32. 15 .R.0	150	182	| 075*| 100*| 125*| 150 | 200 | 250 | 300*	≈ 3,04
P4.32. 20 .R.0	200	232	| 075*| 100*| 125*| 150 | 200 | 250 | 300*	≈ 3,34

*Radius available upon request, please consult igus® for delivery time.

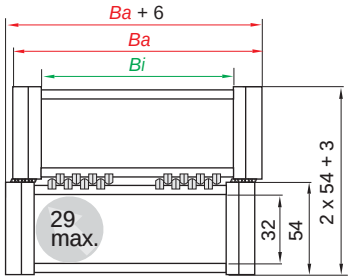
Supplement Part No. with required radius (R). Example: P4.32.15.150.0

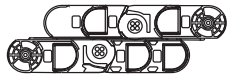
System P4 | Series P4.32 | Dimensions

System P4 principle

Offset operation of upper and lower run,
rresulting in continuous roll-through surface

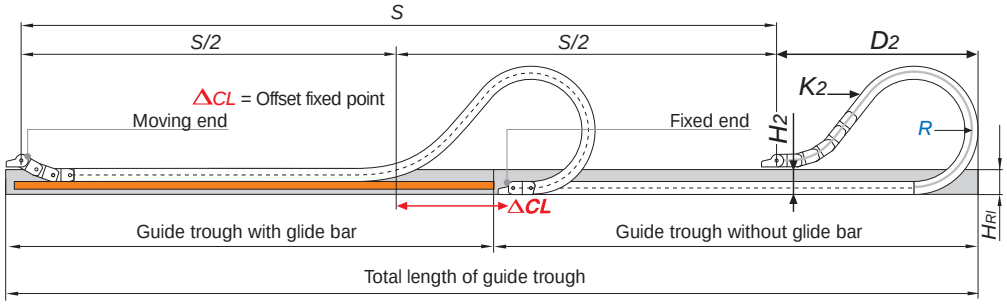






Inner height	32 mm
Pitch	56 mm/link
Links/m	18 (1008 mm)
Chain length	$S/2 + K_2$

Gliding applications | Long travels up to max. 500 m | Fill weight 6,0 kg/m



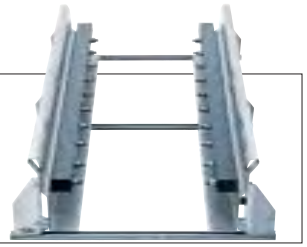
Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	075*	100*	125*	150	200	250	300*
H_2	125	125	125	125	125	125	125
D_2	425	500	635	760	1015	1400	1625
K_2	728	840	1064	1232	1624	2072	2464
ΔCL	100	150	263	376	596	835	1054

*Radius available upon requestplease consult igus® for delivery time.

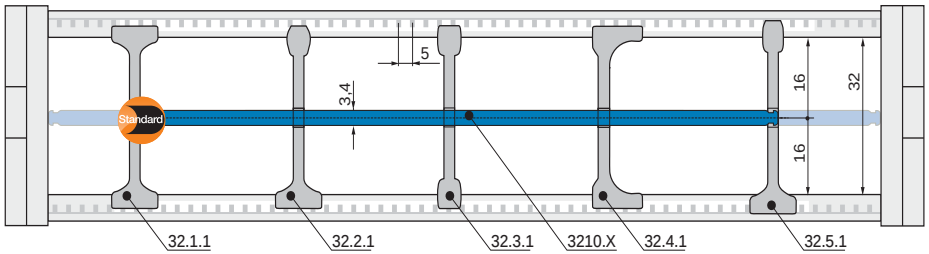
System P4 - guide trough system

● Special geometry in combination with autoglide cross bars allows for offset upper and lower run ● Strong installation kits for long cycle life ● Stainless steel trough segments resist corrosion and seawater ● Available upon request.
More information ►www.igus.eu/eu/P4

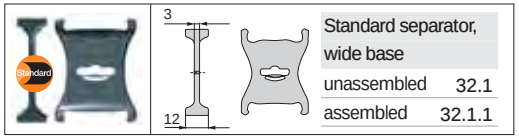


System P4 | Series P4.32 | Interior separation | Standard

New generation interior separation



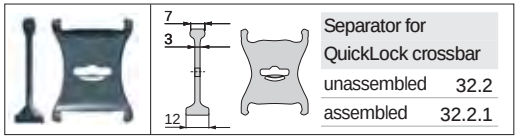
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	32.1
assembled	32.1.1

Standard - for all applications

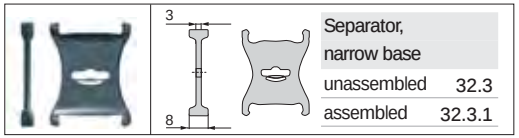
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	32.2
assembled	32.2.1

For even faster installation

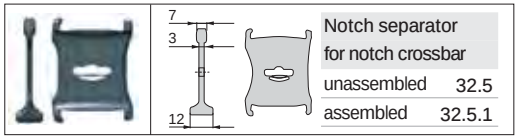
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	32.3
assembled	32.3.1

For many thin cables

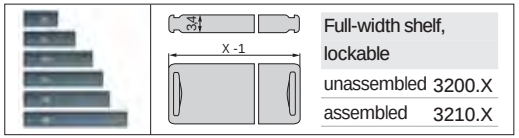
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	32.5
assembled	32.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

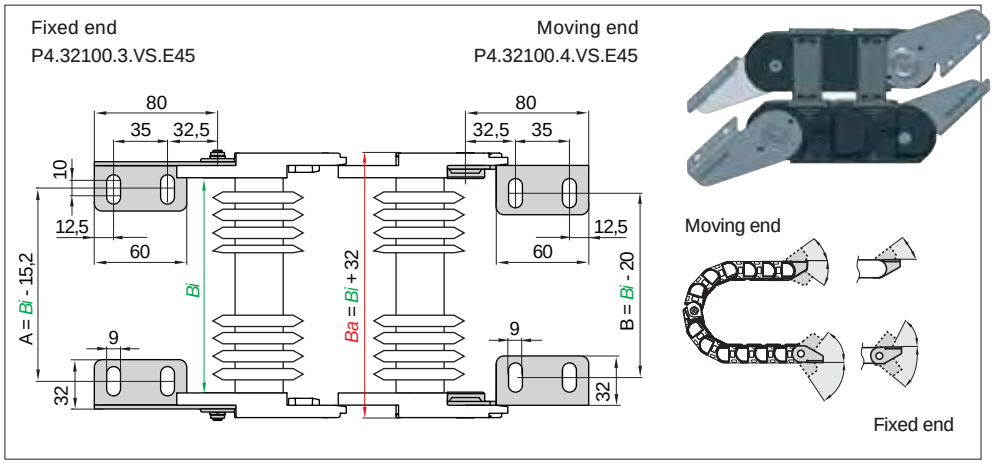
Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at one height.

Lockable full-width shelves



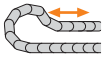
Width X [mm]	unassembled	assembled
050	3200.050	3210.050
075	3200.075	3210.075
100	3200.100	3210.100
115	3200.115	3210.115
125	3200.125	3210.125
150	3200.150	3210.150
175	3200.175	3210.175
200	3200.200	3210.200
225	3200.225	3210.225
250	3200.250	3210.250



Steel pivoting | Recommended for gliding applications on long travels

Part No.	Mounting bracket pivoting
P4.32100.34.VS.E45	assembled set of stainless steel mounting brackets
P4.32100.4.VS.E45	Mounting brackets Moving end
P4.32100.3.VS.E45	Mounting brackets Fixed end

Note: By ordering steel mounting brackets in combination with an e-chain®, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive (Material: stainless steel 1.4301)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

System P4 | Series P4.42 | Product range

profile-rol e-chain® with comb style autoglide crossbars, medium inner height

42



P4.42 | openable along both radii, crossbars every link | comb style autoglide crossbars

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]
P4.42. 10 .R.0	100	154	| 100 | 125 | 150 | 200 | 250 | 300 | 350	≈ 2,71
P4.42. 15 .R.0	150	202	| 100 | 125 | 150 | 200 | 250 | 300 | 350	≈ 3,04
P4.42. 20 .R.0	200	254	| 100 | 125 | 150 | 200 | 250 | 300 | 350	≈ 3,34

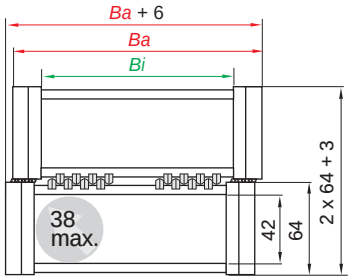
Supplement Part No. with required radius (R). Example: P4.42.15.150.0

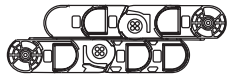
System P4 | Series P4.42 | Dimensions

System P4 principle

Offset operation of upper and lower run, rresulting in continuous roll-through surface

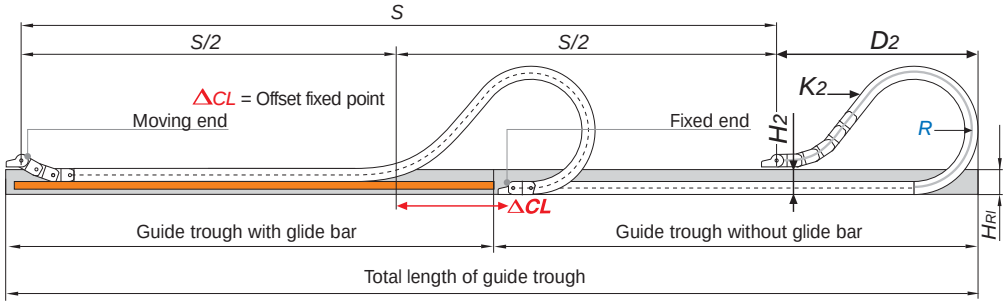






Inner height	42 mm
Pitch	67 mm/link
Links/m	15 (1005 mm)
Chain length	$S/2 + K_2$

Gliding applications | Long travels up to max. 600 m | Fill weight 7,0 kg/m

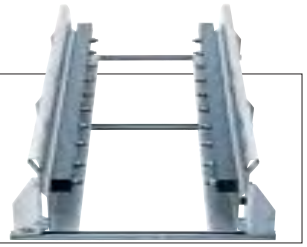


Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	100	125	150	200	250	300	350
H_2	140	140	140	140	140	140	140
D_2	520	785	940	1280	1620	1960	2265
K_2	930	1206	1407	1876	2345	2814	3216
ΔCL	195	335	470	765	1045	1330	1615

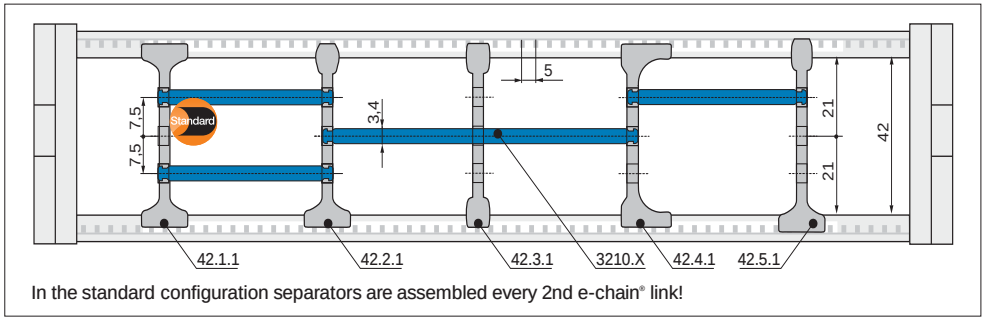
System P4 - guide trough system

● Special geometry in combination with autoglide cross bars allows for offset upper and lower run ● Strong installation kits for long cycle life ● Stainless steel trough segments resist corrosion and seawater ● Available upon request.
More information ►www.igus.eu/eu/P4

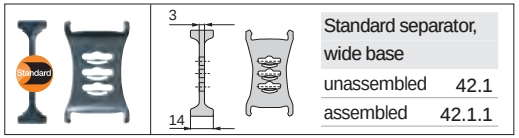


System P4 | Series P4.42 | Interior separation | Standard

New generation interior separation



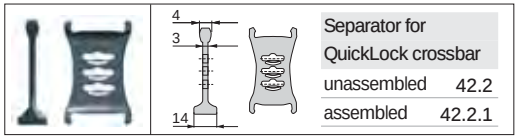
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	42.1
assembled	42.1.1

Standard - for all applications

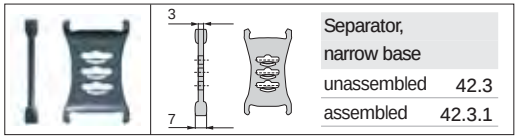
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	42.2
assembled	42.2.1

For even faster installation

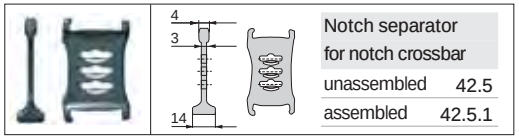
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	42.3
assembled	42.3.1

For many thin cables

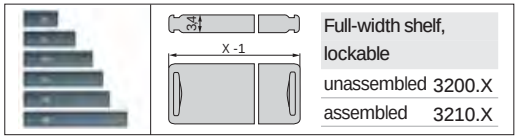
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	42.5
assembled	42.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®.



Full-width shelf, lockable	
unassembled	3200.X
assembled	3210.X

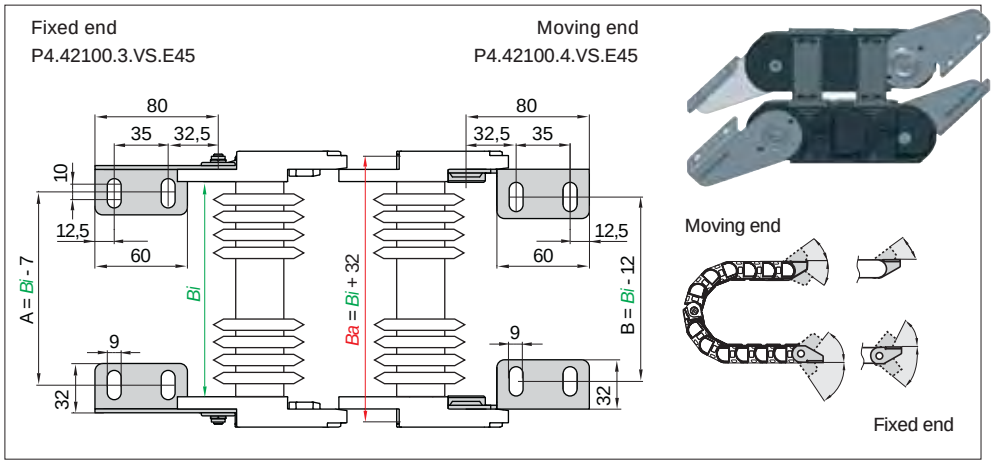
Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

Lockable full-width shelves



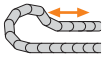
Width X [mm]	unassembled	assembled
050	3200.050	3210.050
075	3200.075	3210.075
100	3200.100	3210.100
115	3200.115	3210.115
125	3200.125	3210.125
150	3200.150	3210.150
175	3200.175	3210.175
200	3200.200	3210.200
225	3200.225	3210.225
250	3200.250	3210.250



Steel pivoting | Recommended for gliding applications on long travels

Part No.	Mounting bracket pivoting
P4.42100.34.VS.E45	assembled set of stainless steel mounting brackets
P4.42100.4.VS.E45	Mounting brackets Moving end
P4.42100.3.VS.E45	Mounting brackets Fixed end

Note: By ordering steel mounting brackets in combination with an e-chain®, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive (Material: stainless steel 1.4301)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

System P4 | Series P4.56 | Product range

profile-rol e-chain® with comb style autoglide crossbars, large inner height

56



P4.56 | openable along both radii, crossbars every link | comb style autoglide crossbars

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Gewicht [kg/m]
P4.56. 18 .R.0	180	250	| 150*| 200 | 250 | 300 | 350 | 400*| 450*| 500*	≈ 6,72
P4.56. 20 .R.0	200	270	| 150*| 200 | 250 | 300 | 350 | 400*| 450*| 500*	≈ 7,03
P4.56. 25 .R.0	250	320	| 150*| 200 | 250 | 300 | 350 | 400*| 450*| 500*	≈ 7,39
P4.56. 30 .R.0	300	370	| 150*| 200 | 250 | 300 | 350 | 400*| 450*| 500*	≈ 7,79
P4.56. 35 .R.0	350	420	| 150*| 200 | 250 | 300 | 350 | 400*| 450*| 500*	≈ 8,19
P4.56. 40 .R.0	400	470	| 150*| 200 | 250 | 300 | 350 | 400*| 450*| 500*	≈ 8,49

*Radius available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (R). Example: P4.56.20.250.0

Extension link for heavy fill weights

- 50% higher fill weight possible
- Maximum rigidity
- Divides cross section into compartments (electric/hydraulic)
- 2 inner heights (56, 80 mm)
- Available upon request.

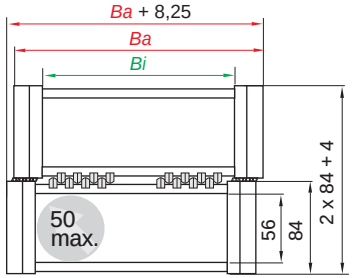
More information ▶www.igus.eu/eu/P4



System P4 principle

Offset operation of upper and lower run, rresulting in continuous roll-through surface

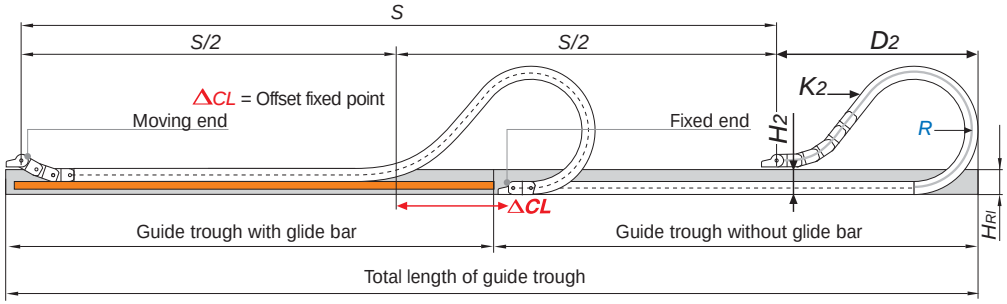






Inner height	56 mm
Pitch	91 mm/link
Links/m	11 (1001 mm)
Chain length	$S/2 + K_2$

Gliding applications | Long travels up to max. 800 m | Fill weight 13 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	150*	200	250	300	350	400*	450*	500*
H_2	**	180	180	180	180	180	**	**
D_2	**	1140	1470	1700	1950	2255	**	**
K_2	**	1820	2275	2639	3003	3458	**	**
ΔCL	**	550	800	1000	1200	1450	**	**

*Radius available upon request, please consult igus® for delivery time. **Values upon request

System P4 - guide trough system

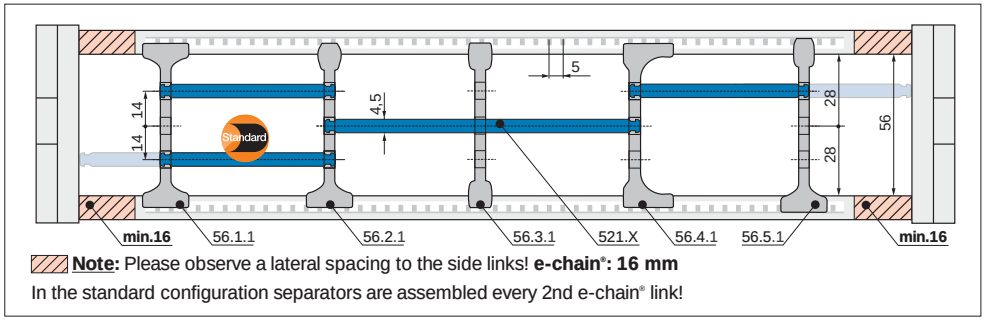
- Special geometry in combination with autoglide cross bars allows for offset upper and lower run
- Strong installation kits for long cycle life
- Stainless steel trough segments resist corrosion and seawater
- Available upon request.

More information ▶www.igus.eu/eu/P4



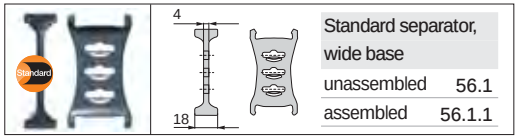
System P4 | Series P4.56 | Interior separation | Standard

New generation interior separation



Note: Please observe a lateral spacing to the side links! **e-chain®: 16 mm**

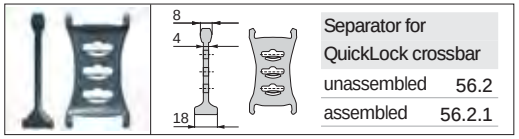
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	56.1
assembled	56.1.1

Standard - for all applications

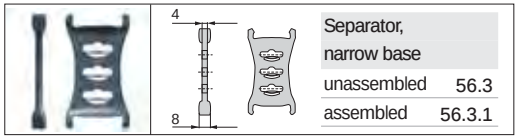
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	56.2
assembled	56.2.1

For even faster installation

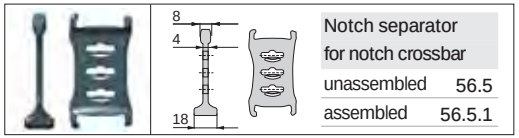
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	56.3
assembled	56.3.1

For many thin cables

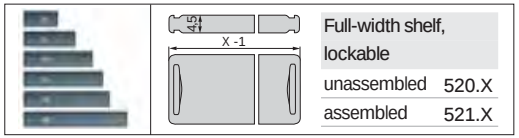
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	56.5
assembled	56.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

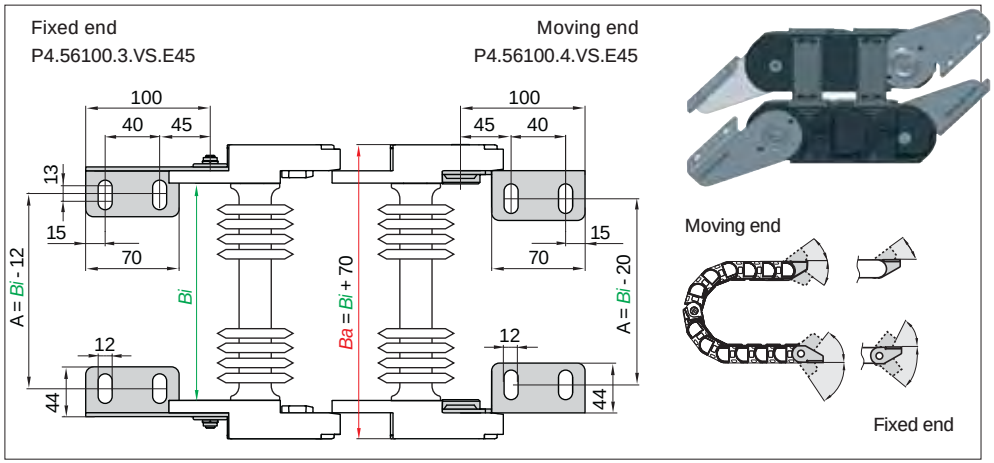
Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 3 different heights.

Lockable full-width shelves



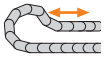
Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled	Width X [mm]	unassembled	assembled
050	520.050	521.050	125	520.125	521.125	225	520.225	521.225
065	520.065	521.065	150	520.150	521.150	250	520.250	521.250
075	520.075	521.075	175	520.175	521.175	300	520.300	521.300
100	520.100	521.100	200	520.200	521.200	450	520.450	521.450



Steel pivoting | Recommended for gliding applications on long travels

Part No.	Mounting bracket pivoting
P4.56100.34.VS.E45	assembled set of stainless steel mounting brackets
P4.56100.4.VS.E45	Mounting brackets Moving end
P4.56100.3.VS.E45	Mounting brackets Fixed end

Note: By ordering steel mounting brackets in combination with an e-chain®, they will be delivered assembled!



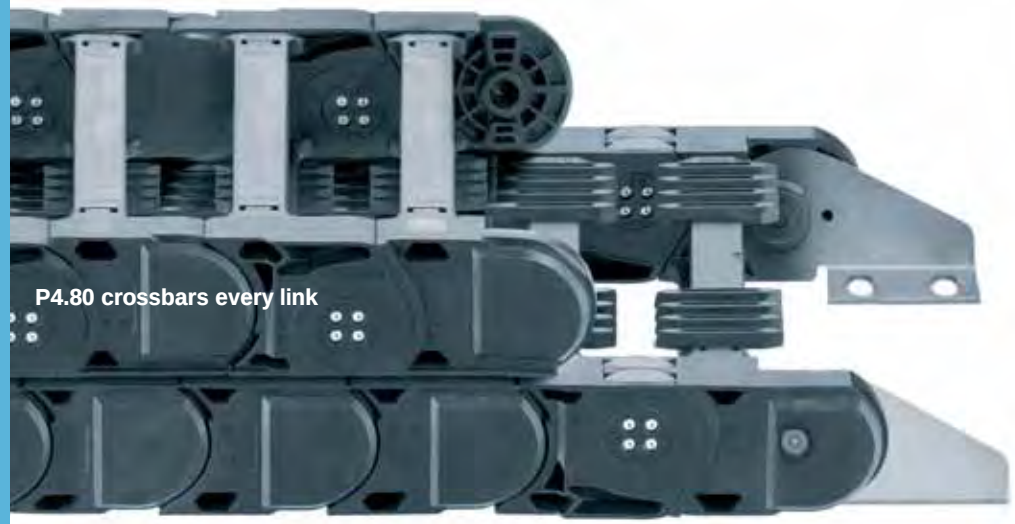
- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive (Material: stainless steel 1.4301)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

System P4 | Series P4.80 | Product range

80

profile-rol e-chain® with comb style autoglide crossbars, large inner height



P4.80 | openable along both radii, crossbars every link | comb style autoglide crossbars

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]
P4.80. 18 .R.0	180	256	| 150*| 200*| 250 | 300 | 350 | 400*| 450*| 500	≈ 8,85
P4.80. 20 .R.0	200	276	| 150*| 200*| 250 | 300 | 350 | 400*| 450*| 500	≈ 9,13
P4.80. 25 .R.0	250	326	| 150*| 200*| 250 | 300 | 350 | 400*| 450*| 500	≈ 9,46
P4.80. 30 .R.0	300	376	| 150*| 200*| 250 | 300 | 350 | 400*| 450*| 500	≈ 9,83
P4.80. 35 .R.0	350	426	| 150*| 200*| 250 | 300 | 350 | 400*| 450*| 500	≈ 10,19
P4.80. 40 .R.0	400	476	| 150*| 200*| 250 | 300 | 350 | 400*| 450*| 500	≈ 10,46

*Radius available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (R). Example: P4.80.20.250.0

Extension link for heavy fill weights

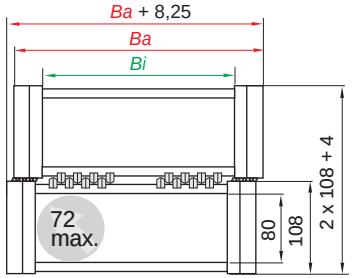
● 50% higher fill weight possible ● Maximum rigidity
● Divides cross section into compartments (electric/hydraulic)
● 2 inner heights (56, 80 mm) ● Available upon request.
More information ►www.igus.eu/eu/P4



System P4 principle

Offset operation of upper and lower run,
rresulting in continuous roll-through surface

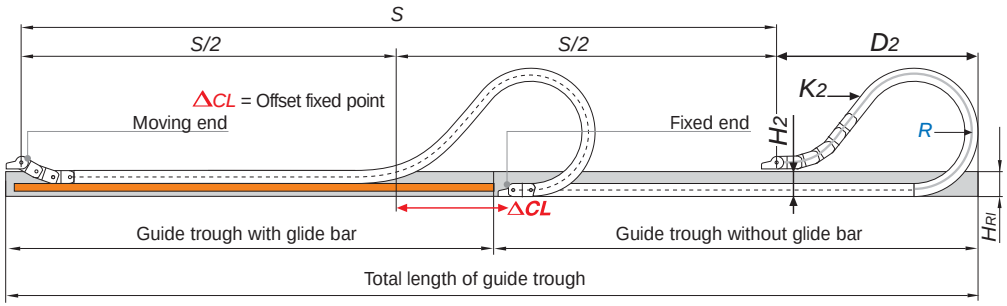






Inner height 80 mm
Pitch 100 mm/link
Links/m 10 (1000 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 800 m and more | Fill weight 30 kg/m



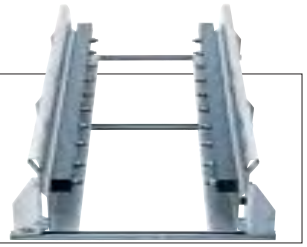
Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	150*	200*	250	300	350	400*	450*	500
H_2	180	180	180	180	180	180	180	180
D_2	955	1310	1610	1974	2060	2625	2910	3275
K_2	900	1400	1800	2300	2700	3200	3600	4100
ΔCL	**	**	600	800	970	1160	**	1530

*Radius available upon request, please consult igus® for delivery time. **Values upon request

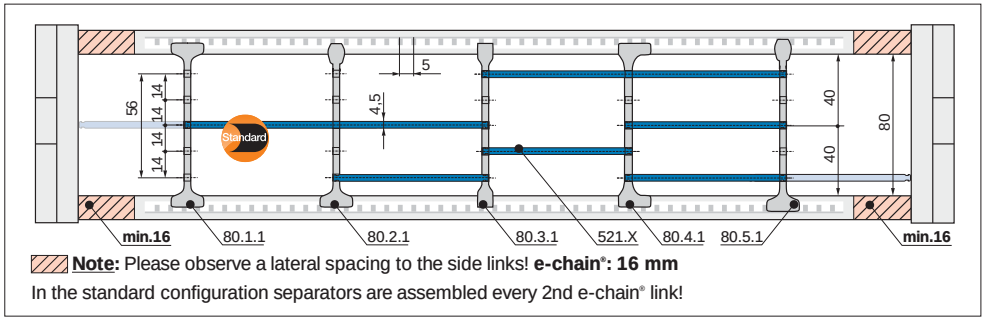
System P4 - guide trough system

● Special geometry in combination with autoglide cross bars allows for offset upper and lower run ● Strong installation kits for long cycle life ● Stainless steel trough segments resist corrosion and seawater ● Available upon request.
More information ►www.igus.eu/eu/P4



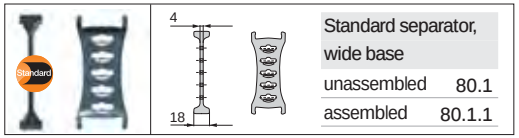
System P4 | Series P4.80 | Interior separation | Standard

New generation interior separation



Note: Please observe a lateral spacing to the side links! **e-chain®: 16 mm**

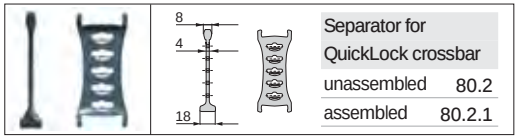
In the standard configuration separators are assembled every 2nd e-chain® link!



Standard separator, wide base	
unassembled	80.1
assembled	80.1.1

Standard - for all applications

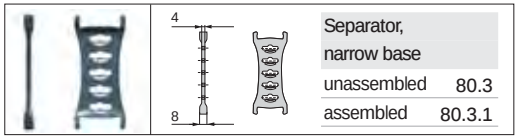
Separator with wide base for maximum locking strength and safe standing in e-chains®.



Separator for QuickLock crossbar	
unassembled	80.2
assembled	80.2.1

For even faster installation

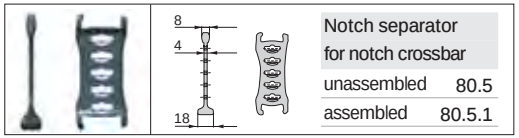
Firm hold to one side with a wide base, narrow on opposed side for easy cable assembly (slight grip).



Separator, narrow base	
unassembled	80.3
assembled	80.3.1

For many thin cables

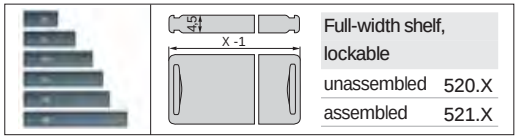
Separator with a narrow base for a large number of thin cables side by side. Saves space in e-chains®.



Notch separator for notch crossbar	
unassembled	80.5
assembled	80.5.1

Locks safely onto in 5 mm increments

Notch separator for the notch crossbar, with scaling on the notch crossbars. For exact positioning in e-chains®.



Full-width shelf, lockable	
unassembled	520.X
assembled	521.X

Horizontal separation

Shelf locks safely into separators on both ends, fixed width possible. Separators can be moved freely over the shelf in horizontal direction. Can be arranged at 5 different heights.

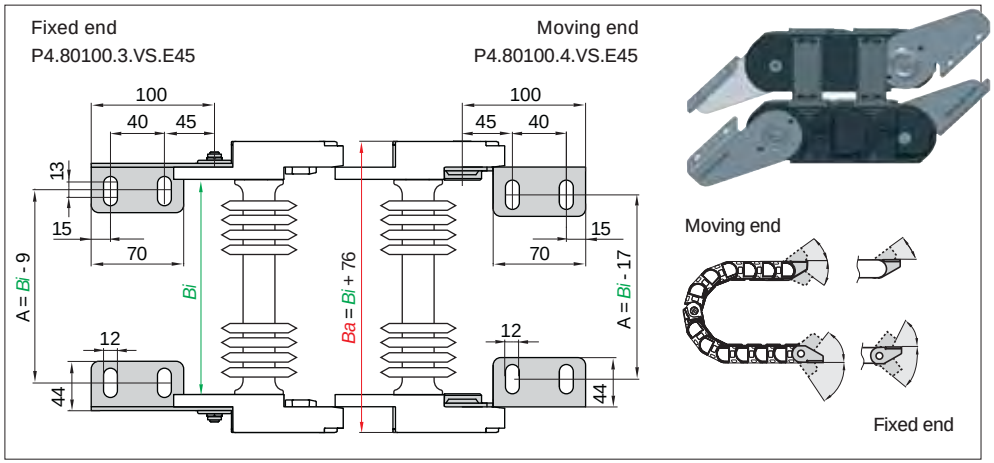
Lockable full-width shelves



Width X [mm]	unassembled	assembled
050	520.050	521.050
065	520.065	521.065
075	520.075	521.075
100	520.100	521.100

Width X [mm]	unassembled	assembled
125	520.125	521.125
150	520.150	521.150
175	520.175	521.175
200	520.200	521.200

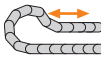
Width X [mm]	unassembled	assembled
225	520.225	521.225
250	520.250	521.250
300	520.300	521.300
450	520.450	521.450



Steel pivoting | Recommended for gliding applications on long travels

Part No.	Mounting bracket pivoting
P4.80100.34.VS.E45	assembled set of stainless steel mounting brackets
P4.80100.4.VS.E45	Mounting brackets Moving end
P4.80100.3.VS.E45	Mounting brackets Fixed end

Note: By ordering steel mounting brackets in combination with an e-chain®, they will be delivered assembled!



- For pivoting connections
- Secure connection
- One part (two-piece) for all e-chain® widths
- Electrically conductive (Material: stainless steel 1.4301)

Strain relief, e.g. clamps, tiewrap plates, nuggets and plug-in clips are available from stock. The complete chainfix range with order options ►from page 1148

High push/ pull forces: Large bolt connection

Quick to fill: Lid open on both sides, flip open in the outer radius

Long life: High-strength rollers, "quiet" design, stainless steel ball bearings

High stability: Torsional stiffness through undercut design

Universal: KMA all-sides attachment



Long travels up to 800 m, rolling instead of gliding - rol e-chain®

Conventionally designed e-chains® are operated in the glide mode on long travels. The reason for developing the igus® rol e-chain® was the necessity to extend the technical limits of this operating mode. The demands on e-chains® for long travels have increased steadily in recent years. Travels of 800 metres also pose new challenges in crane building such as high travel speeds and low noise with extreme cable loads.
Please contact us if you have decided for this product. We'll assist you in the project planning!

- Major reduction in drive power for moving the e-chain®
- Travels up to 800 m possible
- Speeds up to 6 m/s possible
- Various roller types for optimum application adaption
- Can be used even in dirty environments
- Available as ready-to-fit, made-to-specifications system with system guarantee

Typical industries and applications

● Crane systems ● Bulk handling / Materials handling ● Mining / Construction machinery ● Shifting systems

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Travels max. [m]	Page
 **rol e-chain® - crossbars every link** for the most demanding applications							
2828R	32	50 - 400	74 - 424	54	125 - 300**	250	1308
3838R	42	50 - 400	77 - 427	64	150 - 350**	330	1310
4040R	56	50 - 600	86 - 636	84	200 - 400	500	1312
5050R	80	50 - 600	100 - 650	108	250 - 500**	600	1316
 **rol e-chain® - e-tubes** fully enclosed, excellent cable protection							
7728R	32	50 - 300	74 - 324	54	150 - 300	250	1308
7838R	42	50 - 300	77 - 327	64	200 - 350	330	1310
8840R	56	75 - 462	111 - 499	84	300 - 400	500	1312
9850R	80	75 - 462	125 - 513	108	300 - 500	600	1316
 **rol e-chain® - crossbars every link, Heavy-Duty** For very long travels with high additional fill weights							
4040RHD	56	50 - 600	104 - 654	84	200 - 400	600	1314
5050RHD	80	50 - 600	110 - 660	108	250 - 500	800	1318
 **rol e-chain® - e-tubes, Heavy-Duty** fully enclosed, for very long travels with high additional fill weights							
8840RHD	56	57 - 125	129 - 516	84	300 - 400	600	1314
9850RHD	80	73 - 141	135 - 522	108	300 - 500	800	1318

**Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

Technical data

Gliding speed	max. 10 [m/s]
Acceleration	max. 50 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94-HB

Order example | Order key

Order example for complete e-chain® Series 4040R (1,0 m), color black, with mounting brackets and interior separation:

e-chain® (1,0 m)	Please indicate e-chain® length or number of links: 1,0 m or 11 links	4040R.30.300.0
+ Mounting brackets	1 set	40400.30.12
+ Interior separation	with 2 separators assembled every 2nd link	2 x 56.1.1

Order text: 1,0 m 4040R.30.300.0 + 40400.30.12 + 2 x 56.1.1

Order key
4040R.30.300.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

P4 - profile-rol e-chain®, 57% less energy consumption

● Safe, low-noise, abrasion-resistant energy supply system on long travels up to 800 m ● High additional fill weights up to 30 kg/m ● High speeds up to 10 m/s ● Identical pitch of the e-chain® link with or without roller ● Integrated captive roller in the side part ● autoglide crossbars provide for a safe guiding
More information ▶from page 1284 or www.igus.eu/eu/P4





Shipyard-Crane: 180 m travel, 30 kg/m fill weight: Since installation in 2001 no problem with the igus® rol e-chain®



igus® rol e-chain® saves drive power on long travels.
Safely guided in the igus® guide troughs



Series 4040R on a coal unloading system -
travel 190 m, speed 0.5 m/s, fill weight 8.05 kg/m

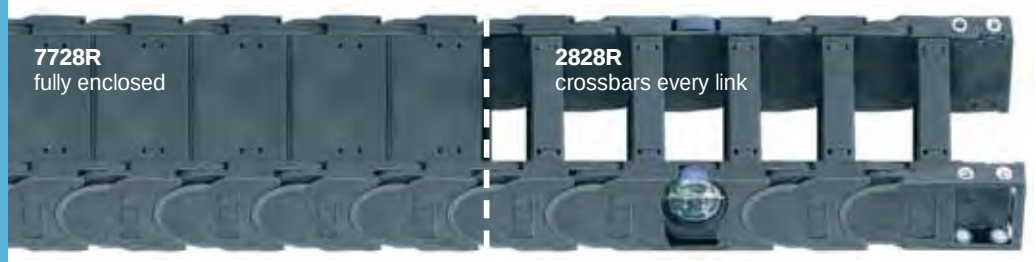
autoglide - Self-guiding e-chainsystems®

autoglide: self-guiding e-chains®, without the need of guide troughs ● 4 versions available ● Travels up to 80 m and travel speeds up to 2,5 m/s ● Cost-effective solution ● Very quick installation times for long travels ● Small installation width, silent operation
More information ▶from page 1320 or www.igus.eu/eu/autoglide



rol e-chain® | 2828R·7728R | Product range

Rolling instead of gliding, long travels up to 250 m



e-chains® | Series 2828R | crossbars every link, openable along both radii
e-tubes | Series 7728R | fully enclosed, hinged, snap-open removable lids

Part No. e-chains®	Part No. e-tubes	Bi [mm]	Ba [mm]	2828R [kg/m]	7728R [kg/m]
2828R.	7728R. 05. R.0 1)	50	74	≈ 1,73	≈ 2,63
2828R.	– 06. R.0	68	92	≈ 1,79	–
2828R.	7728R. 07. R.0	75	99	≈ 1,84	≈ 2,75
2828R.	– 087. R.0	87	111	≈ 1,93	–
2828R.	– 097. R.0	97	120	≈ 1,99	–
2828R.	7728R. 10. R.0	100	124	≈ 2,02	≈ 2,83
2828R.	7728R. 11. R.0	108	132	≈ 2,08	≈ 2,94
2828R.	– 112. R.0	112	137	≈ 2,15	–
2828R.	7728R. 12. R.0	125	149	≈ 2,20	≈ 3,03
2828R.	– 137. R.0	137	162	≈ 2,29	–
2828R.	7728R. 15. R.0	150	174	≈ 2,38	≈ 3,19
2828R.	– 162. R.0	162	187	≈ 2,44	–
2828R.	7728R. 17. R.0	168	192	≈ 2,51	≈ 3,39
2828R.	– 18. R.0	175	199	≈ 2,56	–
2828R.	– 187. R.0	187	212	≈ 2,65	–
2828R.	7728R. 20. R.0	200	224	≈ 2,74	≈ 3,59

Part No. e-chains®	Part No. e-tubes	Bi [mm]	Ba [mm]	2828R [kg/m]	7728R [kg/m]
2828R.	– 212. R.0	212	237	≈ 2,87	–
2828R.	– 23. R.0	225	249	≈ 2,92	–
2828R.	– 237. R.0	237	262	≈ 3,05	–
2828R.	7728R. 25. R.0	250	274	≈ 3,10	≈ 4,04
2828R.	– 262. R.0	262	286	≈ 3,19	–
2828R.	– 28. R.0	275	299	≈ 3,28	–
2828R.	– 29. R.0	287	312	≈ 3,37	–
2828R.	7728R. 30. R.0	300	324	≈ 3,46	≈ 4,43
2828R.	– 312. R.0	312	337	≈ 3,59	–
2828R.	– 325. R.0	325	349	≈ 3,68	–
2828R.	– 337. R.0	337	362	≈ 3,77	–
2828R.	– 350. R.0	350	374	≈ 3,86	–
2828R.	– 362. R.0	362	387	≈ 3,95	–
2828R.	– 375. R.0	375	399	≈ 4,04	–
2828R.	– 387. R.0	387	412	≈ 4,11	–
2828R.	– 400. R.0	400	424	≈ 4,18	–

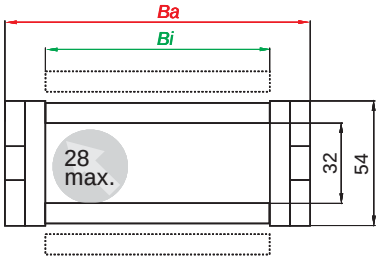
*Radius not available for e-tubes 1) Removable lid only, no hinged option

Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

Available bending radii R [mm] 125* | 150 | 175 | 200 | 220 | 250 | 300

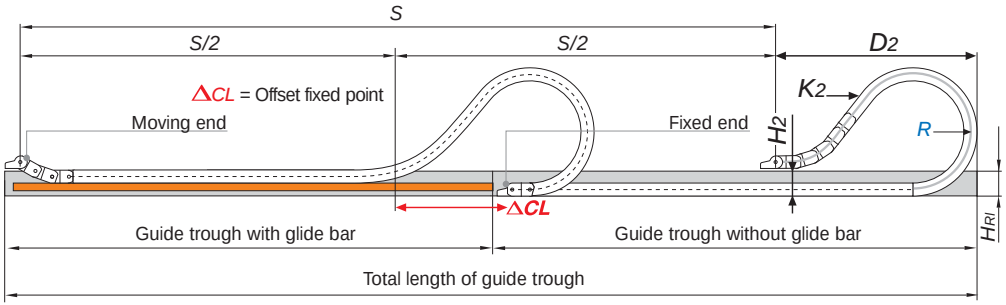
Supplement Part No. with required radius (R). Example: 2828R.30.300.0

rol e-chain® | 2828R·7728R | Accessories



Inner height 32 mm
Pitch 56 mm/link
Links/m 18 (1008 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 250 m | Fill weight 6,0 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	125*	150	175	200	220	250	300
H_2^{+10}	166	166	166	166	166	166	166
D_2^{+50}	575	700	845	960	1040	1270	1540
K_2	896	1064	1288	1456	1624	1904	2296
ΔCL	270	380	490	600	700	840	1055

*Radius not available for e-tubes Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

Accessories | More information ► www.igus.eu/eu/2828R ► www.igus.eu/eu/7728R



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment



Steel mounting brackets, pivoting, robust and electrically conductive



Extension links - for extremely wide e-chains® up to 3,0 m



Aluminum SuperTrough, Basic Version

rol e-chain® | 3838R·7838R | Product range

42 42

Rolling instead of gliding, long travels up to 330 m



e-chains® | Series 3838R | crossbars every link, openable along both radii
e-tubes | Series 7838R | fully enclosed, hinged, snap-open removable lids

Part No. e-chains®	Part No. e-tubes	Bi [mm]	Ba [mm]	3838R [kg/m]	7838R [kg/m]
3838R.	7838R. 05. R.0 1)	50	77	≈ 2,06	≈ 2,25
3838R.	– 06. R.0	68	95	≈ 2,09	–
3838R.	7838R. 07. R.0	75	102	≈ 2,12	≈ 2,38
3838R.	– 087. R.0	87	115	≈ 2,18	–
3838R.	– 097. R.0	97	123	≈ 2,23	–
3838R.	7838R. 10. R.0	100	127	≈ 2,25	≈ 2,60
3838R.	7838R. 11. R.0	108	135	≈ 2,30	≈ 2,65
3838R.	– 112. R.0	112	140	≈ 2,30	–
3838R.	7838R. 12. R.0	125	152	≈ 2,40	≈ 2,81
3838R.	– 137. R.0	137	165	≈ 2,44	–
3838R.	7838R. 15. R.0	150	177	≈ 2,53	≈ 3,07
3838R.	– 162. R.0	162	190	≈ 2,55	–
3838R.	7838R. 17. R.0	168	195	≈ 2,62	≈ 3,24
3838R.	– 18. R.0	175	202	≈ 2,62	–
3838R.	– 187. R.0	187	215	≈ 2,69	–
3838R.	7838R. 20. R.0	200	227	≈ 2,77	≈ 3,53

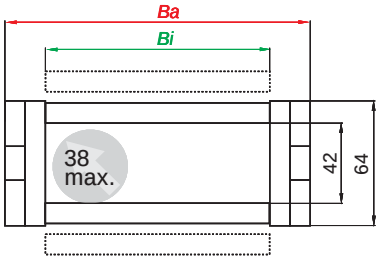
Part No. e-chains®	Part No. e-tubes	Bi [mm]	Ba [mm]	3838R [kg/m]	7838R [kg/m]
3838R.	– 212. R.0	212	240	≈ 2,84	–
3838R.	– 23. R.0	225	252	≈ 2,92	–
3838R.	– 237. R.0	237	265	≈ 2,96	–
3838R.	7838R. 25. R.0	250	277	≈ 3,05	≈ 4,33
3838R.	– 262. R.0	262	290	≈ 3,06	–
3838R.	– 28. R.0	275	302	≈ 3,17	–
3838R.	– 29. R.0	287	315	≈ 3,19	–
3838R.	7838R. 30. R.0	300	327	≈ 3,32	≈ 4,89
3838R.	– 312. R.0	312	340	≈ 3,34	–
3838R.	– 325. R.0	325	352	≈ 3,41	–
3838R.	– 337. R.0	337	365	≈ 3,46	–
3838R.	– 350. R.0	350	377	≈ 3,68	–
3838R.	– 362. R.0	362	390	≈ 3,74	–
3838R.	– 375. R.0	375	402	≈ 3,79	–
3838R.	– 387. R.0	387	415	≈ 3,85	–
3838R.	– 400. R.0	400	427	≈ 3,90	–

*Radius not available for e-tubes 1) Removable lid only, no hinged option

Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

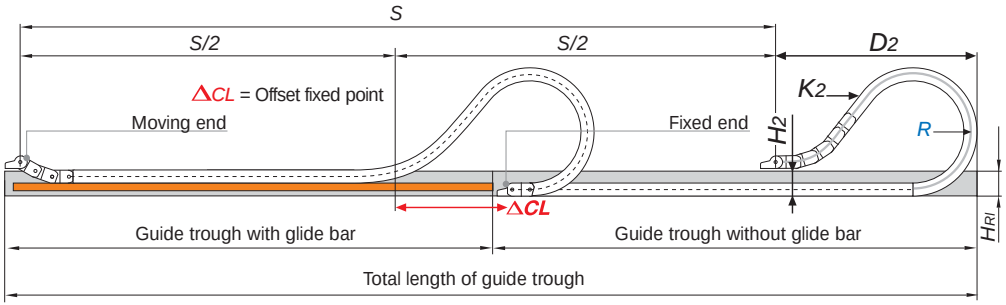
Available bending radii R [mm] 150* | 170* | 200 | 215 | 250 | 300 | 350

Supplement Part No. with required radius (R). Example: 3838R.30.300.0



Inner height 42 mm
Pitch 67 mm/link
Links/m 15 (1005 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 330 m | Fill weight 7,0 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	150*	170*	200	215	250	300	350
H_2^{+10}	186	186	186	186	186	186	186
D_2^{+50}	680	820	1010	1030	1245	1630	1830
K_2	107	1273	1541	1608	1876	2479	2747
ΔCL	345	455	610	670	825	1075	1285

*Radius not available for e-tubes Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

Accessories | More information ► www.igus.eu/eu/3838R ► www.igus.eu/eu/7838R



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment



Steel mounting brackets, pivoting, robust and electrically conductive



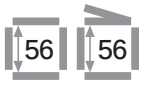
Extension links - for extremely wide e-chains® up to 3,0 m



Aluminum SuperTrough, Basic Version

rol e-chain® | 4040R·8840R | Product range

Rolling instead of gliding, long travels up to 500 m





e-chains® | Series 4040R | crossbars every link, openable along both radii
e-tubes | Series 8840R | fully enclosed, hinged, snap-open removable lids

Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	4040R [kg/m]	8840R [kg/m]
4040R.	–	05. R.0	50	86	≈ 3,65	–
4040R.	–	06. R.0	65	101	≈ 3,67	–
4040R.	8840R.	07. R.0[1)]	75	111	≈ 3,78	≈ 4,24
4040R.	–	08. R.0	87	123	≈ 3,83	–
4040R.	8840R.	10. R.0	100	136	≈ 3,96	≈ 4,52
4040R.	–	11. R.0	112	149	≈ 4,09	–
4040R.	8840R.	12. R.0	125	161	≈ 4,16	≈ 4,88
4040R.	–	13. R.0	137	174	≈ 4,29	–
4040R.	8840R.	15. R.0	150	186	≈ 4,36	≈ 5,31
4040R.	–	16. R.0	162	199	≈ 4,47	–
4040R.	8840R.	17 .R.0	175	211	≈ 4,58	≈ 5,56
4040R.	–	18. R.0	187	224	≈ 4,69	–
4040R.	8840R.	20. R.0	200	236	≈ 4,71	≈ 5,89
4040R.	–	21. R.0	212	249	≈ 4,82	–
4040R.	–	22. R.0	225	261	≈ 4,88	–
4040R.	–	23. R.0	237	274	≈ 5,02	–
4040R.	8840R.	25. R.0	250	286	≈ 5,10	≈ 6,61
4040R.	–	26. R.0	262	299	≈ 5,19	–
4040R.	8840R.	27. R.0	275	311	≈ 5,30	≈ 6,89
4040R.	–	28. R.0	287	324	≈ 5,32	–
4040R.	8840R.	30. R.0	300	336	≈ 5,54	≈ 7,27

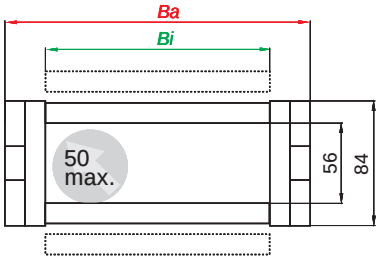
Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	4040R [kg/m]	8840R [kg/m]
4040R.	–	31. R.0	312	349	≈ 5,58	–
4040R.	–	32. R.0	325	361	≈ 5,63	–
4040R.	–	33. R.0	337	374	≈ 5,81	–
4040R.	8840R.	35. R.0	350	386	≈ 5,96	≈ 8,02
4040R.	–	36. R.0	362	399	≈ 5,96	–
4040R.	–	37. R.0	375	411	≈ 5,98	–
4040R.	–	38. R.0	387	424	≈ 6,07	–
4040R.	8840R.	40. R.0	400	436	≈ 6,27	≈ 8,98
4040R.	–	41. R.0	412	449	≈ 6,42	–
4040R.	–	42. R.0	425	461	≈ 6,58	–
4040R.	–	43. R.0	437	474	≈ 6,64	–
4040R.	–	45. R.0	450	486	≈ 6,71	–
4040R.	8840R.	46. R.0	462	499	≈ 6,73	≈ 9,44
4040R.	–	47. R.0	475	511	≈ 6,86	–
4040R.	–	48. R.0	487	524	≈ 6,88	–
4040R.	–	50. R.0	500	536	≈ 7,00	–
4040R.	–	51. R.0	512	549	≈ 7,02	–
4040R.	–	52. R.0	525	561	≈ 7,06	–
4040R.	–	53. R.0	537	574	≈ 7,22	–
4040R.	–	55. R.0	550	586	≈ 7,70	–
4040R.	–	60. R.0	600	636	≈ 7,90	–

*Radius not available for e-tubes [1)] Removable lid only, no hinged option

Available bending radii R [mm] 200* | 250* | 300 | 350 | 400

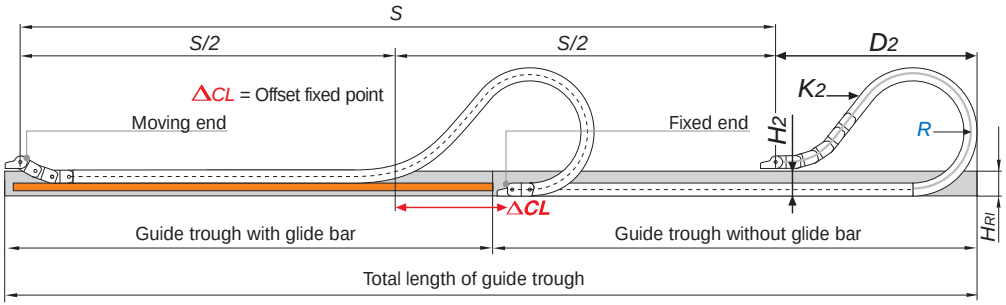
Supplement Part No. with required radius (R). Example: 4040R.30.300.0

rol e-chain® | 4040R·8840R | Dimensions



Inner height 56 mm
Pitch 91 mm/link
Links/m 11 (1001 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 500 m | Fill weight 13 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	200*	250*	300	350	400
H_2^{+10}	180	180	180	180	180
D_2^{+50}	1230	1370	1600	1850	2070
K_2	1820	2184	2548	2912	3276
ΔCL	525	710	900	1090	1275

*Radius not available for e-tubes

Accessories | More information ► www.igus.eu/eu/4040R ► www.igus.eu/eu/8840R



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment



Steel mounting brackets, pivoting, robust and electrically conductive



Extension links - for extremely wide e-chains® up to 3,0 m

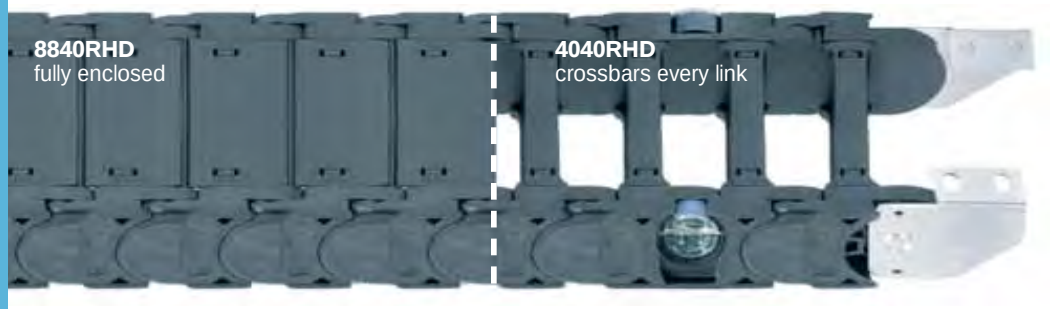


Aluminum SuperTrough, Basic Version

rol e-chain® | 4040RHD·8840RHD | Product range

56 56

Heavy-Duty - Rolling instead of gliding, long travels up to 600 m



e-chains® | 4040RHD | crossbars every link, openable along both radii
e-tubes | 8840RHD | fully enclosed, hinged, snap-open removable lids

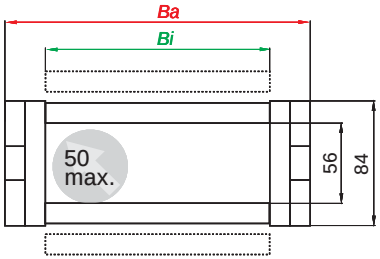
Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	4040RHD [kg/m]	8840RHD [kg/m]
4040RHD.	–	05.R.0	50	104	≈ 5,03	–
4040RHD.	–	06.R.0	65	119	≈ 5,12	–
4040RHD.	8840RHD.	07.R.0[1)]	75	129	≈ 5,19	≈ 5,64
4040RHD.	–	08.R.0	87	141	≈ 5,27	–
4040RHD.	8840RHD.	10.R.0	100	154	≈ 5,36	≈ 5,93
4040RHD.	–	11.R.0	112	166	≈ 5,48	–
4040RHD.	8840RHD.	12.R.0	125	179	≈ 5,56	≈ 6,29
4040RHD.	–	13.R.0	137	191	≈ 5,69	–
4040RHD.	8840RHD.	15.R.0	150	204	≈ 5,73	≈ 6,67
4040RHD.	–	16.R.0	162	216	≈ 5,84	–
4040RHD.	8840RHD.	17.R.0	175	229	≈ 5,97	≈ 6,98
4040RHD.	–	18.R.0	187	241	≈ 6,09	–
4040RHD.	8840RHD.	20.R.0	200	254	≈ 6,14	≈ 7,29
4040RHD.	–	21.R.0	212	266	≈ 6,21	–
4040RHD.	–	22.R.0	225	279	≈ 6,28	–
4040RHD.	–	23.R.0	237	291	≈ 6,39	–
4040RHD.	8840RHD.	25.R.0	250	304	≈ 6,50	≈ 8,02
4040RHD.	–	26.R.0	262	316	≈ 6,59	–
4040RHD.	8840RHD.	27.R.0	275	329	≈ 6,70	≈ 8,38
4040RHD.	–	28.R.0	287	341	≈ 6,75	–
4040RHD.	8840RHD.	30.R.0	300	354	≈ 6,91	≈ 8,68

Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	4040RHD [kg/m]	8840RHD [kg/m]
4040RHD.	–	31.R.0	312	366	≈ 6,94	–
4040RHD.	–	32.R.0	325	379	≈ 7,05	–
4040RHD.	–	33.R.0	337	391	≈ 7,17	–
4040RHD.	8840RHD.	35.R.0	350	404	≈ 7,37	≈ 9,38
4040RHD.	–	36.R.0	362	416	≈ 7,28	–
4040RHD.	–	37.R.0	375	429	≈ 7,38	–
4040RHD.	–	38.R.0	387	441	≈ 7,49	–
4040RHD.	8840RHD.	40.R.0	400	454	≈ 7,76	≈ 10,38
4040RHD.	–	41.R.0	412	466	≈ 7,68	–
4040RHD.	–	42.R.0	425	479	≈ 7,98	–
4040RHD.	–	43.R.0	437	491	≈ 7,82	–
4040RHD.	–	45.R.0	450	504	≈ 8,15	–
4040RHD.	8840RHD.	46.R.0	462	516	≈ 8,10	≈ 10,85
4040RHD.	–	47.R.0	475	529	≈ 8,14	–
4040RHD.	–	48.R.0	487	541	≈ 8,39	–
4040RHD.	–	50.R.0	500	554	≈ 8,48	–
4040RHD.	–	51.R.0	512	566	≈ 8,40	–
4040RHD.	–	52.R.0	525	579	≈ 8,57	–
4040RHD.	–	53.R.0	537	591	≈ 8,66	–
4040RHD.	–	55.R.0	550	604	≈ 9,08	–
4040RHD.	–	60.R.0	600	654	≈ 9,31	–

*Radius not available for e-tubes [1)] Removable lid only, no hinged option

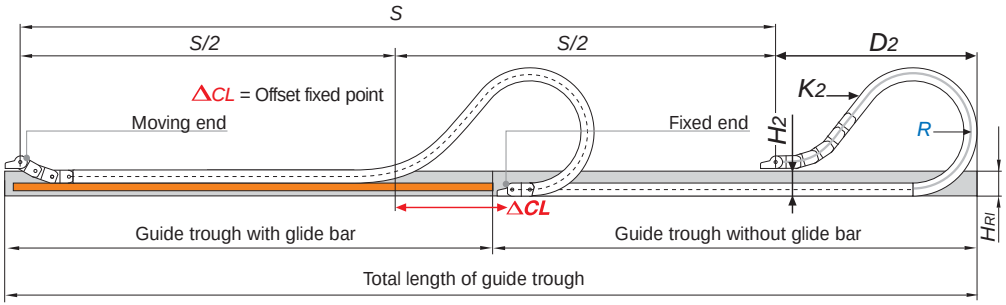
Available bending radii R [mm] 200* | 250* | 300 | 350 | 400

Supplement Part No. with required radius (R). Example: 4040RHD.30.300.0



Inner height 56 mm
Pitch 91 mm/link
Links/m 11 (1001 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 600 m | Fill weight 16 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	200*	250*	300	350	400
H_2^{+10}	180	180	180	180	180
D_2^{+50}	1145	1390	1620	1870	2095
K_2	1820	2184	2548	2912	3276
ΔCL	525	710	900	1090	1275

*Radius not available for e-tubes

Accessories | More information ► www.igus.eu/eu/4040RHD ► www.igus.eu/eu/8840RHD



Optimized, cable-saving interior separation program



Steel mounting brackets, pivoting, robust and electrically conductive



Aluminum SuperTrough, Basic Version

rol e-chain® | 5050R·9850R | Product range

Rolling instead of gliding, long travels up to 600 m





e-chains® | Series 5050R | crossbars every link, openable along both radii
e-tubes | Series 9850R | fully enclosed, hinged, snap-open removable lids

Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	5050R [kg/m]	9850R [kg/m]
5050R.	–	05. R.0	50	100	≈ 5,62	–
5050R.	–	06. R.0	65	115	≈ 5,68	–
5050R.	9850R.	07. R.0[1)]	75	125	≈ 5,70	≈ 6,24
5050R.	–	08. R.0	87	137	≈ 5,76	–
5050R.	9850R.	10. R.0	100	150	≈ 5,79	≈ 6,52
5050R.	–	11. R.0	112	163	≈ 5,85	–
5050R.	9850R.	12. R.0	125	175	≈ 5,89	≈ 6,89
5050R.	–	13. R.0	137	188	≈ 5,95	–
5050R.	9850R.	15. R.0	150	200	≈ 5,98	≈ 7,32
5050R.	–	16. R.0	162	213	≈ 6,04	–
5050R.	9850R.	17 .R.0	175	225	≈ 6,09	≈ 7,58
5050R.	–	18. R.0	187	238	≈ 6,15	–
5050R.	9850R.	20. R.0	200	250	≈ 6,16	≈ 7,89
5050R.	–	21. R.0	212	263	≈ 6,22	–
5050R.	–	22. R.0	225	275	≈ 6,25	–
5050R.	–	23. R.0	237	288	≈ 6,31	–
5050R.	9850R.	25. R.0	250	300	≈ 6,36	≈ 8,61
5050R.	–	26. R.0	262	313	≈ 6,40	–
5050R.	9850R.	27. R.0	275	325	≈ 6,46	≈ 8,82
5050R.	–	28. R.0	287	338	≈ 6,47	–
5050R.	9850R.	30. R.0	300	350	≈ 6,58	≈ 9,27

Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	5050R [kg/m]	9850R [kg/m]
5050R.	–	31. R.0	312	363	≈ 6,60	–
5050R.	–	32. R.0	325	375	≈ 6,62	–
5050R.	–	33. R.0	337	388	≈ 6,71	–
5050R.	9850R.	35. R.0	350	400	≈ 6,79	≈ 10,02
5050R.	–	36. R.0	362	413	≈ 6,80	–
5050R.	–	37. R.0	375	425	≈ 6,80	–
5050R.	–	38. R.0	387	438	≈ 6,84	–
5050R.	9850R.	40. R.0	400	450	≈ 6,94	≈ 10,98
5050R.	–	41. R.0	412	463	≈ 7,02	–
5050R.	–	42. R.0	425	475	≈ 7,10	–
5050R.	–	43. R.0	437	488	≈ 7,13	–
5050R.	–	45. R.0	450	500	≈ 7,16	–
5050R.	9850R.	46. R.0	462	513	≈ 7,17	≈ 11,44
5050R.	–	47. R.0	475	525	≈ 7,24	–
5050R.	–	48. R.0	487	538	≈ 7,26	–
5050R.	–	50. R.0	500	550	≈ 7,30	–
5050R.	–	51. R.0	512	563	≈ 7,32	–
5050R.	–	52. R.0	525	575	≈ 7,34	–
5050R.	–	53. R.0	537	588	≈ 7,41	–
5050R.	–	55. R.0	550	600	≈ 7,66	–
5050R.	–	60. R.0	600	650	≈ 7,76	–

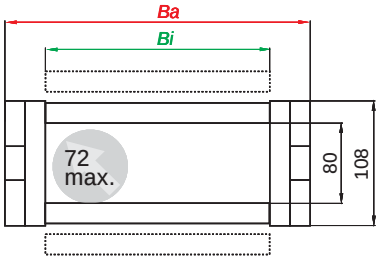
*Radius not available for e-tubes [1)] Removable lid only, no hinged option

Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

Available bending radii R [mm] 250* | 300 | 350 | 400 | 500

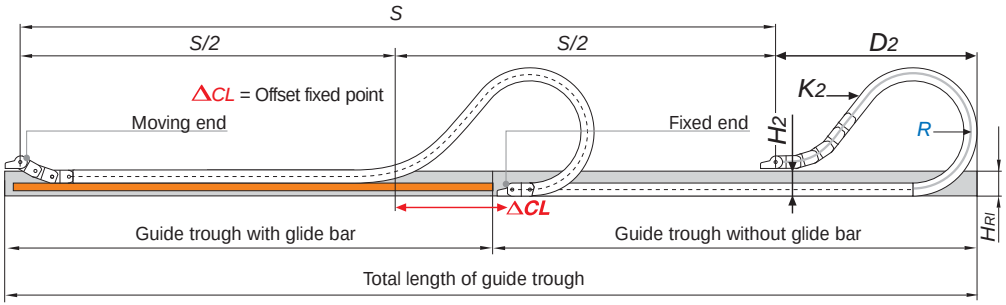
Supplement Part No. with required radius (R). Example: 5050R.30.300.0

rol e-chain® | 5050R·9850R | Dimensions



Inner height 80 mm
Pitch 91 mm/link
Links/m 11 (1001 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 600 m | Fill weight 25 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	250*	300	350	400	500
H_2^{+10}	242	242	242	242	242
D_2^{+50}	1250	1550	1720	1990	2460
K_2	2002	2457	2730	3185	3913
ΔCL	600	800	970	1160	1530

*Radius not available for e-tubes Smaller bending radii (only for e-chains®) available upon request, please consult igus® for delivery time.

Accessories | More information ► www.igus.eu/eu/5050R ► www.igus.eu/eu/9850R



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment



Steel mounting brackets, pivoting, robust and electrically conductive



Extension links - for extremely wide e-chains® up to 3,0 m



Aluminum SuperTrough, Basic Version

rol e-chain® | 5050RHD·9850RHD | Product range

Heavy-Duty - Rolling instead of gliding, long travels up to 800 m



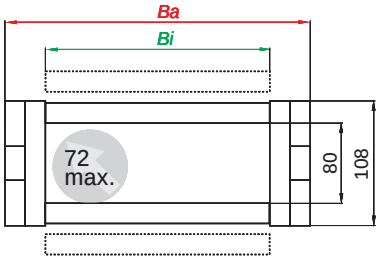
e-chains® | 5050RHD | crossbars every link, openable along both radii
e-tubes | 9850RHD | fully enclosed, hinged, snap-open removable lids

Part No. e-chains®	Part No. e-tubes		Bi [mm]	Ba [mm]	5050RHD [kg/m]	9850RHD [kg/m]
5050RHD.	–	05. R.0	50	110	≈ 6,65	–
5050RHD.	–	06. R.0	65	125	≈ 6,74	–
5050RHD.	9850RHD.	07 R.0[1)]	75	135	≈ 6,81	≈ 7,25
5050RHD.	–	08. R.0	87	147	≈ 6,89	–
5050RHD.	9850RHD.	10. R.0	100	160	≈ 6,99	≈ 7,55
5050RHD.	–	11. R.0	112	172	≈ 7,10	–
5050RHD.	9850RHD.	12. R.0	125	185	≈ 7,18	≈ 7,91
5050RHD.	–	13. R.0	137	197	≈ 7,32	–
5050RHD.	9850RHD.	15. R.0	150	210	≈ 7,35	≈ 8,29
5050RHD.	–	16. R.0	162	222	≈ 7,47	–
5050RHD.	9850RHD.	17. R.0	175	235	≈ 7,60	≈ 8,60
5050RHD.	–	18. R.0	187	247	≈ 7,71	–
5050RHD.	9850RHD.	20. R.0	200	260	≈ 7,77	≈ 8,91
5050RHD.	–	21. R.0	212	272	≈ 7,84	–
5050RHD.	–	22. R.0	225	285	≈ 7,91	–
5050RHD.	–	23. R.0	237	297	≈ 8,02	–
5050RHD.	9850RHD.	25. R.0	250	310	≈ 8,13	≈ 9,64
5050RHD.	–	26. R.0	262	322	≈ 8,22	–
5050RHD.	9850RHD.	27 R.0	275	335	≈ 8,32	≈ 10,00
5050RHD.	–	28. R.0	287	347	≈ 8,38	–
5050RHD.	9850RHD.	30. R.0	300	360	≈ 8,53	≈ 10,30
5050RHD.	–	31. R.0	312	372	≈ 8,57	–
5050RHD.	–	32. R.0	325	385	≈ 8,67	–
5050RHD.	–	33. R.0	337	397	≈ 8,79	–
5050RHD.	9850RHD.	35. R.0	350	410	≈ 8,99	≈ 11,00
5050RHD.	–	36. R.0	362	422	≈ 8,90	–
5050RHD.	–	37. R.0	375	435	≈ 9,00	–
5050RHD.	–	38. R.0	387	447	≈ 9,11	–
5050RHD.	9850RHD.	40. R.0	400	460	≈ 9,38	≈ 12,00
5050RHD.	–	41. R.0	412	472	≈ 9,31	–
5050RHD.	–	42. R.0	425	485	≈ 9,60	–
5050RHD.	–	43. R.0	437	497	≈ 9,44	–
5050RHD.	–	45. R.0	450	510	≈ 9,55	–
5050RHD.	9850RHD.	46. R.0	462	522	≈ 9,72	≈ 12,47
5050RHD.	–	47. R.0	475	535	≈ 9,76	–
5050RHD.	–	48. R.0	487	547	≈ 10,01	–
5050RHD.	–	50. R.0	500	560	≈ 10,11	–
5050RHD.	–	51. R.0	512	572	≈ 10,02	–
5050RHD.	–	52. R.0	525	585	≈ 10,19	–
5050RHD.	–	53. R.0	537	597	≈ 10,29	–
5050RHD.	–	55. R.0	550	610	≈ 10,71	–
5050RHD.	–	60. R.0	600	660	≈ 10,94	–

*Radius not available for e-tubes [1)] Removable lid only, no hinged option

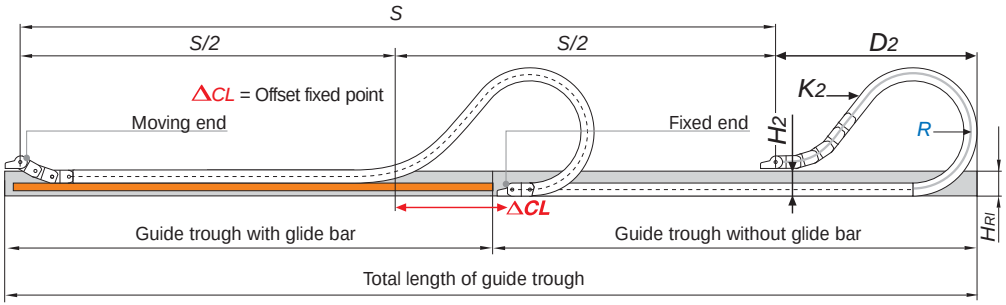
Available bending radii R [mm] 250* | 300 | 350 | 400 | 500

Supplement Part No. with required radius (R). Example: 5050RHD.30.300.0



Inner height 80 mm
Pitch 91 mm/link
Links/m 11 (1001 mm)
Chain length $S/2 + K_2$

Gliding applications | Long travels up to max. 800 m | Fill weight 30 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	250*	300	350	400	500
H_2^{+10}	242	242	242	242	242
D_2^{+50}	1280	1570	1750	2010	2480
K_2	2002	2457	2730	3185	3913
ΔCL	600	800	970	1160	1530

*Radius not available for e-tubes

Accessories | More information ► www.igus.eu/eu/5050RHD ► www.igus.eu/eu/9850RHD



Optimized, cable-saving interior separation program



Steel mounting brackets, pivoting, robust and electrically conductive



Extension links - for extremely wide e-chains® up to 3,0 m



Aluminum SuperTrough, Basic Version

There are 4 options for the igus® autoglide system:



Version 01 - For igus® E4.1 e-chains®
Special crossbars in the inner radius of the e-chain® fitted with molded-on autoglide grooves



New in this catalog

Version 02 - For igus® E2/000 e-chains®
Special crossbars with molded-on autoglide grooves. To be opened along the inner radius.



Version 03 - For igus® easy chain® e-chains®
Combination of the easily fillable easy chain® and injection-molded autoglide grooves in the inner radius



Version 04 - For Series E2/000 e-chains®
Special plastic autoglide grooves side-mounted on the e-chain® hold the e-chain® "in the track"

Save on long travels, self-guiding e-chains® - autoglide

Long travels are always demanding for an e-chainsystem®. For much of the travel, the e-chain® must run on the lower run or on the glide bars. In addition the e-chainsystem® needs guides, in order to prevent a sideward movement. In most cases this is ensured through a guide trough. However, there are also applications where a guide trough is not desired for space reasons, whether this is due to optical considerations or spatial conditions. In order to cater for this possibility, igus® developed the autoglide system in 1995. autoglide is a self-aligning e-chain®, which can dispense with guide troughs for up to 80 m travel.

- Travels up to 80 m and travel speeds up to 2,5 m/s
- Cost-effective solution, guide troughs not required!
- Very quick installation times for long travels!
- Small installation width, silent operation

Typical industries and applications

● Industrial vehicles ● Long travels with easier filling ● Simple outdoor applications

Series	Inner height *hi* [mm]	Inner width *Bi* [mm]	Outer width *Ba* [mm]	Outer height *ha* [mm]	Bending radius *R* [mm]	Travels max. [m]	Page
 **Version 01** autoglide - Self-guiding e-chains® for system E4.1 Crossbars in the inner radius of the e-chain® fitted with molded-on autoglide grooves							
E4.32AG	32	112 - 262	136 - 286	54	100 - 300	60	1324
E4.42AG	42	112 - 262	139 - 289	64	125 - 350	70	1326
E4.56AG	56	150 - 250	184 - 284	84	150 - 500	80	1328
 **Version 02** autoglide - Self-guiding e-chains® for system E2/000 Crossbars in the inner radius of the e-chain® fitted with molded-on autoglide grooves							
2400AG New*	25	57 - 77	73 - 93	35	075 - 250	40	1332
2600AG New*	35	50 - 75	66 - 91	50	075 - 250	60	1334
3400AG New*	45	75 - 100	95 - 120	64	100 - 300	70	1336
 **Version 03** autoglide - Easy filling - simply press cables in easy chain®-Design in the outer radius, fitted with molded-on autoglide grooves in the inner radius							
EA16	32	48	60	39	065 - 100	20	1340
EA25	25	50	60	25,2	075 - 100	20	1341
 **Version 04** autoglide - Special glide elements provide a secure guidance on E2/000: e-chains®, half and full e-tubes							
2400/2500.AG	25	57 - 125	73 - 141	35	055 - 250	20	1344
2600/2700.AG	35	50 - 250	66 - 194	50	075 - 250	30	1346

*New in this catalog

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

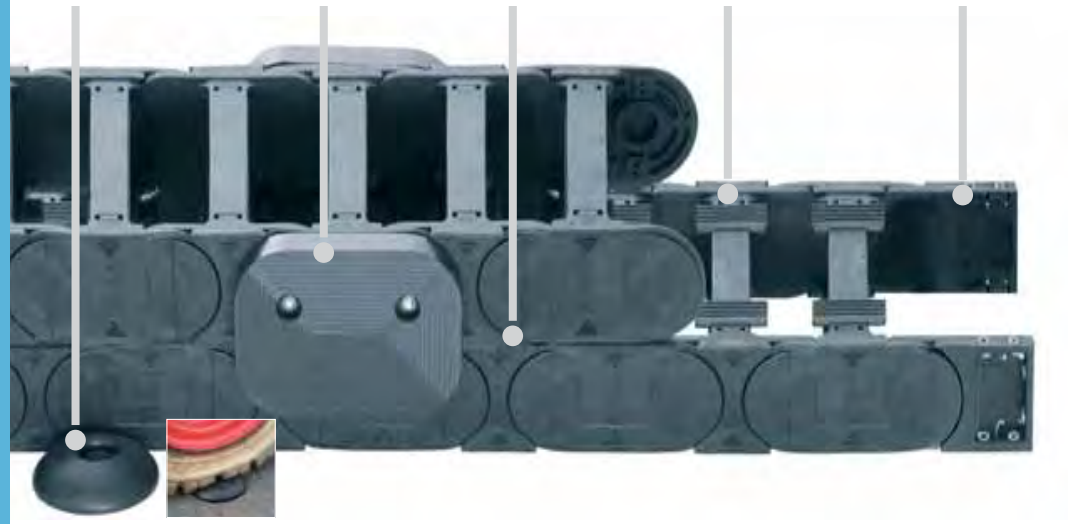
Practical: Traversable floor guides

Safe on track: Assembled glide wing feeds the e-chain®

Smoth running: Offset operation of upper and lower run

Secure guidance: comb style auto-glide crossbars

Universal: KMA all-sides attachment



Self-guiding e-chains® for System E4.1 - autoglide Version 01

For the larger e-chains® of the E4.1 system - crossbars in the inner radius of the e-chain® are provided with injection-moulded glide shoes. **Glide wings and floor guides** - Simple guide elements for quick installation on the subsurface are available for the autoglide system version 1. The traversable excentric floor guides are fastened every 2 m on the subsurface. The glide wing fastened on the moving end feeds the e-chain® and holds this securely in the track. The autoglide crossbars safely guide the e-chain® and replace the guide trough.

- Save purchase and installation costs with this system
- Traversable over floor guide for travel distances over 10 m.

Note: Only two glide wings AG.XXX.OF are required for the safe feeding of the e-chain®. The mounting of the glide wing is done on the outer link of the upper run, which is laid down first on the lower run.

Typical industries and applications

● Industrial vehicles ● Long travels with easier filling ● Simple outdoor applications

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

Find a video online
►www.igus.eu/eu/autoglide

Technical data

Gliding speed	max. 2,5 [m/s]
Acceleration	max. 2,5 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

Order example | Order key

Order example for complete e-chain® Series E4.32AG (15 m), color black, with mounting brackets and interior separation:

e-chain® (15 m)	Please indicate e-chain® length or number of links: 15 m or 287 links	E4.32.15.150.0.AG.NC
e-chain® + glide wing	Module, containing 3 e-chain® links and 2 glide wings	E4.32.15.150.0.AG.**OF**.NC
+ Floor guides	8 pieces (2 pieces every 2 m from the half of travel)	AG.380.BF

Order text: 15 m E4.32.15.150.0.AG.NC **+** E4.32.15.150.0.AG.**OF**.NC + AG.380.BF + Mounting bracket + Interior separation (optional)

Note: We require one glide wing per e-chain® to the left and right at the position where the upper run first meets the lower run.



autoglide with assembled glide wing. Module, containing 3 e-chain® links and 2 glide wings Part No. E4.32.15.150.0.AG.OF.NC



autoglide self-guiding e-chains® Part No. E4.32.15.150.0.AG.NC



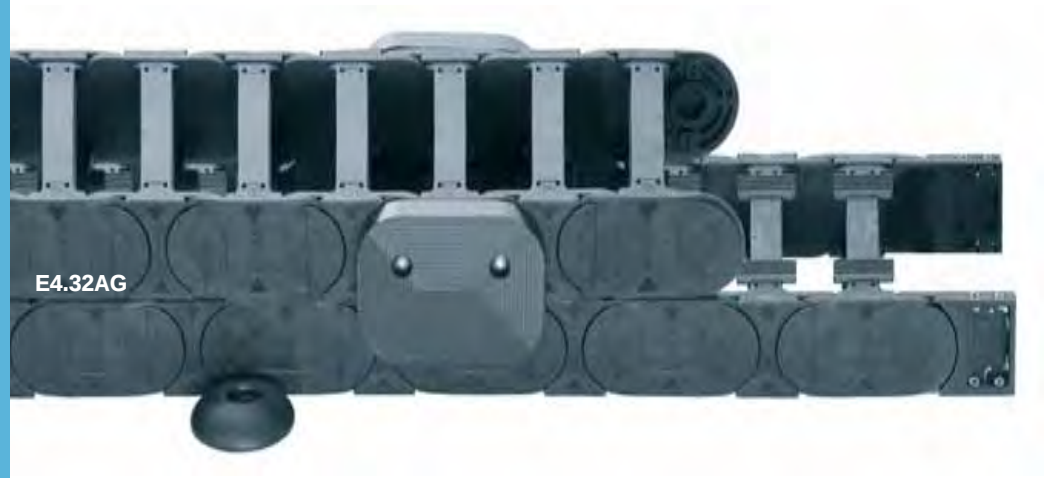
Glide wing Part No. AG.280.OF and floor guide Part No. AG.380.BF as single parts

Order key
E4.32.15.150.0.AG.**OF**.NC

- Assembly as NC Version
- With assembled glide wing autoglide
- Standard color black
- Bending radius *R*
- Width index
- Series / Type

autoglide Version 01 | Series E4.32AG | Product range

Crossbars in the inner radius with molded-on autoglide grooves



Series E4.32AG | openable along both radii, crossbars every link | autoglide crossbars along the inner radius

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]	Glide wing single part	Floor guide single part
E4.32.112.R.0.AG.NC	112	136	| 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300	2,106	AG.280.OF	AG.380.BF
E4.32.12 .R.0.AG.NC	125	148	| 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300	2,176	AG.280.OF	AG.380.BF
E4.32.15 .R.0.AG.NC	150	173	| 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300	2,343	AG.280.OF	AG.380.BF
E4.32.17 .R.0.AG.NC	168	191	| 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300	2,444	AG.280.OF	AG.380.BF
E4.32.20 .R.0.AG.NC	200	223	| 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300	2,657	AG.280.OF	AG.380.BF
E4.32.262.R.0.AG.NC	262	286	| 100 | 125 | 150 | 175 | 200 | 220 | 250 | 300	3,050	AG.280.OF	AG.380.BF

More widths upon request, please consult igus® for delivery time.

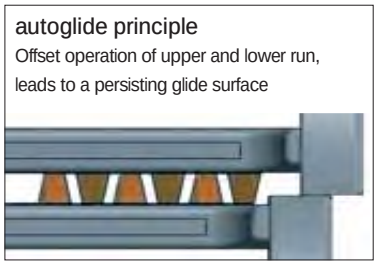
Supplement Part No. with required radius (R). Example: E4.32.15.150.0.AG.NC

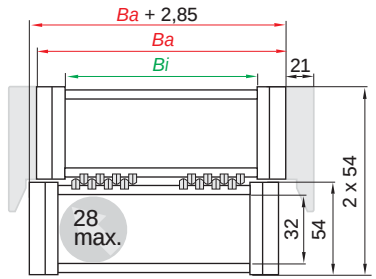
For autoglide e-chains® with assembled glide wings please add index **.OF** e.g. E4.32.15.150.0.AG.**OF**.NC

autoglide Version 01 | Series E4.32AG | Dimensions

autoglide principle

Offset operation of upper and lower run, leads to a persisting glide surface

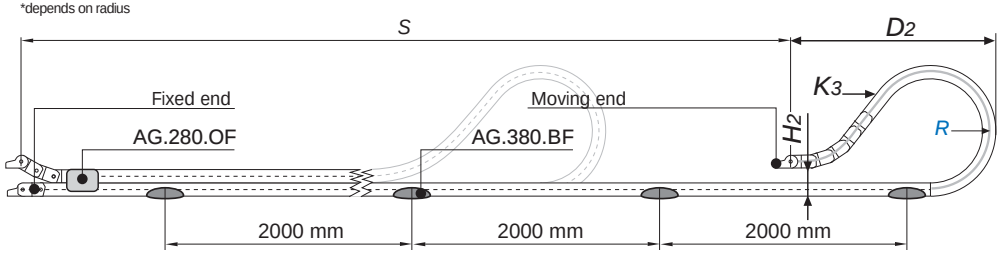




Inner height 32 mm
Pitch 56 mm/link
Links/m 18 (1008 mm)
Chain length $S + K_3$

Gliding applications | Long travels up to max. 60 m | Fill weight* 5,0 - 7,0 kg/m

*depends on radius



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	100	125	150	175	200	220	250	300
H_2	166	166	166	166	166	166	166	166
D_2	370	470	500	655	770	900	930	1100
K_3	840	1064	1232	1568	1848	2072	2240	2688

Accessories | More information ►www.igus.eu/eu/E4.32AG



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment

autoglide Version 01 | Series E4.42AG | Product range

42

Crossbars in the inner radius with molded-on autoglide grooves



Series E4.42AG | openable along both radii, crossbars every link | autoglide crossbars along the inner radius

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]	Glide wing single part	Floor guide single part
E4.42.112.R.0.AG.NC	112	139	| 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350	2,372	AG.380.OF	AG.380.BF
E4.42.12 .R.0.AG.NC	125	151	| 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350	2,430	AG.380.OF	AG.380.BF
E4.42.15 .R.0.AG.NC	150	176	| 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350	2,569	AG.380.OF	AG.380.BF
E4.42.17 .R.0.AG.NC	168	194	| 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350	2,654	AG.380.OF	AG.380.BF
E4.42.20 .R.0.AG.NC	200	226	| 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350	2,831	AG.380.OF	AG.380.BF
E4.42.262.R.0.AG.NC	262	289	| 125 | 150 | 160 | 175 | 200 | 250 | 300 | 350	3,159	AG.380.OF	AG.380.BF

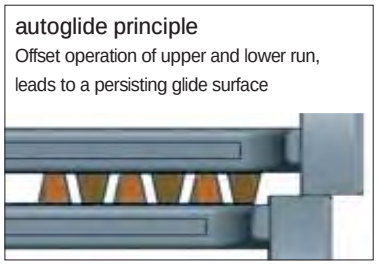
More widths upon request, please consult igus® for delivery time.

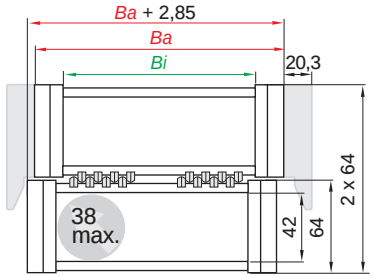
Supplement Part No. with required radius (R). Example: E4.42.15.150.0.AG.NC

For autoglide e-chains® with assembled glide wings please add index **.OF** e.g. E4.42.15.150.0.AG.**OF**.NC

autoglide principle

Offset operation of upper and lower run, leads to a persisting glide surface

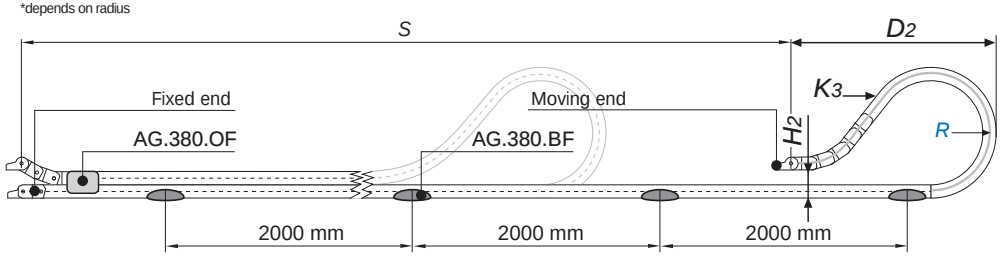




Inner height 42 mm
Pitch 67 mm/link
Links/m 15 (1005 mm)
Chain length $S + K_3$

Gliding applications | Long travels up to max. 70 m | Fill weight* 4,0 - 9,6 kg/m

*depends on radius



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	125	150	160	175	200	250	300	350
H_2	186	186	186	186	186	186	186	186
D_2	475	570	623	670	780	1030	1150	1500
K_3	1139	1340	1474	1608	1876	2412	2747	3551

Accessories | More information ►www.igus.eu/eu/E4.42AG



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment

autoglide Version 01 | Series E4.56AG | Product range

56

Crossbars in the inner radius with molded-on autoglide grooves



Series E4.56AG | openable along both radii, crossbars every link | autoglide crossbars along the inner radius

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]	Glide wing single part	Floor guide single part
E4.56.15.R.0.AG.NC	150	184	| 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500	4,109	AG.400.OF	AG.380.BF
E4.56.21.R.0.AG.NC	212	247	| 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500	4,567	AG.400.OF	AG.380.BF
E4.56.25.R.0.AG.NC	250	284	| 150 | 175 | 200 | 240 | 250 | 300 | 350 | 400 | 450 | 500	4,896	AG.400.OF	AG.380.BF

More widths upon request, please consult igus® for delivery time.

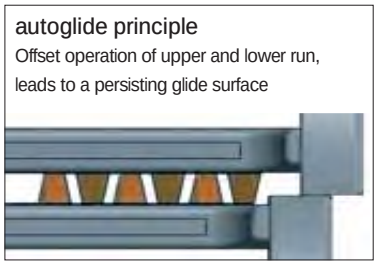
Supplement Part No. with required radius (R). Example: E4.56.15.150.0.AG.NC

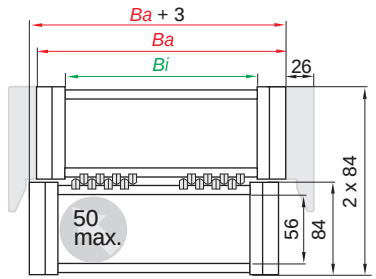
For autoglide e-chains® with assembled glide wings please add index **.OF** e.g. E4.56.15.150.0.AG.**OF**.NC

autoglide Version 01 | Series E4.56AG | Dimensions

autoglide principle

Offset operation of upper and lower run, leads to a persisting glide surface

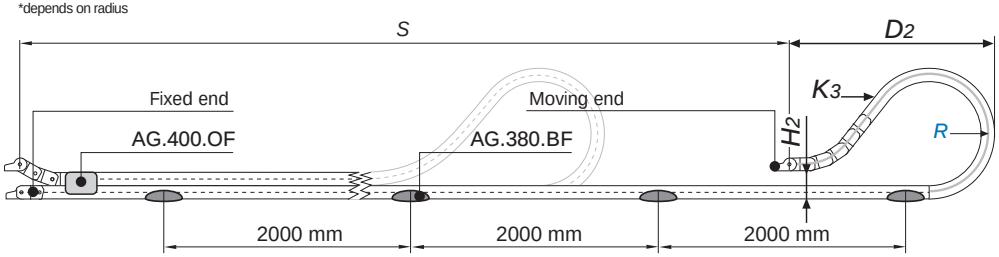




Inner height	56 mm
Pitch	91 mm/link
Links/m	11 (1001 mm)
Chain length	$S + K_3$

Gliding applications | Long travels up to max. 80 m | Fill weight* 6,4 - 12 kg/m

*depends on radius



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <10 m we recommend an unsupported e-chain®.

R	150	175	200	240	250	300	350	400	450	500
H_2	266	266	266	266	266	266	266	266	266	266
D_2	450	580	710	900	980	1180	1440	1530	1700	1850
K_3	1092	1456	1729	2184	2366	2821	3276	3640	4095	4550

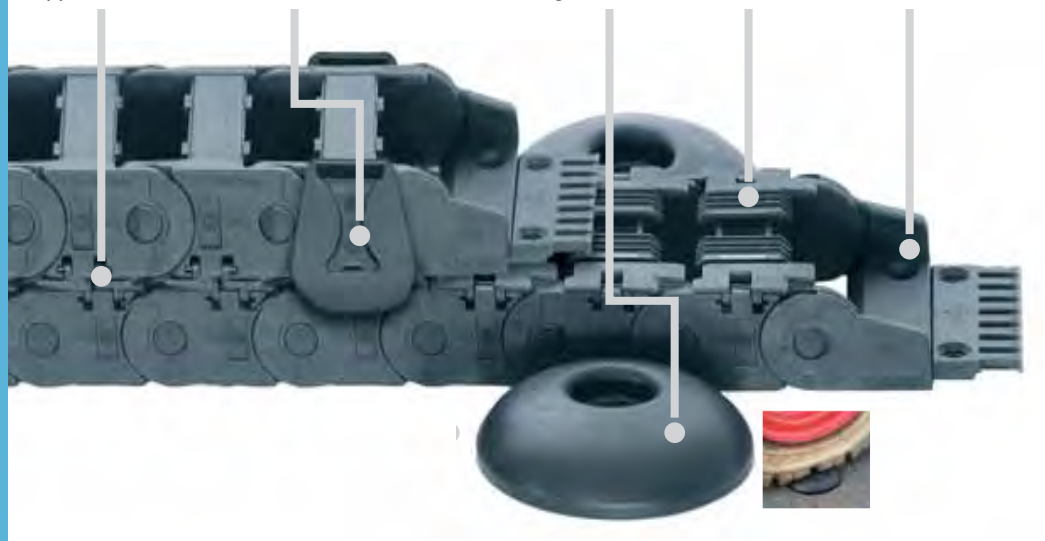
Accessories | More information ►www.igus.eu/eu/E4.56AG



Optimized, cable-saving interior separation program



Pivoting KMA mounting bracket with all-sides attachment



Self-guiding e-chains® for System E2/000 - autoglide Version 02

With the autoglide system, interfering guide troughs for use in long travels can be dispensed with. Self-guiding e-chains® glide safely on top of each other up to 70 m travel. This system has now been extended for igus® E2/000 and optimised further. Larger glide surfaces of the autoglide crossbars ensure an even higher lifetime of the system. A plug-in glide wing ensures the safe threading of the e-chain® in the first few metres of travel. The traversable excentric floor guides are fastened every 2 m on the subsurface.

- Travels up to 70 m without guide trough at speeds up to 2.0 m/s
- Very compact, no interfering trough in the travel or work area
- Fast installation times for long travels
- Snap-open in the inner radius
- Also for "half tube" fully enclosed in the outer radius
- Clip-on glide wings, safe threading in of the e-chain®
- Drive-over floor guide

Typical industries and applications

● Greenhouses ● Storage and retrieval systems ● Conveyor systems
● Indoor cranes ● Handling ● And many other "long travels"

Find a video online
►www.igus.eu/safetrough

Technical data

Gliding speed	max. 2,0 [m/s]
Acceleration	max. 1,0 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

Order example | Order key

Order example for complete e-chain® Series 2400AG (15 m), color black, with mounting brackets and interior separation:

e-chain® (15 m)	Please indicate e-chain® length or number of links: 15 m or 347 links	2400.05AG.100.0
+ Glide wing	2 glide wings are required per e-chain®	AG.2400.OF
+ Floor guides	8 pieces (2 units every 2 m from the half of the travel)	AG.380.BF

Order text: 15 m 2400.05AG.100.0 + AG.2400.OF + AG.380.BF + Mounting bracket + Interior separation (optional)

Note: We require one glide wing per e-chain® to the left and right at the position where the upper run first meets the lower run.

Order key
2400.05AG.100.0

- Standard color black
- Bending radius *R*
- autoglide
- Width index
- Series / Type

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

autoglide Version 02 | Series 2400AG | Product range

25

Crossbars with molded-on autoglide grooves New in this catalog



2400AG | snap-open along inner radius | Crossbars with molded-on autoglide grooves

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]	Glide wing single part	Floor guide single part
2400. 05 AG. R.0	57	73	| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	1,00	AG.2400.OF	AG.380.BF
2400. 07 AG. R.0	77	93	| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	1,10	AG.2400.OF	AG.380.BF

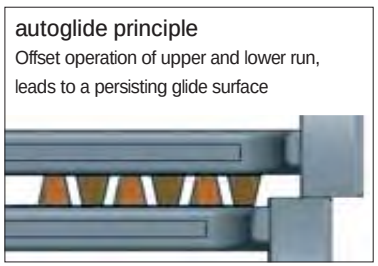
More widths upon request, please consult igus® for delivery time.

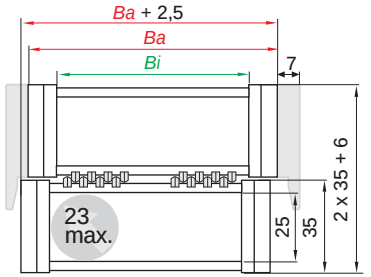
Supplement Part No. with required radius (R). Example: 2400.05AG.100.0

autoglide Version 02 | Series 2400AG | Dimensions

autoglide principle

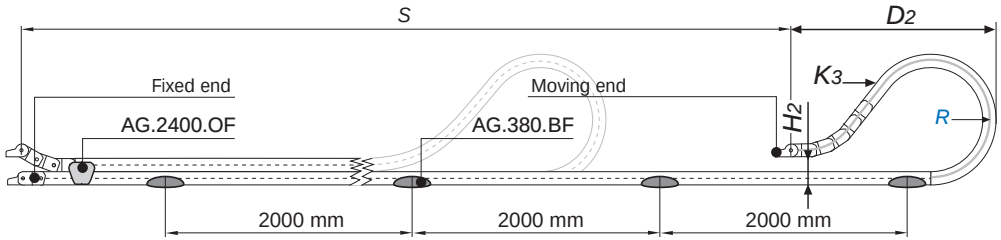
Offset operation of upper and lower run, leads to a persisting glide surface





Inner height	25 mm
Pitch	46 mm/link
Links/m	22 (1012 mm)
Chain length	$S + K_3$

Gliding applications | Long travels up to max. 40 m | Fill weight 2,0 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels between 4 and 10 m we recommend an unsupported e-chain®.

R	075	100	125	150	175	200	225	250
H_2	150	100	100	100	100	100	100	100
D_2	162	380	440	590	755	950	1040	1130
K_3	598	920	1058	1426	1794	2208	2438	2668

Accessories | More information ►www.igus.eu/eu/2400AG



Optimized, cable-saving interior separation program



Pivoting mounting brackets for gliding applications



KMA mounting bracket with all-sides attachment

autoglide Version 02 | Series 2600AG | Product range

35

Crossbars with molded-on autoglide grooves New in this catalog



2600AG | snap-open along inner radius | Crossbars with molded-on autoglide grooves

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]	Glide wing single part	Floor guide single part
2600. 05 AG. R.0*	50	66	| 075 | 100 | 125 | 150 | 175 | 200 | 250	1,27	AG.2600.OF	AG.380.BF
2600. 07 AG. R.0*	75	91	| 075 | 100 | 125 | 150 | 175 | 200 | 250	1,40	AG.2600.OF	AG.380.BF

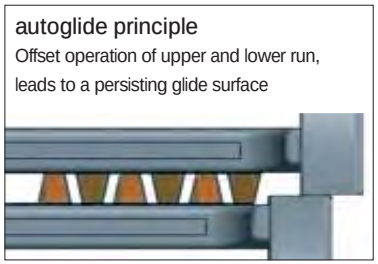
*Width and more widths upon request, please consult igus® for delivery time.

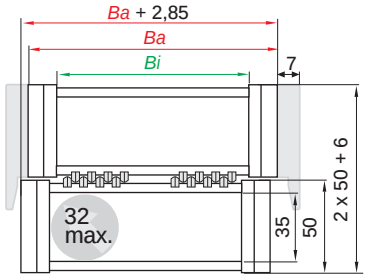
Supplement Part No. with required radius (R). Example: 2600.05AG.100.0

autoglide Version 02 | Series 2600AG | Dimensions

autoglide principle

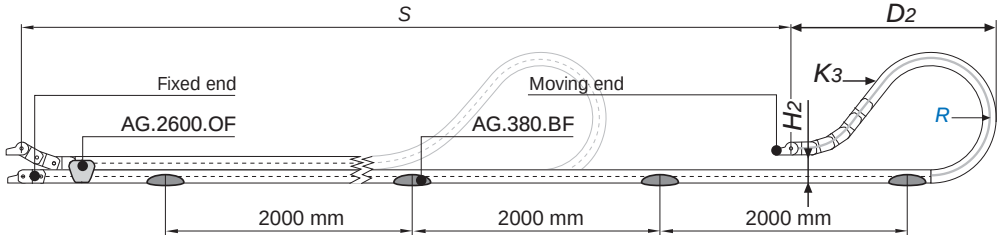
Offset operation of upper and lower run, leads to a persisting glide surface





Inner height	35 mm
Pitch	56 mm/link
Links/m	18 (1008 mm)
Chain length	$S + K_3$

Gliding applications | Long travels up to max. 60 m | Fill weight 2,5 kg/m



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels between 5 and 10 m we recommend an unsupported e-chain®.

R	075	100	125	150	175	200	250
H_2	150	166	166	166	166	166	166
D_2^{+25}	150	350	475	500	655	770	950
K_3	616	840	1120	1232	1568	1848	2296

Accessories | More information ►www.igus.eu/eu/2600AG



Optimized, cable-saving interior separation program



Pivoting mounting brackets for gliding applications



KMA mounting bracket with all-sides attachment

autoglide Version 02 | Series 3400AG | Product range

45

Crossbars with molded-on autoglide grooves New in this catalog



3400AG | snap-open along inner radius | Crossbars with molded-on autoglide grooves

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]	Glide wing single part	Floor guide single part
3400. 075 AG. R.0*	75	95	| 100 | 125 | 150 | 200 | 250 | 300	1,89	AG.3400.OF	AG.380.BF
3400. 100 AG. R.0*	100	120	| 100 | 125 | 150 | 200 | 250 | 300	2,04	AG.3400.OF	AG.380.BF

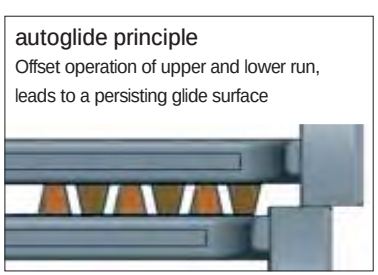
*Width and more widths upon request, please consult igus® for delivery time.

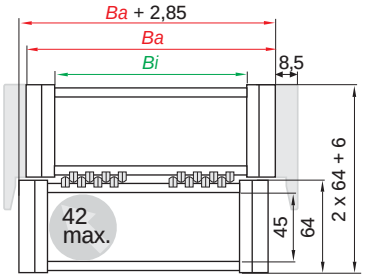
Supplement Part No. with required radius (R). Example: 3400.100AG.100.0

autoglide Version 02 | Series 3400AG | Dimensions

autoglide principle

Offset operation of upper and lower run, leads to a persisting glide surface

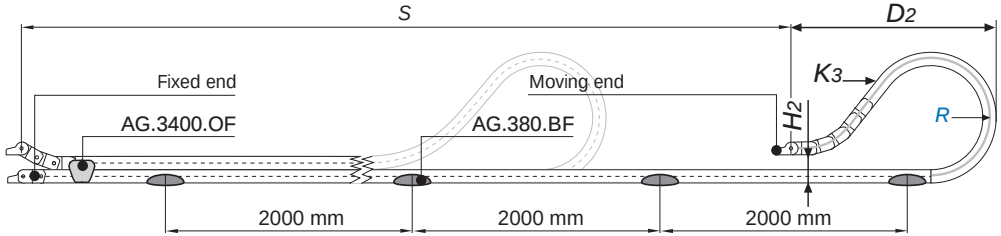




Inner height	45 mm
Pitch	67 mm/link
Links/m	15 (1005 mm)
Chain length	$S + K_3$

Gliding applications | Long travels up to max. 70 m | Fill weight* 5,0 - 8,0 kg/m

*depends on radius



Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels between 6 and 10 m we recommend an unsupported e-chain®.

R	100	125	150	200	250	300
H_2	200	186	186	186	186	186
D_2	233	475	570	780	1010	1150
K_3	871	1139	1407	1876	2412	2747

Accessories | More information ►www.igus.eu/eu/3400AG



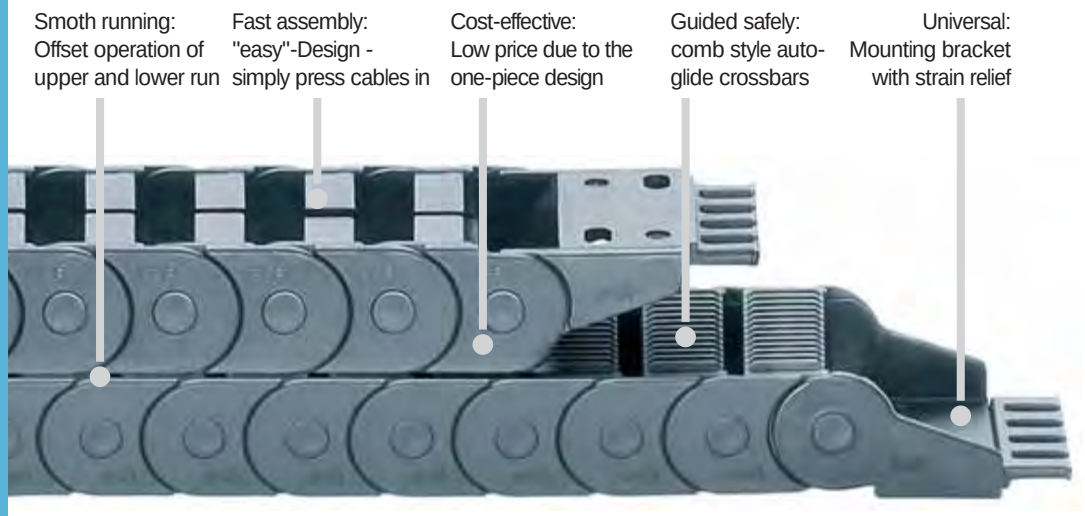
Optimized, cable-saving interior separation program



Pivoting mounting brackets for gliding applications



KMA mounting bracket with all-sides attachment



easy chain® design in outer radius, injection-moulded autoglide sprockets in the inner radius - autoglide Version 03

Version 03 is the quickly filled and cost-effective easy chain® e-chain® with injection-moulded autoglide sprockets in the inner radius. One-piece e-chain® with injection-moulded autoglide sprockets in the inner radius. The sprockets similar to tiewrap plates are moulded directly on the e-chain® link and are available in two sizes. The reduced installation time is one of the main features of the e-chains®. Their elastic and rugged material igumid NB offers yet more reasons for application: Optimum elasticity, UL94-V2 classification and excellent suitability for cleanrooms. Their one-piece design makes easy chain® attractive especially with regard to price.

- Doubly cost-effective. Elimination of guide troughs and economical, one-piece e-chain®
- Very quick assembly time - "easy"-design even on long travels
- "easy"-design: Easy to fill - cables and hoses can be inserted without opening
- Single part design
- Small installation width, silent operation
- UL94-V2 classifications

Typical industries and applications

- Industrial vehicles | Long travels with easier filling | Simple outdoor applications

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)

Technical data

Gliding speed	max. 1,0 [m/s]
Acceleration	max. 1,0 [m/s²]
Material - permitted temperature °C, igumid NB	-40° up to +80° C
Flammability class, igumid NB	VDE 0304 IIC UL94-V2

Order key

Order key
EA25.050.100.0

- Standard color black
- Bending radius *R*
- Width index
- Series / Type



Simply push in the cables in the e-chain® with the thumb - and it's ready! For removal just pull out the cables from the e-chain®

autoglide Version 03 | Series EA16 | Product range

Easy filling - simply press cables in

32



Series EA16 | Simply press cables in (outer radius) | autoglide crossbars (inner radius)

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]
EA16. 4 .R.0.	48	60	| 065 | 075 | 100	≈ 0,66

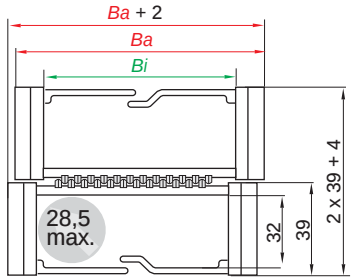
More widths upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (R). Example: EA16.4.100.0 (+ mounting bracket EA16.4.12PZ)

autoglide principle

Offset operation of upper and lower run, leads to a persisting glide surface

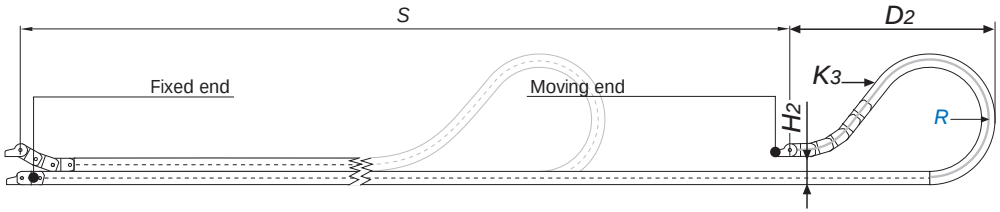




Dimensions

Inner height	32 mm
Pitch	30,5 mm/link
Links/m	33 (1006,5 mm)
Chain length	$S + K_3$

Gliding applications | Long travels up to max. 20 m | Fill weight 0,4 [kg/m]



Note: We recommend to realize the engineering of such a plant by our technicians.

R	065	075	100
H_2	100	100	100
D_1	325	355	570
K_3	702	763	1251

autoglide Version 03 | Series EA25 | Product range

Easy filling - simply press cables in

25



Series EA25 | Simply press cables in (outer radius) | autoglide crossbars (inner radius)

Part No. e-chain®	Bi [mm]	Ba [mm]	R Available bending radii [mm]	Weight [kg/m]
EA25. 050 .R.0.	50	60	| 075 | 100	≈ 0,49

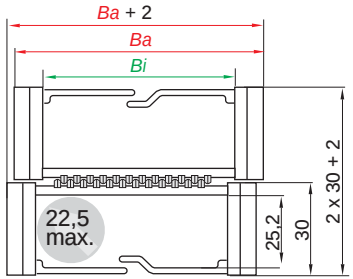
More widths upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (R). Example: EA25.050.100.0 (+ mounting bracket EA25.050.12PZ)

autoglide principle

Offset operation of upper and lower run, leads to a persisting glide surface

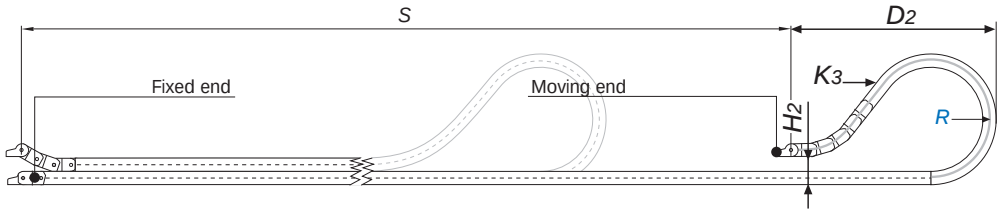




Dimensions

Inner height	32 mm
Pitch	25 mm/link
Links/m	40 (1000 mm)
Chain length	$S + K_3$

Gliding applications | Long travels up to max. 20 m | Fill weight 0,4 [kg/m]



Note: We recommend to realize the engineering of such a plant by our technicians.

R	075	100
H_2	100	100
D_1	330	330
K_3	750	1125



Special glide shoes provide a safe guiding for the E2/000 - autoglide Version 04

In this version, special plastic glide shoes are side-mounted on the e-chain® link every 1,000 to 2,000 mm. The function of these gliding shoes resembles the leeboards used on sail boats. Some of these glide shoes are conceived in such a way that in contact they pivot upwards and enable the continuation of the travel. Similarly the glide shoes in autoglide go up and down, each according to its position as lower run or upper run of the e-chain®. They provide the precise lateral guidance and a smooth glide of the e-chain®. The glide shoes are assembled every 24th e-chain® link from the moving end. Up to 10 m length without floor guides possible in the series 2400/2450/2480/2500.

Typical industries and applications

● Industrial vehicles ● Long travels with easier filling ● Simple outdoor applications

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)

Find a video online
►www.igus.eu/AG_Movie

Technical data

Gliding speed	max. 0,5 [m/s]
Acceleration	max. 1,0 [m/s²]
Material - permitted temperature °C, igumid G	-40° up to +120° C
Flammability class, igumid G	VDE 0304 IIC UL94 HB

Order example | Order key

Order example for complete e-chain® Series 2500AG (10 m), color black, with mounting brackets and interior separation:

e-chain® (10 m)	Please indicate e-chain® length or number of links: 10 m or 249 links (Number of links in the assembly must still be deducted)	2500.05.150.0
e-chain® + glide wing	Assembly consists of 4 e-chain® links and 2 glide wings	2500.05.150.0.AG
+ Floor guides	8 pieces (2 units every 2 m from the half of the travel)	AG.380.BF

Order text: 209 links 2500.05.150.0 + 10 units 2500.05.150.0.AG + Mounting bracket + Interior separation (optional)

Note: The lateral glide wings are assembled on every 24th e-chain® link

Order key
2500.05.150.0.AG

- autoglide
- Standard color black
- Bending radius *R*
- Width index
- Series / Type

Version 04 | 2400·2450·2480·2500 | Product range

25 25

Special glide shoes provide reliable guiding



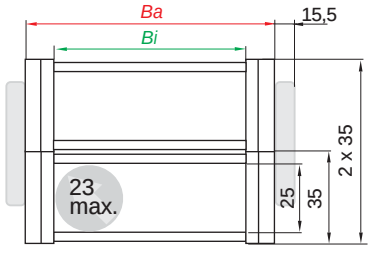
e-chains® | Series 2400 snap-open along inner radius
e-chains® | Series 2500 snap-open along outer radius | Standard
Half e-tubes | Series 2450 snap-open along inner radius, enclosed along outer radius
Full e-tubes | Series 2480 snap-open along inner radius, fully enclosed

Part No. e-chain®/e-tube	*Bi* [mm]	*Ba* [mm]	*R* Available bending radii [mm]	Floor guide single part
2400/2500/2450/2480. 05 .*R*.0.AG	57	73	| 055*| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	AG.380.BF
2400/2500/2450/2480. 07 .*R*.0.AG	77	93	| 055*| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	AG.380.BF
2400/2500/2450/2480. 09 .*R*.0.AG	89	105	| 055*| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	AG.380.BF
2400/2500/2450/2480. 10 .*R*.0.AG	103	119	| 055*| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	AG.380.BF
2400/2500/2450/2480. 12 .*R*.0.AG	125	141	| 055*| 075 | 100 | 125 | 150 | 175 | 200 | 225 | 250	AG.380.BF

*Radius for Series 2450/2480 available upon request, please consult igus® for delivery time.

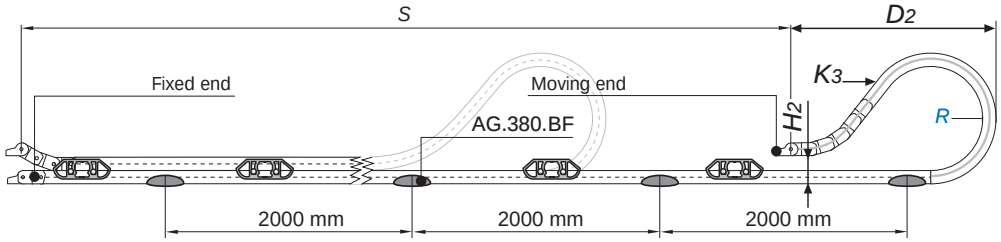
Supplement Part No. with required radius (R). Example: 2500.05.150.0.AG

Version 04 | 2400·2450·2480·2500 | Dimensions



Inner height 25 mm
Pitch 46 mm/link
Links/m 22 (1012 mm)
Chain length $S + K_3$

Gliding applications | Long travels up to max. 20 m | Fill weight 1,6 kg/m



The lateral glide wings are assembled on every 24th e-chain® link
Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <3 m we recommend an unsupported e-chain®.

R	055*	075	100	125	150	175	200	225	250
H_2	110	150	100	100	100	100	100	100	100
D_2^{+25}	142	162	380	440	590	755	950	1040	1130
K_3	506	598	920	1058	1426	1794	2208	2438	2668

*Radius for Series 2450/2480 available upon request, please consult igus® for delivery time.

Accessories | More information ► www.igus.eu/eu/autoglide



Optimized, cable-saving interior separation program



Pivoting mounting brackets for gliding applications



KMA mounting bracket with all-sides attachment

Version 04 | 2600·2650·2680·2700 | Product range

Special glide shoes provide reliable guiding



e-chains® | Series 2600 snap-open along inner radius
e-chains® | Series 2700 snap-open along outer radius | Standard
Half e-tubes | Series 2650 snap-open along inner radius, enclosed along outer radius
Full e-tubes | Series 2680 snap-open along inner radius, fully enclosed

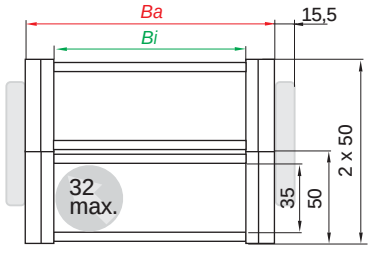
Part No. e-chain®/e-tube	*Bi* [mm]	*Ba* [mm]	*R* Available bending radii [mm]	Floor guide single part
2600/2650/2680/2700. 05 .*R*.0.AG	50	66	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 06 .*R*.0.AG	65	81	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 07 .*R*.0.AG	75	91	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 09 .*R*.0.AG	90	106	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 10 .*R*.0.AG	100	116	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 12 .*R*.0.AG	125	141	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 15 .*R*.0.AG	150	166	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF
2600/2650/2680/2700. 17 .*R*.0.AG	175	194	| 075* | 100 | 125 | 150 | 175 | 200 | 250	AG.380.BF

*Radius for Series 2650/2680 available upon request, please consult igus® for delivery time.

Supplement Part No. with required radius (R). Example: 2600.05.100.0.AG

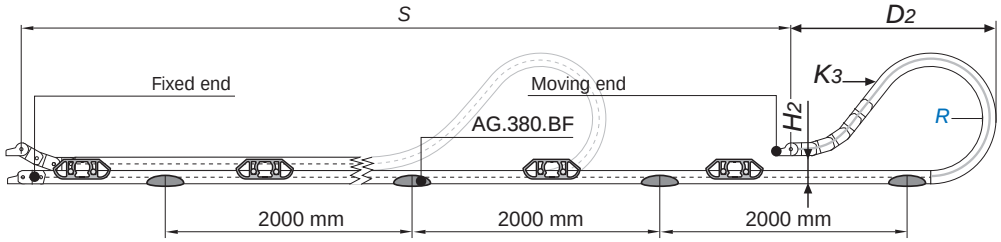
Version 04 | 2600·2650·2680·2700 | Dimensions

2600
2650
2680
2700



Inner height 35 mm
Pitch 56 mm/link
Links/m 18 (1008 mm)
Chain length $S + K_3$

Gliding applications | Long travels up to max. 30 m | Fill weight 2,0 kg/m



The lateral glide wings are assembled on every 24th e-chain® link

Note: We recommend to realize the engineering of such a plant by our technicians.
In case of travels <3 m we recommend an unsupported e-chain®.

R	075*	100	125	150	175	200	250
H_2	150	166	166	166	166	166	166
D_2	150	350	475	500	655	770	950
K_3	616	840	1120	1232	1568	1848	2296

*Radius for Series 2650/2680 available upon request, please consult igus® for delivery time.

Accessories | More information ►www.igus.eu/eu/autoglide



Optimized, cable-saving interior separation program



Pivoting mounting brackets for gliding applications



KMA mounting bracket with all-sides attachment



Special solutions for long travels

guidelok horizontal | guidelok slimline F | lbt flizz® | micro flizz®



Chip protection on long travels up to 50 m

Upper run guide - guidelok horizontal

- Chips cannot get stuck between upper and lower run
- Enormous increase of "self-supporting" length of e-chains® and e-tubes
- Modular system with few parts (also possible without sideways trough)
- Lower cost than most steel chains or sophisticated gliding systems

► **from page 1352 and**
► **www.igus.eu/eu/guidelok-HR**



Safe vertical guidance - guidelok slimline F

in highly dynamic rack feeder

- Up to 7 m/s and 10 m/s²
- Up to 80% less trough required
- Saving costs and weight
- For hanging systems up to 50 m
- No swinging of the e-chain®, high reliability due to lever mechanism and guiding rails
- Faster and easier installation

► **from page 1354 and**
► **www.igus.eu/eu/glsl-f**

Special solutions | For long travels



Cost-effective, enclosed energy supply - lbt flizz®

Travels up to 120 m, speeds up to 8 m/s

- Applicable for moving and stationary control, ideal for all bus systems
- Low weight and good corrosion resistance at -10°C up to +60°C continuous temperature
- Cost-effective, modular energy supply for all media, not only for electrical
- Quiet and maintenance free operation

► **from page 1356 and**
► **www.igus.eu/eu/flizz**



Master long travels with the smallest e-chain® - micro flizz®

compact system for a secure guidance of power, data and air

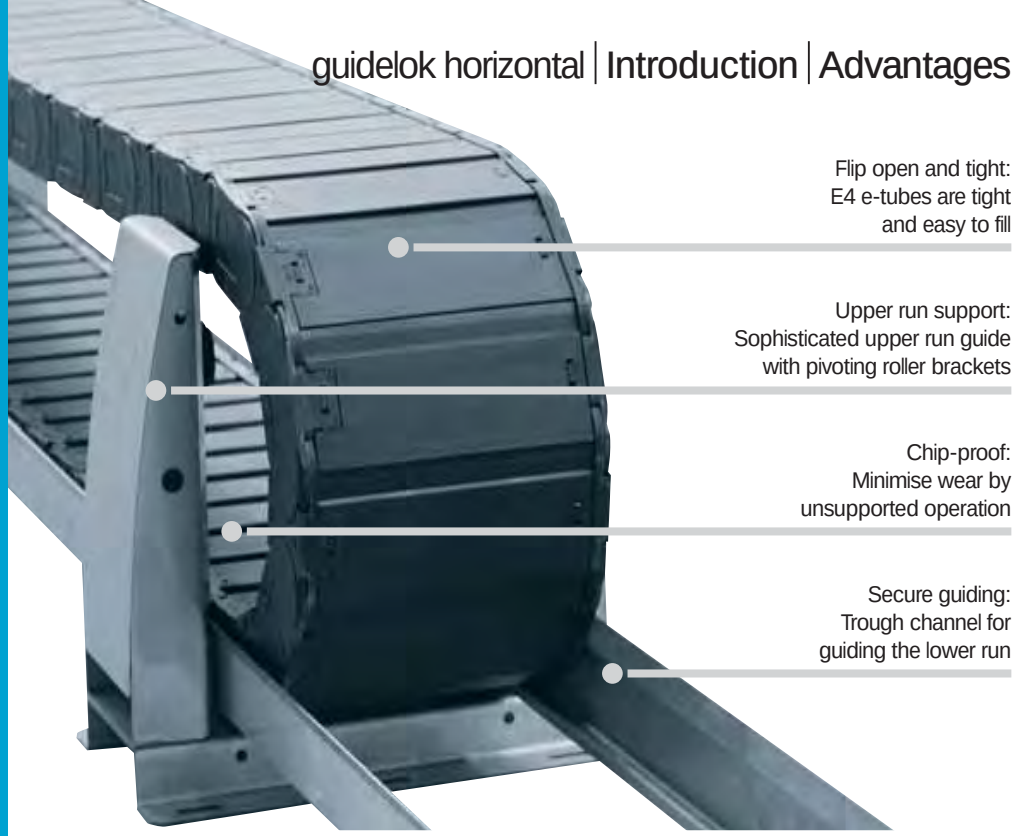
- Maintenance-free alternative for busbar
- Control via stationary switch cabinet possible
- Accelerations up to 50 m/s² and speeds up to 6 m/s
- e-chain® is guided in special slot, no sliding against each other
- Less space required

► **from page 1360 and**
► **www.igus.eu/eu/microflizz**

Modular system for projects - fast, completely from stock

...tested and time-proven in numerous projects, have now become available as a modular standard system. ● Faster quotations ● Faster project planning ►from page 1370





Upper run guide for long travels, self-supporting in chip areas - guidelok horizontal

Especially for long travels on machine tools, when the e-chain® has to be gliding, metallic chips are a problem. guidelok horizontal is a cost-effective solution.

- Travels, unsupported up to 50 m possible
- Chips cannot get stuck between upper and lower run
- Modular system with few parts (also possible without sideways trough)
- Enormous increase of "self-supporting" length of e-chains®
- Lower push-/pull forces (smaller e-chains®, self-supporting and rollers = energy efficient)
- Lower cost than most steel chains or sophisticated gliding systems
- Open guide trough design, chips can fall through

Typical industries and applications

- Machine tools
- Applications in chip areas
- Wherever a gliding application is not recommended

Find a video online
►www.igus.eu/eu/glhr-movie

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)

Design-principle - horizontal guidelok guides the e-chain® on special spring loaded roller supports, that are pushed back by the e-chains® radius, clearing its path



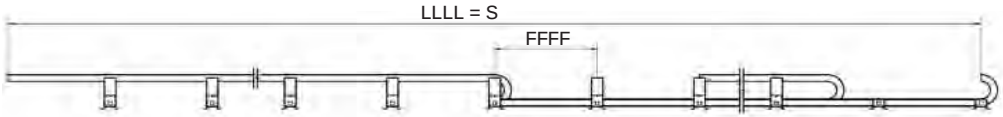
The e-chain® is guided in the trough channel, pushing back the spring loaded roller support with its radius...



...which snaps back out again after the e-chain® radius has passed...



...the upper run then gets to lay on the roller support.



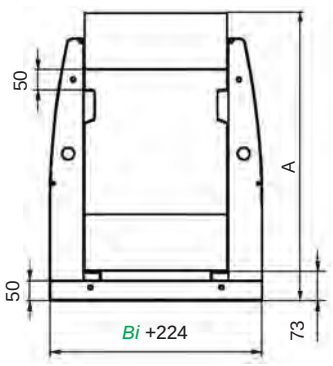
Principle sketch - guidelok horizontal - LLLL = Total length FFFF = Field length

For Series	*Bi* [mm]	*R* Available bending radii [mm]	Part No. guidelok elements
E4.56/R4.56	150 - 600	| 150 | 175 | 200 | 250 | 300 |	907.645.*Bi*.*R*.LLLL/FFFF
E4.80/R4.80	50 - 600	| 150 | 175 | 200 | 250 | 300 |	907.645.*Bi*.*R*.LLLL/FFFF
E4.112	200 - 600	| 150 | 175 | 200 | 250 | 300 |	907.645.*Bi*.*R*.LLLL/FFFF
E4.56/R4.56	50 - 600	| 350 | 400 | 450 | 500 |	907.837.*Bi*.*R*.LLLL/FFFF
E4.80/R4.80	50 - 600	| 350 | 400 | 450 | 500 |	907.837.*Bi*.*R*.LLLL/FFFF
E4.112	200 - 600	| 350 | 400 | 450 | 500 |	907.837.*Bi*.*R*.LLLL/FFFF

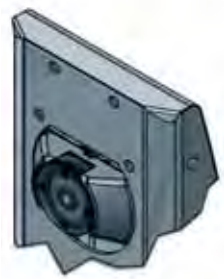
LLLL = Total length FFFF = Field length

More series and radii upon request, please consult igus® for delivery time.

Supplement Part No. with required value for total length and field length, example: 907.645.200.300.20000/2000.0







Lateral supports with pivoting rollers for the upper run support of the e-chain®



Safe guidance:
Also at high travel speeds

No swinging out of the e-chain®:
guidelok safety catches to guide the e-chain® even at high lateral accelerations

High vertical travels:
Travels up to 50 m in 1,5 m or 2 m field length possible

Safe vertical guidance - guidelok slimline F

In highly dynamic rack feeder a speed for the horizontal movement exceeding in 7 m/s is not uncommon. The advanced igus® guidelok slimline F guides e-chains® even at the fastest speed. Note: Systems of this type should be designed by our system design engineers. We will be more than willing to submit an offer to you. Please contact us about this.

- Up to 7 m/s and 10 m/s²
- Up to 80% less trough required, saving costs and weight
- For hanging systems up to 50 m
- No swinging of the e-chain®, high reliability due to the lever mechanism and guiding rails
- Faster and easier installation
- Reduced noise
- Easy access for servicing
- Energy and data and all kinds of media are safely

Typical industries and applications

- Storage and retrieval units
- Lifts
- Elevators
- Construction and crane lifts
- Hoists

Find a video online
►www.igus.eu/eu/glslf-movie

Available from stock. Delivery time* in 24h or today!
*Delivery time means time until shipping of goods (after technical release)

Special solutions for long travels online ► www.igus.eu/eu/glsl-f

For Series	Bi [mm]	R Radii [mm]	Part No. guidelok F	v max. vertical	v max. horizontal
255	103	| 150 |	GLSL.F.255. 10.150.LLLL/FFFF	4 [m/s]	7 [m/s]
2700	100	| 150 |	GLSL.F.2700.10.150.LLLL/FFFF	4 [m/s]	7 [m/s]

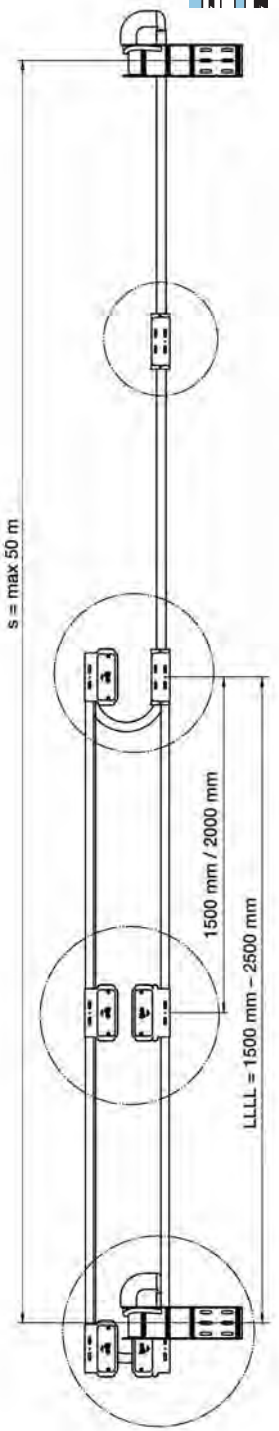
LLLL = Total length FFFF = Field length

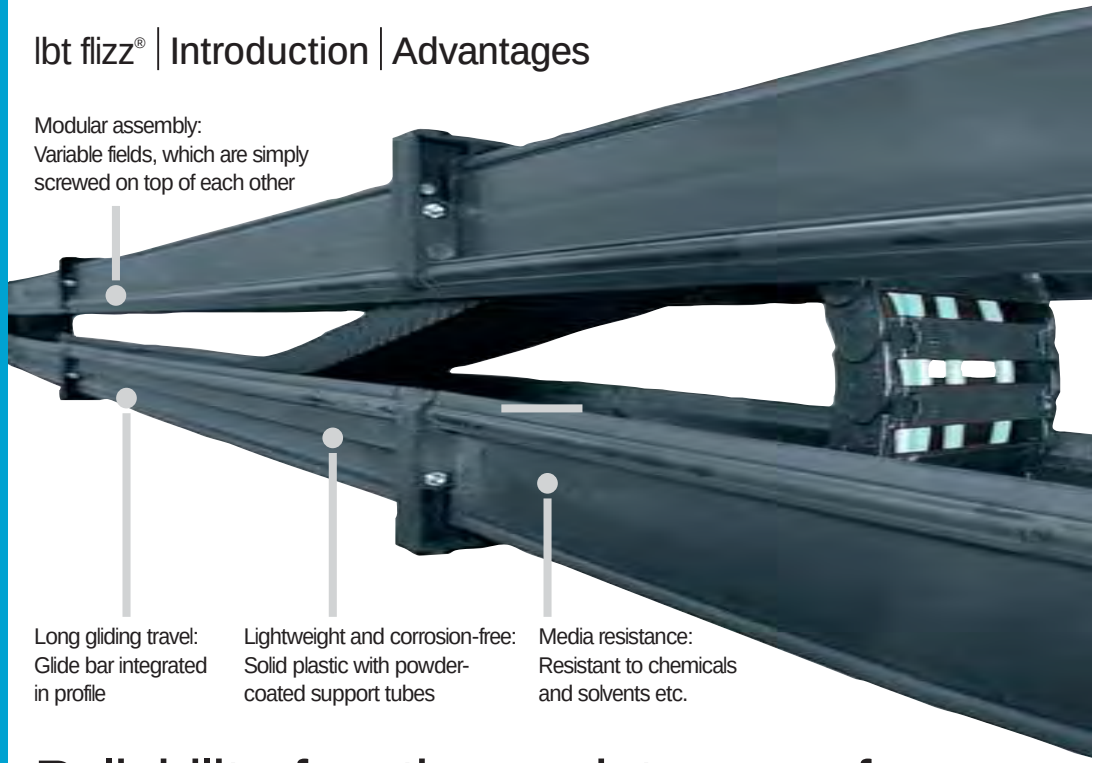
Special versions with different widths, radii and field lenghts possible, please consult igus® for delivery time.

Supplement Part No. with required value for total length and field length, example:
GLSL.F.2700.10.150.9000/1500



guidelok slimline F in a high-bay warehouse





Reliability, function, maintenance-free with substantial cost advantages - lbt flizz®

- Speeds up to 8 m/s, at acceleration up to 10 m/s² - for travels up to 120 m
- Applicable for moving and stationary control, ideal for all bus systems
- Low weight and good corrosion resistance at -10°C up to +60°C continuous temperature
- Resistant against most chemicals, oils, fats, coolants and solvents
- Energy supply system protected from wind and weathering.
- Optionally fully enclosed design
- Cost-effective, modular energy supply system for all media, not only electrical
- Quiet and maintenance free operation
- Easy and fast installation since it supplied as a made-to-spec system
- Easy integration in existing systems
- Extruded guide profiles and support frames with end-to-end tubes for stabilisation
- Cable length 50 % of travel
- No cable junction

Typical industries and applications

- Sludge scrapers
- Sand catchers
- Stormwater overflow tanks
- Electric plating plants
- Cranes
- Plant construction

Available from stock. Delivery time* in 24h or today!

*Delivery time means time until shipping of goods (after technical release)

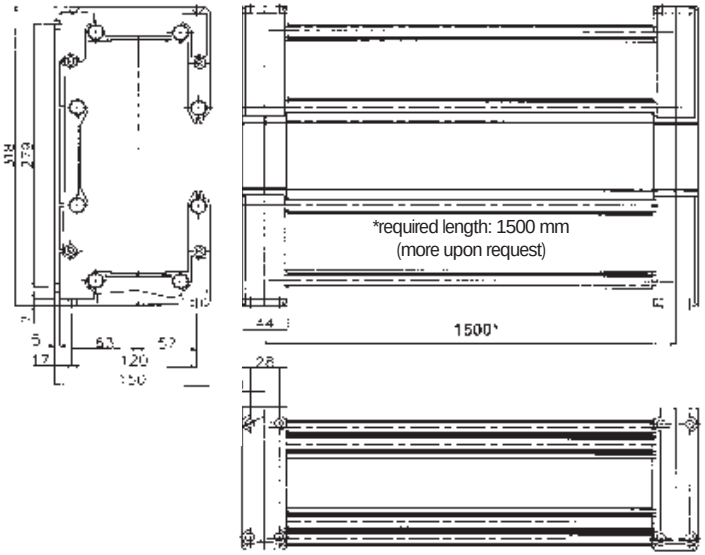
Find a video online
►www.igus.eu/eu/lbt-movie

Safe energy and data transfer - The igus® chainflex® range of cables offers a selection from over 1.030 different cables available from stock. This includes power, signal, data and bus systems including fibre optic cables. In addition, we can offer you all supply cables for your drive systems, such as motor, servo cables and encoder cables; all can be supplied made-to-spec with connectors.

Cost-cutting installation - Thanks to the use of made-to-spec e-chain-systems®, you can greatly reduce expensive time incurred for installation and assembly at the installation site. Function-tested systems guarantee fast commissioning of the powered system sections.

Installation service - We will be more than pleased to submit an offer to you for a full solution, including all installation services. This means that none of your own staff are tied up and, in future, you will have a trouble-free energy supply system at a fixed price.

Outdoor use in sewage treatment plants - Because of the particular strain in sewage treatment plants, some with flooding, foam, etc., a safety margin for all load values of 50%, compared to applications in the inner/dry zone, should be made. A review of the application data by our project engineers is recommended.





Installation option for power infeed at fixed end



Example of mounting the console on jibs



The installation variant of a floating moving end for compensating for any lateral offset tolerances between scraper and e-chainsystem®



lbt flizz® for high speeds and accelerations.
The complete system includes the igus® e-chain®, the lbt flizz® guide trough and the customised, fully assembled igus® chainflex® cables



The scraper moves on the 38 m long final clarifier in round-the-clock operation. The energy supply is done via the lbt flizz® system



Space-saving and compact energy supply with lbt flizz® - Maintenance system, delivered preassembled with assembled igus® e-chain®

lbt flizz® | Applications



lbt flizz® in a longitudinal scraper travel (S) = 38 m
● Speed (v) = 1.0 m/min. ● Acceleration (a) = 0.5 m/s²
● Cycle time 1.5 x hour/ 24 h/365 days

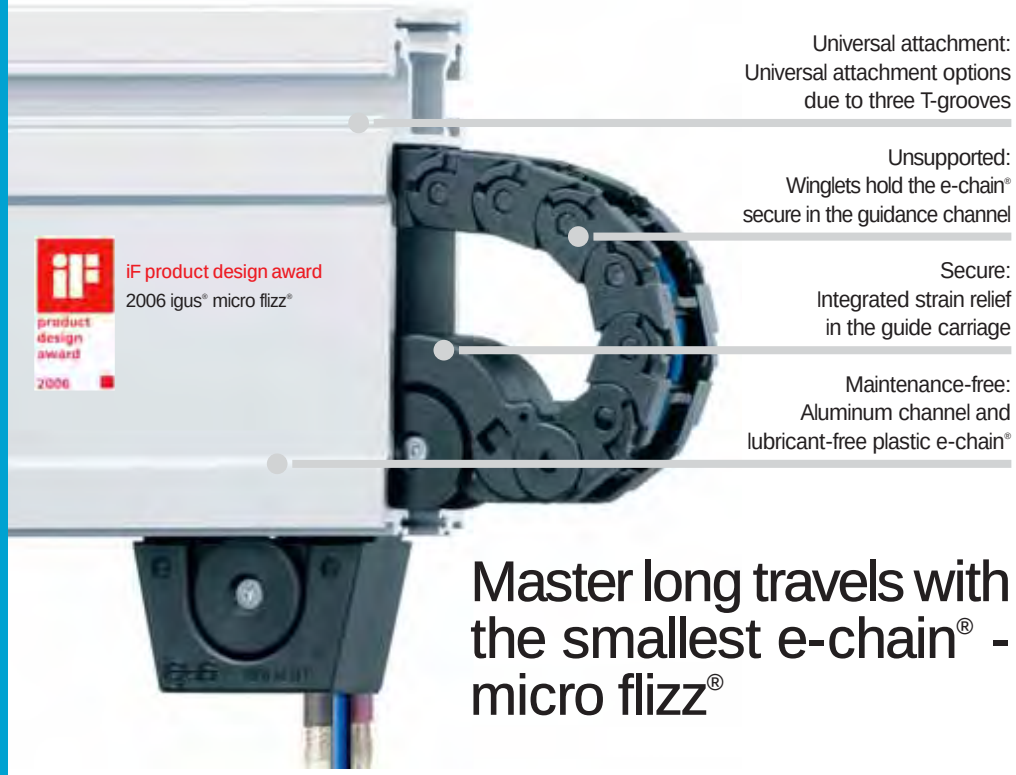


Energy supply system protected from wind and weathering. The used materials are weather-resistant, as well as resistant against most chemicals, oils, fats, coolants and solvents





igus® lbt flizz® - Sewage works of the company Hydrobudowa S.A. in Poland. The power supply system of the scrapers in 8 clarifiers was equipped with igus® e-chain® and lbt flizz®. The complete system runs directly over the clarifier. Advantages: ● Low-maintenance system ● Longer service life ● Enclosed trough, protection against snow and ice ● Space-saving compared to conventional system ● Compact and safe ● Travel (S) = 42 m ● Assembled with igus® chainflex® cables



Universal attachment:
Universal attachment options
due to three T-grooves

Unsupported:
Winglets hold the e-chain®
secure in the guidance channel

Secure:
Integrated strain relief
in the guide carriage

Maintenance-free:
Aluminum channel and
lubricant-free plastic e-chain®

iF product design award
2006 igus® micro flizz®

Master long travels with the smallest e-chain® - micro flizz®

Compact system for a secure guidance of power, data and air as a maintenance-free alternative for busbar

- e-chain® is guided in special slot, no sliding against each other
- Control via stationary switch cabinet possible
- Accelerations up to 50 m/s² and speeds up to 6 m/s
- Fast assembly due to pre-configured, modular system
- Less space required
- Available also as preassembled
- Smooth running due to ball bearings in the guide carriages
- Also with EX tested e-chain® available (on request)
- 3 sizes available: cable diameters MF06: max. Ø 8,0 mm, MF08: max. Ø 9,5 mm, MF10: max. Ø 16 mm

Typical industries and applications

● Rack feeder ● Indoor cranes ● Industrial gates ● Working stations ● Sewage treatment plants ● Camera systems ● Sliding doors ● Operator panels ● Measure systems ● Studio equipment ● Conveyor technique

Find a video online
►www.igus.eu/eu/MF-movie

Available from stock. **Delivery time* in 24h or today!**
*Delivery time means time until shipping of goods (after technical release)



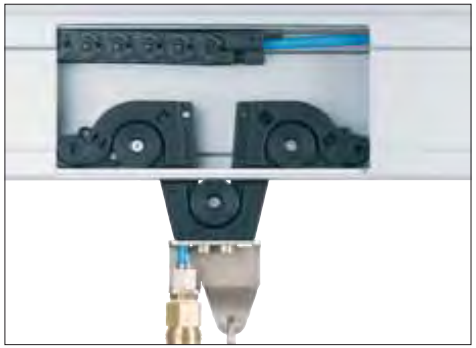
Separated upper and lower run: Running trough the radius, integrated winglets fold in



In the extended position, the winglets fold out and safely hold the upper run in the elevated position

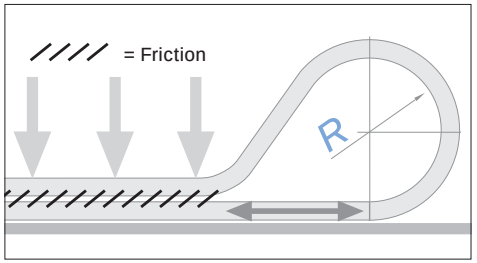


A polymer spring element cushions the motion inside the trough and lower noise

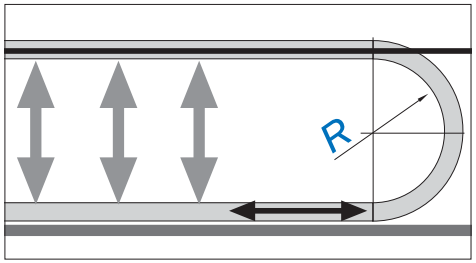


micro flizz® accessory: Connection for compressed air coupling

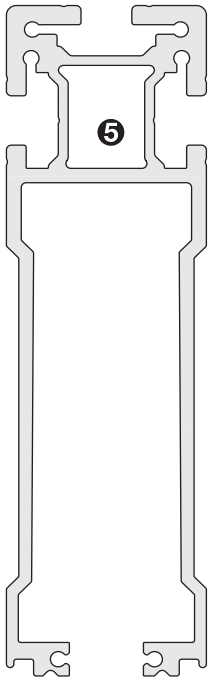
Special feature: micro flizz® construction



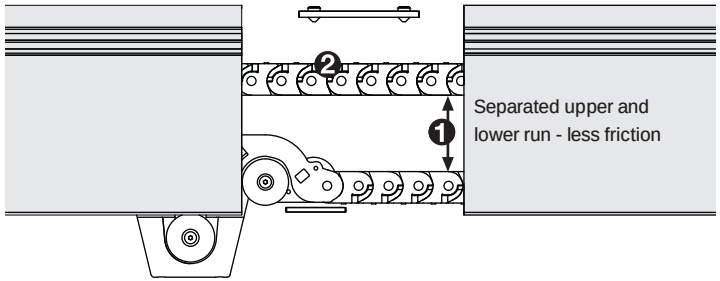
Yesterday: Moving lower run, sliding function.
Long travels need stable e-chains®

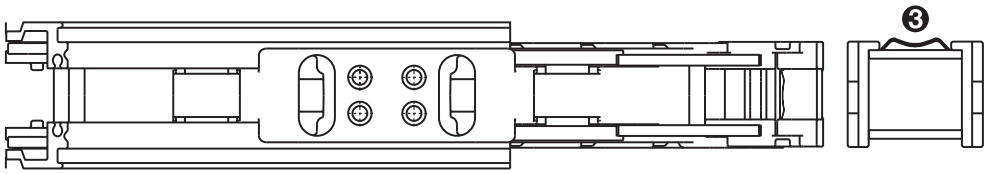


Today: micro flizz® - Small e-chains®, self-guiding in guiding channel - Friction is reduced by factor 3 over the conventional system



❶ Separated upper and lower run of the flizz® e-chain®, thus less friction and reduced push/pull forces
❷ Winglets hold the e-chain® secure in the guidance channel
❸ Polymer springs for a soft unrolling of the e-chain® in the flizz® channel effect a substantial noise reduction
❹ Integrated strain relief in the guide carriage for the safe fixing of cables
❺ Universal attachment options due to three T-grooves
❻ Attachment of the e-chain® by roller cart on the moving end, gliding or locking possible
❼ Opposed e-chains® can be used - a double filling or two independent travels are possible



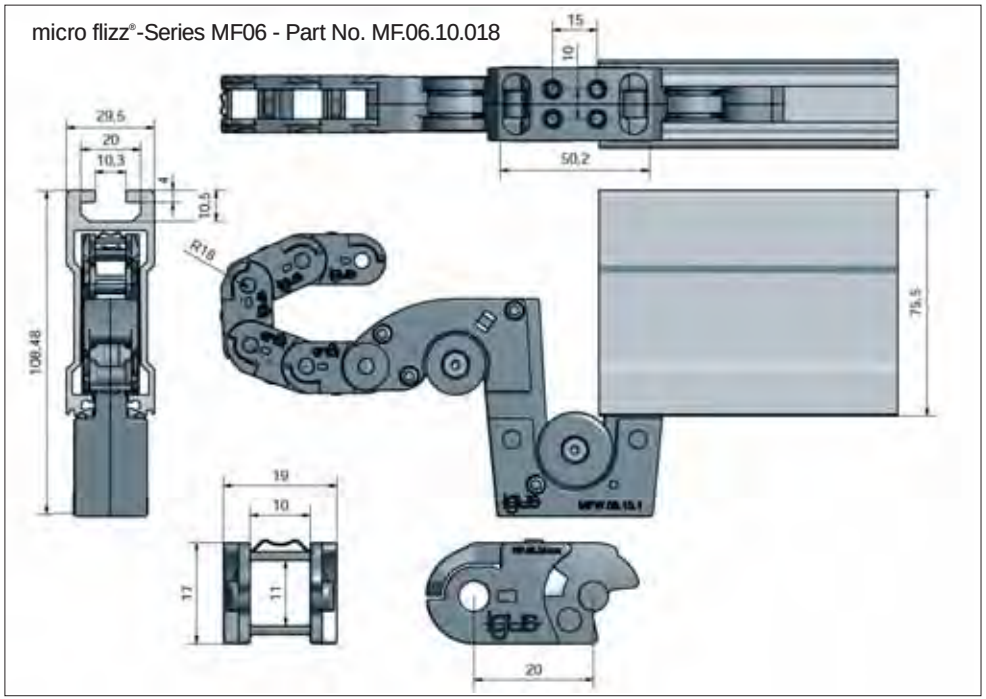




chainflex® special cables for micro flizz®

Many high-flex chainflex® cables for micro flizz® on stock.
More information: ►www.igus.eu/eu/chainflex





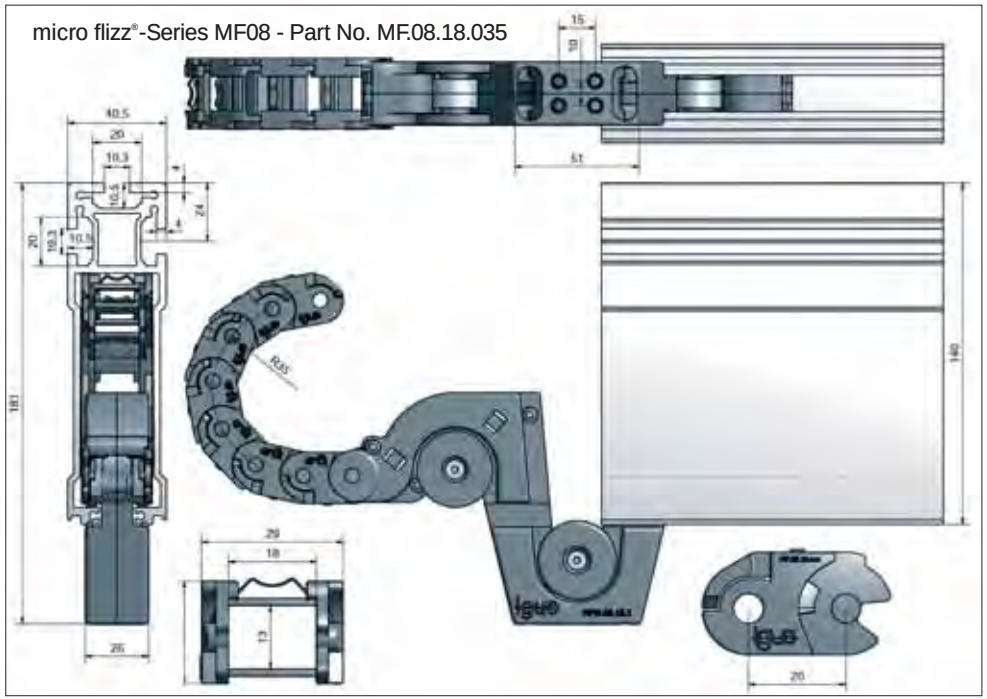
micro flizz®-Series MF06 | Dimensions

Part No.	*Bi* [mm]	*Ba* [mm]	*hi* [mm]	*ha* [mm]	*R* Bending radius [mm]
MF.06.10.018	10	19	11	17	018

More dimensions	
Installation height complete system:	108,48 mm
Installation width complete system:	29,5 mm
Recommended length channel pieces:	2,0 m, 3,0 m and 6,0 - Die-cast aluminum material
Cable diameter max.:	ø 8 mm



e-chain® viewable for illustration



micro flizz®-Series MF08 | Dimensions

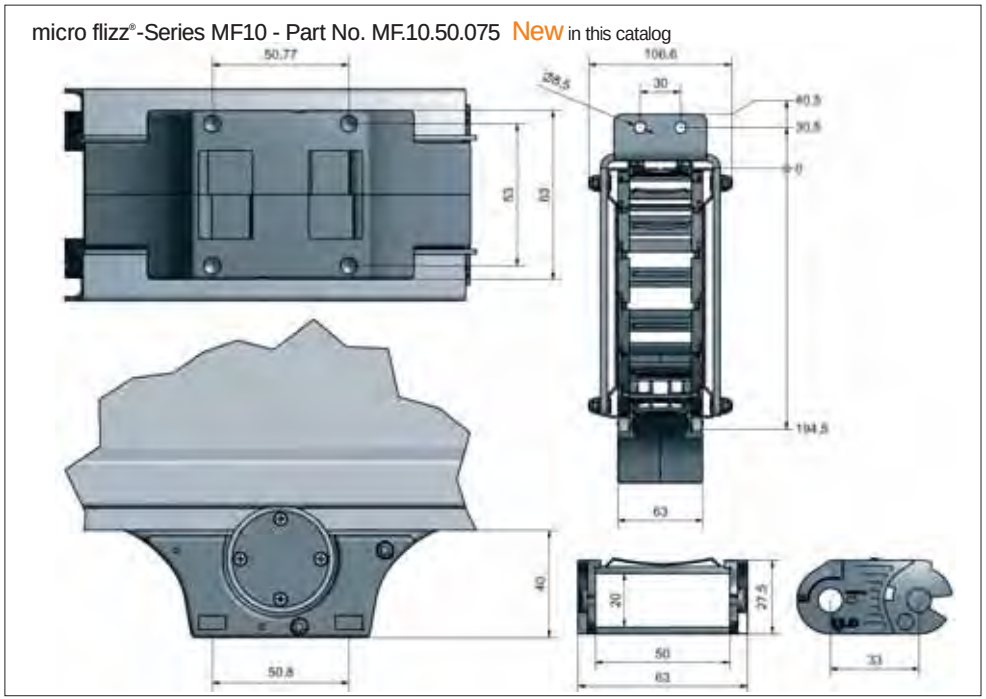
Part No.	Bi [mm]	Ba [mm]	hi [mm]	ha [mm]	R Bending radius [mm]
MF.08.18.035	18	29	13	21	035

More dimensions

Installation height complete system:	161 mm
Installation width complete system:	40,5 mm
Recommended length channel pieces:	2,0 m, 3,0 m and 6,0 - Die-cast aluminum material
Cable diameter max.:	ø 9,5 mm



e-chain® viewable for illustration



micro flizz®-Series MF10 | Dimensions

Part No.	Bi [mm]	Ba [mm]	hi [mm]	ha [mm]	R Bending radius [mm]
MF.10.50.075	50	63	20	27,5	075

More dimensions

Installation height complete system:	275 mm
Installation width complete system:	107,6
Recommended length channel pieces:	Standard-trough piece length 2 m - Black anodised steel
Cable diameter max.:	ø 16 mm



e-chain® viewable for illustration

Order example - End feed

MF	06.	10.	018.	L / F	**MF.06.10.018.5000/2000** Series MF06
MF	08.	18.	035.	L / F	**MF.08.18.035.5000/2000** Series MF08
MF	10.	50.	075.	L / F	**MF.10.50.075.5000/2000** Series MF10

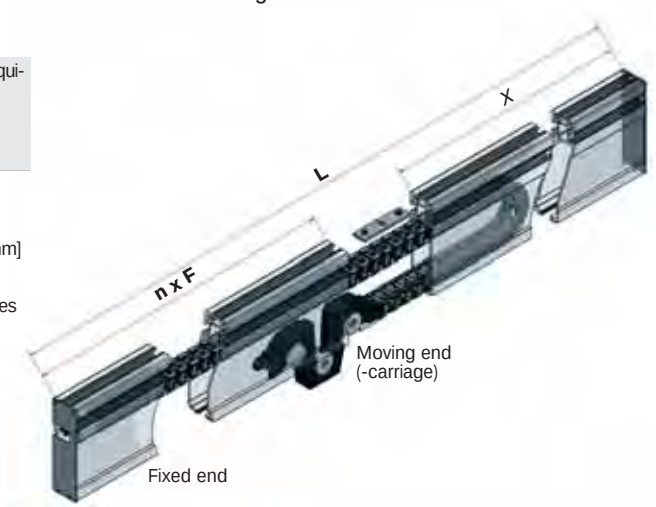
F = Field length [mm]
L = Total length [mm]
R = Bending radius [mm]
Bi = Inner e-chain® width
Type (Series)
micro flizz® end feed

micro flizz® as end feed option with a total length of 5000 mm, split into 2 channels each 2000 mm and 1 channel with a residual length of 1000 mm

Calculate the number of required channel pieces (n) thus:

$$n = \frac{L}{F}$$

Then round off the result.



Bi = Inner e-chain® width [mm]
R = Bending radius [mm]
n = Number of channel pieces
S = Travel = L - 300 [mm]
F = Field length [mm]
L = Total length [mm]
X = Residual length [mm]

F = Recommended channel lengths: 2000, 3000, 6000 mm
Bi = Series 06: 10 mm / Series 08: 18 mm / Series 10: 50 mm
hi = Series 06: 11 mm / Series 08: 13 mm / Series 10: 20 mm

Order example - 2 carriages in opposite directions

MFG2	06.	10.	018.	L / F	**MFG2.06.10.018.10000/3000** Series MF06
MFG2	08.	18.	035.	L / F	**MFG2.08.18.035.10000/3000** Series MF08
MFG2	10.	50.	075.	L / F	**MFG2.10.50.075.10000/3000** Series MF10

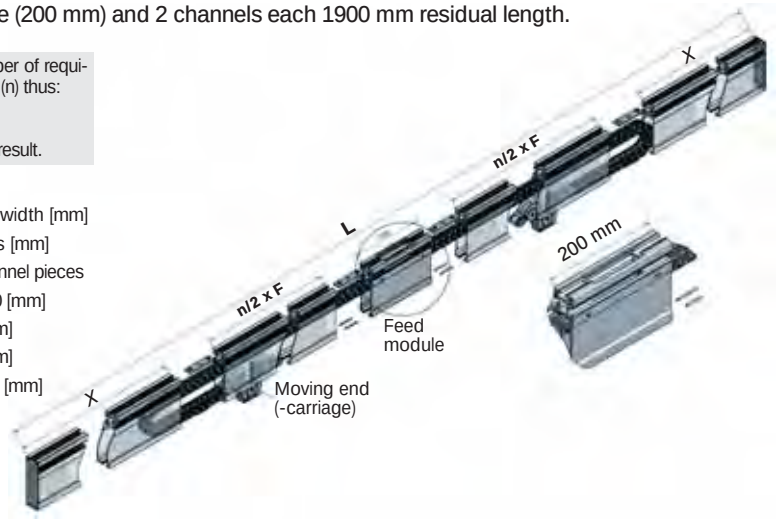
F = Field length [mm]
L = Total length [mm]
R = Bending radius [mm]
Bi = Inner e-chain® width
Type (Series)
micro flizz® 2 carriages in opposite directions

micro flizz® mounted with 2 carriages in opposite directions - Total length 10000 mm, split into 2 channels each 3000 mm, the feed module (200 mm) and 2 channels each 1900 mm residual length.

Calculate the number of required channel pieces (n) thus:

$$n = 2 \times \frac{L - 200}{2 \times F}$$

Then round off the result.



Bi = Inner e-chain® width [mm]
R = Bending radius [mm]
n = Number of channel pieces
S = Travel = L - 300 [mm]
F = Field length [mm]
L = Total length [mm]
X = Residual length [mm]

F = Recommended channel lengths: 2000, 3000, 6000 mm
Bi = Series 06: 10 mm / Series 08: 18 mm / Series 10: 50 mm
hi = Series 06: 11 mm / Series 08: 13 mm / Series 10: 20 mm



micro flizz® in an outdoor application
with 30 m travel



micro flizz® as energy supplying rail guide
of a scale to weigh chemicals, etc.



Energy supply to the strip at cold storage house
doors, in operation for more than one year

micro flizz® | Applications | Real-life tests



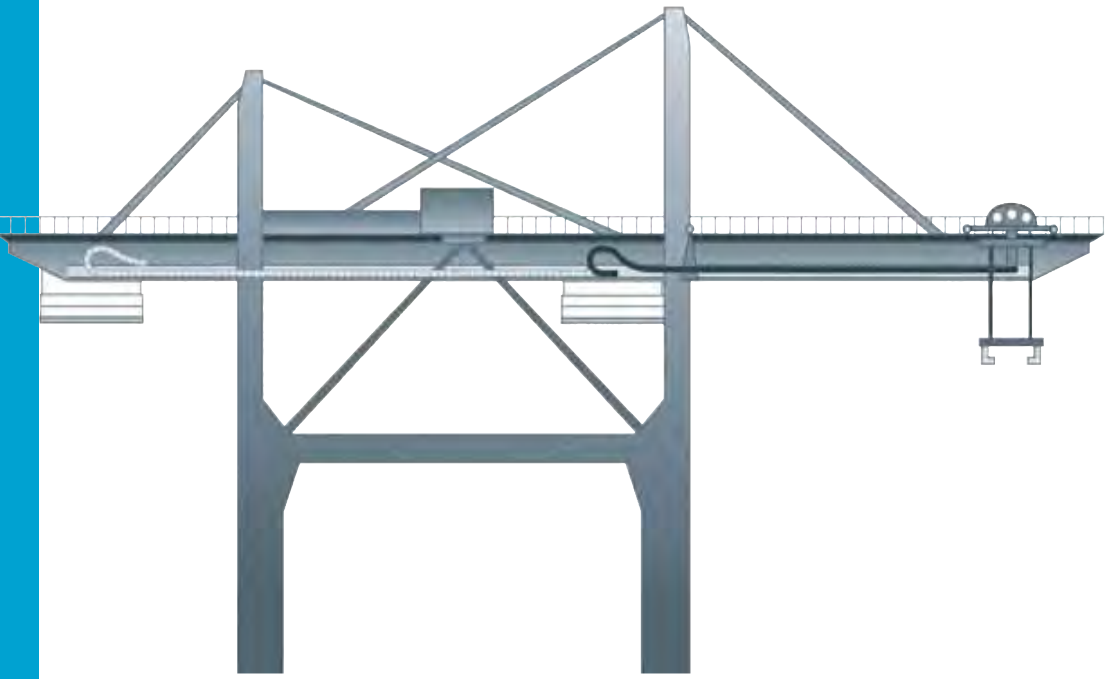
micro flizz®: ● s = 40 m ● v = 4 m/s ● a = 1 m/s²



Safe energy supply also under strong dust
and dirt accumulation with igus® micro flizz®



igus® running performance ca. 15.000 km without failure.
● s = 8,5 m ● v = 4 m/s ● a = 4 m/s²



For extremely heavy-duty applications and "special solutions from stock"

The igus® modular system for projects ...tested and time-proven in numerous projects, have now become available as a modular standard system.

- Faster quotations, faster project planning
- Detailed service manuals and documentation
- Time and cost savings
- Safe function
- System warranty available upon request, for individual applications
- PPDS-tow arm with electronic push/pull force monitoring
- Fixed end-modules for easy attachment of the e-chain® inside the guide trough, with no drilling required
- Extreme gliders gliding elements for even longer cycle life of e-chains® on long travels
- HD trough systems with different assembly kit designs, matching the respective application and stress levels

Typical industries and applications

● Cranes ● Offshore ● Cranes, offshore

Find a video online
►www.igus.eu/eu/System-Project

Available from stock. **Delivery time* in 24h or today!**

*Delivery time means time until shipping of goods (after technical release)



Long travels with electronics Push/Pull-force monitoring with the igus® PPDS System



igus® supervisors plan projects worldwide



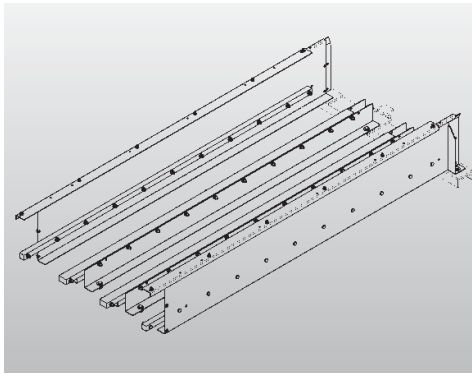
Series 4040R on a coal unloading system - travel 190 m, speed 0.5 m/s, fill weight 8.05 kg/m



Series 4040HD on 180 m travel lengths with housing.-40°C to +40°C (-40°F/+104°F) temperature range and high dirt pollution



Crane system designed by igus®



igus® project planning example, here: guide trough modules



PMA

corrugated conduits, connectors,
system support, accessories

PMAFLEX | Conduits | Cable protection



Product	Description	Page
PMA conduits		
PACOF	Flexible, medium, divisible	1376
BLNO	Divisible connectors	1377
BLN	Divisible lock nuts	1377
PCL	Very flexible, medium	1378
VOH	Pliable, very heavy	1379
PIS/PIH	Highly flexible, medium	1380
CYL	Very flexible, medium	1381

PMAFIX | Connectors | Safety and sealing systems



Product	Description	Page
PMA connectors		
IP66 - stat., IP54 dyn.	Universal safety clip	1382
IP68 - stat., IP67 dyn.	Oval clip	1382
PMAFIX / PMAFLEX	Connectors	1383
PMAFIX connectors VW	90° elbow, metric & PG	1384
PMAFIX connectors VN	Straight, metric & PG	1385
PMAFIX connectors VA	45° elbow, metric & PG	1386
PMAFIX connectors VB	90° curved elbow, metric & PG	1387
PMAFIX connectors VO	Flange 90°	1387

PMA | Accessories



Product	Description	Page
PMA accessories		
PMAFIX FH0	One-piece system support	1388
PMA MN	Hexagonal Lock Nuts, metric & PG	1388
PMA SGB	Conduit clamps	1389
PMA 514	Plug Screws, metric & PG	1389

PMA - corrugated conduits, connectors, system support, accessories

- Wide range of tubes
- Long service life of the tubes especially through millions of reverse bending cycles (I-PIST)
- UL-approved products
- PMAFIX safety locking system



PMA-Program - Wide selection of tubes and systems

The PMA cable protection system is applied wherever the mechanical protection of electrical wires and cables is required. Very flexible types of conduits are especially suitable for the additional protection of leads in e-chainsystems® if required. By combining technical excellence with rigorous international safety standards, PMA meets the demands of industry worldwide - specialising in applications from the machine building industries to high tech manufacturing; heavy plant and vehicle construction; fiber optics, solar energy and robotic applications with high speed and millions of reversed bending cycles.

PMAFLEX - Conduits

PMAFLEX covers different conduit types for a variety of applications in cable protection. The PMAFLEX range offers conduits for technically demanding applications and special requirements. Conduit sizes range from 4.5 mm to 125 mm diameters, from lightweight to heavyweight, and pliable to highly flexible. Standard colours are black and grey. Many conduits are specially approved, e.g. CSA, UL Recognition, NF, SNCF, DB, etc.

PMAFIX - Connectors

The designation PMAFIX describes a very large range of connectors for PMA conduits with the patented PMA safety clip system. Connectors are available for ingress protection IP66 and IP68. IP66 connectors are fitted with a preinstalled universal safety clip which ensures a quick "push-in" installation. IP68 connectors for increased requirements will be delivered with a special conduit seal cap.

TN - Divisible connectors, **PG** (inch thread) and **GTN** - Divisible lock nuts, **PG** (inch thread)
No longer available with inch thread since 01/01/2011. Metric thread ▶ next page

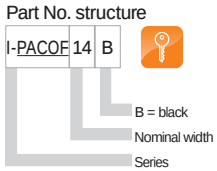
Please note: Since 2003 are only complete packaging units available on request!



PMAFLEX conduits PACOF - flexible, medium, divisible

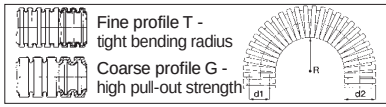
The PMA COFLEX conduit type PACOF has been created for retrofit and pre-loomed applications. New cables can be added without the need for re-wiring or re-threading within the building of machines and installations. Further, this product will be used increasingly in vehicle manufacturing and building construction. Divisible connectors and locknuts are available for this product group. **Features:** ● Specially modified polyamide 6, good closure up to IP50 ● Self-extinguishing, free of halogen and cadmium ● Temperature range: -40°C up to +105°C; short-term to +150°C ● Chemical resistance: To fuels, mineral oils, fats, alkalies, weak acids and bases etc.

Part No. structure



Part No. black	Conduit size NW	Conduit size metric	Inside Ø d1 [mm]	Outside Ø d2 [mm]	stat.** R [mm]	PU [m]
I-PACOF-07B	07	10	5, 9	10, 0	30	50
I-PACOF-10B	10	12	8, 5	12, 8	33	50
I-PACOF-12B	12	16	11, 0	15, 6	35	50
I-PACOF-17B	17	20	15, 5	21, 1	45	50
I-PACOF-23B	23	25	22, 1	28, 4	70	50
I-PACOF-29B	29	32	27, 2	34, 5	120	50
I-PACOF-36B	36	40	32, 0	42, 4	145	30
I-PACOF-48B	48	50	43, 9	51, 1	150	30
I-PACOF-70B	70	80	66, 0	80, 0	220	10

I-PACOF - suitable for static use only!



** *stat. R* = lowest recommended bending radius for static (fixed) installation

***dyn. R* = lowest recommended bending radius for dynamic (flexible) installation

BLNO - Divisible, straight, metric



In connection with slit PMA conduits and divisible PMA BLN lock nuts. For installation upon fully assembled cable looms or repair in machine and plant construction **Features:** ● Specially modified polyamide 6 ● IP54 - One-piece divisible fitting ● Self-extinguishing ● Free from halogens and cadmium ● Excellent impact strength ● Temperature range: -40°C up to +105°C; Short-term up to +160°C ● Special: Push-in installation of conduit into pre-installed fitting also possible ● Delivery: fitting delivered open

Part No. black	Thread metric	Fits to conduit size: NW	metric	Thread length [mm]	Total length [mm]
I-BLNO-M160	M16x1,5	12	16	13,0	36,5
I-BLNO-M162	M16x1,5	12	16	13,0	39,5
I-BLNO-M202	M20x1,5	12	16	13,0	39,5
I-BLNO-M207	M20x1,5	17	20	13,0	43,5
I-BLNO-M257	M25x1,5	17	20	14,0	44,5
I-BLNO-M253	M25x1,5	23	25	14,0	52,5
I-BLNO-M323	M32x1,5	23	25	17,0	56,0
I-BLNO-M329	M32x1,5	29	32	17,0	61,0
I-BLNO-M409	M40x1,5	29	32	21,0	65,0
I-BLNO-M406	M40x1,5	34	40	22,0	74,5
I-BLNO-M508	M50x1,5	48	50	22,0	80,5

BLN - Divisible lock nut, metric



In connection with PMA Divisible System fitting ● For installation upon fully assembled cable looms or repair in machine and plant construction **Features:** ● Specially modified polyamide 6 ● Excellent impact strength ● Simple installation ● Excellent chemical properties ● Free of halogen and cadmium ● Temperature range: -40°C up to +100°C; Short-term +130°C

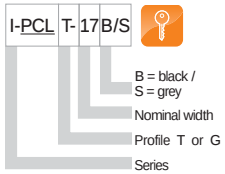
Part No. black	Thread metric	Fits to divisible system		Outside Ø [mm]	Width [mm]
I-BLN-M16	M16x1,5	I-BLNO-M160	I-BLNO-M162	21,5	8,0
I-BLN-M20	M20x1,5	I-BLNO-M202	I-BLNO-M207	29,0	8,0
I-BLN-M25	M25x1,5	I-BLNO-M257	I-BLNO-M253	35,5	9,0
I-BLN-M32	M32x1,5	I-BLNO-M323	I-BLNO-M329	44,5	12,0
I-BLN-M40	M40x1,5	I-BLNO-M409	I-BLNO-M406	53,5	15,0
I-BLN-M50	M40x1,5	I-BLNO-M508	–	69,5	15,0



PMAFLEX conduits PCL - very flexible, medium

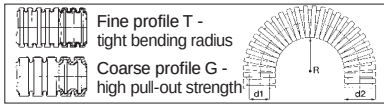
The PMAFLEX conduit type PCL is suitable for a wide range of applications in general machine building. Further more, this conduit type can be used in the vehicle building industry. The product is characterised by good weather resistance and applicability at low temperatures. **Features:** ● Specially modified polyamide 6/6.6 for cold impact ● Self-extinguishing ● Free of halogen and cadmium ● High impact strength also at low temperatures ● Temperature range: -50°C to 105°C; Short-term 150°C ● Chemical resistance: to fuels, mineral oils, fats, alkalies, weak acids and bases etc.

Part No. structure



Part No. black	Part No. grey	Conduit size NW	Conduit size metric	Inside Ø d1 [mm]	Outside Ø d2 [mm]	stat.** R [mm]	VE [m]
I-PCLT-07B	I-PCLT-07S	7	10	6.2	10.0	15	50
I-PCLT-10B	I-PCLT-10S	10	12	9.6	13.0	20	50
I-PCLT-12B	I-PCLT-12S	12	16	12.0	15.8	30	50
I-PCLT-17B	I-PCLT-17S	17	20	16.2	21.2	40	50
I-PCLT-23B	I-PCLT-23S	23	25	22.6	28.5	45	50
I-PCLT-29B	I-PCLT-29S	29	32	29.0	34.5	55	50
I-PCLT-36B	I-PCLT-36S	36	40	36.5	42.5	60	30
I-PCLT-48B	I-PCLT-48S	48	50	47.5	54.5	70	30
I-PCLG-17B	I-PCLG-17S	17	20	15.3	21.2	40	50
I-PCLG-23B	I-PCLG-23S	23	25	21.9	28.5	45	50
I-PCLG-29B	I-PCLG-29S	29	32	27.6	34.5	55	50
I-PCLG-36B	I-PCLG-36S	36	40	36.0	42.5	60	30
I-PCLG-48B	I-PCLG-48S	48	50	47.0	54.5	70	30
I-PCLG-56B	I-PCLG-56S	56	68	56.3	67.2	130	30
I-PCLG-70B	I-PCLG-70S	70	80	67.5	80.0	160	30
I-PCLG-95B	I-PCLG-95S	95	106	91.5	106.0	210	30
I-PCLG-125B	I-PCLG-125S	125	146	126.5	146.5	450	6

I-PCLT/PCLG - recommended for static use!
(moderate dynamic application possible)



** *stat. R* = lowest recommended bending radius for static (fixed) installation

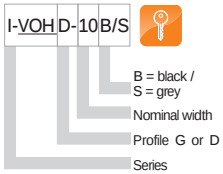
***dyn. R* = lowest recommended bending radius for dynamic (flexible) installation

PMAFLEX conduits VOH - pliable, very heavy

The robust construction of PMAFLEX VOH conduit lends it outstanding impact and pull-out resistance. In the US market, this conduit type can also be used for exterior applications in machinery and installations (from 17 mm inside diameter). This product offers the greatest possible mechanical protection with good flammability properties. **Features:** ● Specially modified polyamide 6 ● Very good self-extinguishing properties ● Free of halogen and cadmium ● High impact strength and pull-out resistance ● High stiffness and compression strength ● Temperature range: -40°C to 105°C; Short-term 150°C ● Chemical resistance: to fuels, mineral oils, fats, alkalies, weak acids and bases etc.

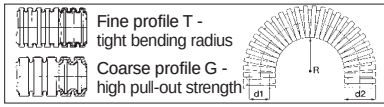


Part No. structure



Part No. black	Part No. grey	Conduit size NW	Conduit size metric	Inside Ø d1 [mm]	Outside Ø d2 [mm]	stat.** R [mm]	VE [m]
I-VOHD-07B	I-VOHD-07S	7	10	5.8	10.0	20	100
I-VOHD-10B	I-VOHD-10S	10	12	9.0	13.0	25	50
I-VOHD-12B	I-VOHD-12S	12	16	11.6	15.8	30	50
I-VOHG-17B	I-VOHG-17S	17	20	14.5	21.0	40	50
I-VOHG-23B	I-VOHG-23S	23	25	21.1	28.5	50	50
I-VOHG-29B	I-VOHG-29S	29	32	26.6	34.5	60	50
I-VOHG-36B	I-VOHG-36S	36	40	35.0	42.5	70	30
I-VOHG-48B	I-VOHG-48S	48	50	46.5	54.5	80	30
I-VOHG-56B	I-VOHG-56S	56	68	55.5	67.2	135	10
I-VOHG-70B	I-VOHG-70S	70	80	67.0	80.0	200	10
I-VOHG-95B	I-VOHG-95S	95	106	90.5	106.0	300	10
I-VOHG-125B	I-VOHG-125S	125	146	126.0	146.5	480	6

I-VOHD/VOH -
suitable for static use only!



** *stat. R* = lowest recommended bending radius for static (fixed) installation

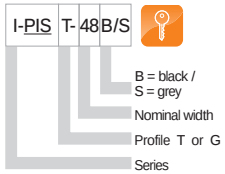
***dyn. R* = lowest recommended bending radius for dynamic (flexible) installation



PMAFLEX conduits PIS/PIH - highly flexible, medium

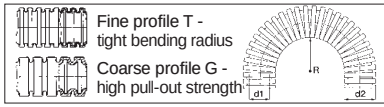
These highly flexible products are used primarily in automation applications and for connections subject to intense movements in general machinery construction. Their outstanding material properties make these conduits especially suitable for outdoor applications where they are exposed to intensive sunlight (UV). **Features:** ● Specially modified polyamide 12 ● PIS: medium-wall (nominal width 07 to 48) - PIH: heavy-wall (nominal width 56 to 125) ● Self-extinguishing ● Free of halogen and cadmium ● Good mechanical properties also at low temperatures ● Temperature range: -50°C to 95°C; Short-term 150°C ● Chemical resistance: To fuels, mineral oils, fats, alkalies, acids and bases etc.

Part No. structure



Part No. black	Part No. grey	Conduit size NW	Conduit size metric	Inside Ø d1 [mm]	Outside Ø d2 [mm]	stat.**/dyn.*** R [mm]	VE [m]
I-PIST-07B	I-PIST-07S	7	10	6.2	10.0	15 / 40	50
I-PIST-10B	I-PIST-10S	10	12	9.6	13.0	20 / 50	50
I-PIST-12B	I-PIST-12S	12	16	11.9	15.8	25 / 65	50
I-PIST-17B	I-PIST-17S	17	20	16.4	21.1	30 / 65	50
I-PIST-23B	I-PIST-23S	23	25	22.6	28.4	35 / 90	50
I-PIST-29B	I-PIST-29S	29	32	29.0	34.3	45 / 110	50
I-PIST-36B	I-PIST-36S	36	40	36.5	42.5	60 / 165	30
I-PIST-48B	I-PIST-48S	48	50	47.5	54.5	70 / 180	30
I-PISG-17B	–	17	20	15.2	21.1	30 / 80	50
I-PISG-23B	I-PISG-23S	23	25	21.7	28.4	40 / 100	50
I-PISG-29B	I-PISG-29S	29	32	27.4	34.3	50 / 120	50
I-PISG-36B	I-PISG-36S	36	40	35.8	42.3	60 / 180	30
I-PISG-48B	I-PISG-48S	48	50	46.7	54.2	70 / 200	30
I-PIHG-56B	I-PIHG-56S	56	68	56.3	67.2	110 / 270	30
I-PIHG-70B	I-PIHG-70S	70	80	67.2	79.6	150 / 350	30
I-PIHG-95B	I-PIHG-95S	95	106	91.3	106.0	170 / 450	30
I-PIHG-125B	I-PIHG-125S	125	146	126.5	146.5	350 / 580	20

I-PIS/PIH -
Recommended for highly flexible applications!



** *stat. R* = lowest recommended bending radius for static (fixed) installation

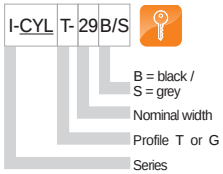
***dyn. R* = lowest recommended bending radius for dynamic (flexible) installation

PMAFLEX conduits CYL - very flexible, medium

PMA CYL ECONOMY conduit exhibits very good flexibility and is also suitable for low-temperature applications. These conduits are used primarily in construction of machinery and equipment. **Features:** ● Specially modified polyamide 6/6.6 for cold impact ● Self-extinguishing, free of halogen and cadmium ● High impact strength also at low temperatures ● Temperature range: -40°C to 105°C; Short-term 150°C ● Chemical resistance: to fuels, mineral oils, fats, alkalies, weak acids and bases etc.

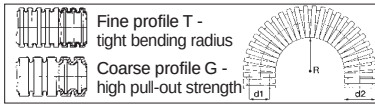


Part No. structure



Part No. black	Part No. grey	Conduit size NW	Conduit size metric	Inside Ø d1 [mm]	Outside Ø d2 [mm]	stat.** R [mm]	VE [m]
I-CYLT-07B	I-CYLT-07S	7	10	6.2	10.0	15	50
I-CYLT-10B	I-CYLT-10S	10	12	9.6	13.0	20	50
I-CYLT-12B	I-CYLT-12S	12	16	12.0	15.8	30	50
I-CYLT-17B	I-CYLT-17S	17	20	16.2	21.2	40	50
I-CYLT-23B	I-CYLT-23S	23	25	22.6	28.5	40	50
I-CYLT-29B	I-CYLT-29S	29	32	29.0	34.5	50	50
I-CYLT-36B	I-CYLT-36S	36	40	36.5	42.5	60	30
I-CYLT-48B	I-CYLT-48S	48	50	47.5	54.5	70	30
I-CYLG-23B	I-CYLG-23S	23	25	21.9	28.5	45	50
I-CYLG-29B	I-CYLG-29S	29	32	27.6	34.5	55	50
I-CYLG-36B	I-CYLG-36S	36	40	36.0	42.5	60	30
I-CYLG-48B	I-CYLG-48S	48	50	47.0	54.5	70	30
I-CYLG-56B	–	56	68	56.3	67.2	120	30
I-CYLG-70B	–	70	80	68.0	80.0	160	30
I-CYLG-95B	–	95	106	91.9	106.0	210	10
I-CYLG-125B	–	125	146	126.5	146.5	450	6

I-CYLT/CYLG - recommended for static use!
(moderate dynamic application possible)



** *stat. R* = lowest recommended bending radius for static (fixed) installation

***dyn. R* = lowest recommended bending radius for dynamic (flexible) installation

IP66 - static, IP54 dynamic

- One piece fitting, sealing by cone
- Easy "push-in" installation
- Preassembled safety clip AFN2
- Fits any type of conduit profile (T and G)
- Excellent pull-out strength
- Re-opening for safety reasons only possible with a screwdriver
- Clip preassembled in all IP66 connectors



Installation



IP68 - static, IP67 dynamic

- High sealing through additional seal cap
- For highest dynamic applications
- Fits any type of conduit profile (T and G)
- Excellent pull-out strength
- Re-opening for safety reasons only possible with a screwdriver



Installation



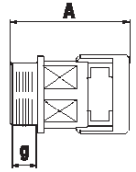
*For safety reasons, oval clip will not fit if seal cap is not fully installed.
Ensure to follow O-ring manufacturers guidelines when using O-rings for sealing purposes.

PMAFIX - Connectors

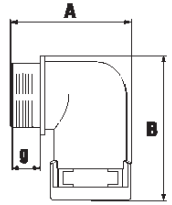
The designation PMAFIX describes a very large range of connectors for PMA conduits with the patented PMA safety clip system. Connectors are available for ingress protection IP66 and IP68. IP66 connectors are fitted with a preinstalled universal safety clip which ensures a quick "push-in" installation. IP68 connectors for increased requirements will be delivered with a special conduit seal cap.

Table 1 - **PMAFIX / PMAFLEX** conduit code

Nominal width	UK sizes	PMA code
7	10	M
10	12	0
12	16	2
17	20	7
23	25	3
29	32	9
36	40	6
48	50	8



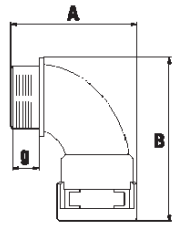
g = Thread length
A = Total length



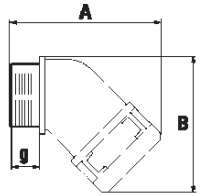
g = Thread length
A x B = External dim.

Table 2 - Thread codes

Thread metric	PMA code	Thread PG	PMA code
M12 x 1.5	M12	PG07	P07
M16 x 1.5	M16	PG09	P09
M20 x 1.5	M20	PG11	P11
M25 x 1.5	M25	PG13.5	P13
M32 x 1.5	M32	PG16	P16
M40 x 1.5	M40	PG21	P21
M50 x 1.5	M50	PG29	P29
M63 x 1.5	M63	PG36	P36
		PG42	P42
		PG48	P48



g = Thread length
A x B = External dim.

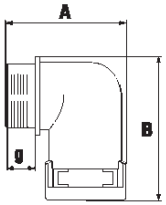


g = Thread length
A x B = External dim.



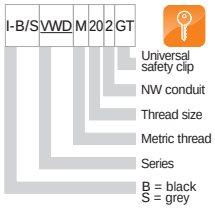
PMAFIX Connectors VW - 90° elbow, metric & PG

These PMAFIX connectors are used in a wide range of applications. Together with PMAFLEX conduits they offer the highest grade of safety and sealing. **Features:** ● High-grade formulated polyamide ● Self-extinguishing, free of halogen, phosphor and cadmium ● Excellent impact strength ● Temperature range: -40°C to 105°C; Short-term 160°C ● Content of delivery IP66: Fitting with preassembled universal safety clips (AFN2), IP68: Fitting with oval clips (OVN2), conduit and thread seal (NVN3, SVN4).

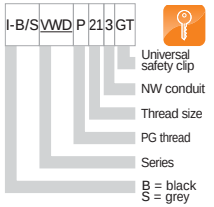


g = Thread length
A x B = External dim.

Part No. structure metric



Part No. structure PG



Part No. IP66	Part No. IP68	Thread metric	Fits to conduit size: NW	metric	Thread length [mm]	External dim. [mm]
I-⊡VWD-M12MGT	I-⊡VWV-M12M	M12 x 1.5	7	10	11.0	32.0 x 35.0
I-⊡VWD-M120GT	I-⊡VWV-M120	M12 x 1.5	10	12	11.0	34.0 x 39.5
I-⊡VWD-M160GT	I-⊡VWV-M160	M16 x 1.5	10	12	11.0	34.0 x 40.5
I-⊡VWD-M162GT	I-⊡VWV-M162	M16 x 1.5	12	16	11.0	38.5 x 46.0
I-⊡VWD-M202GT	I-⊡VWV-M202	M20 x 1.5	12	16	11.0	38.5 x 47.5
I-⊡VWD-M207GT	I-⊡VWV-M207	M20 x 1.5	17	20	11.0	43.5 x 58.5
I-⊡VWD-M253GT	I-⊡VWV-M253	M25 x 1.5	23	25	12.0	54.0 x 65.0
I-⊡VWD-M329GT	I-⊡VWV-M329	M32 x 1.5	29	32	15.0	64.5 x 73.0
I-⊡VWD-M406GT	I-⊡VWV-M406	M40 x 1.5	36	40	19.0	78.0 x 96.0
I-⊡VWD-M508GT	I-⊡VWV-M508	M50 x 1.5	48	50	19.0	91.5 x 106.0

Part No. IP66	Part No. IP68	Thread metric	Fits to conduit size: NW	metric	Thread length [mm]	External dim. [mm]
I-⊡VWD-P07MGT-11	I-⊡VWV-P07M	7	7	10	11.0	32.0 x 35.0
I-⊡VWD-P070GT-11	I-⊡VWV-P070	7	10	12	11.0	34.0 x 39.5
I-⊡VWD-P09MGT-11	–	9	7	10	11.0	32.0 x 36.5
I-⊡VWD-P090GT-11	I-⊡VWV-P090	9	10	12	11.0	34.0 x 39.5
I-⊡VWD-P092GT-11	I-⊡VWV-P092	9	12	16	11.0	38.5 x 44.5
I-⊡VWD-P11MGT-11	–	11	7	10	11.0	32.0 x 38.0
I-⊡VWD-P110GT-11	I-⊡VWV-P110	11	10	12	11.0	34.0 x 41.0
I-⊡VWD-P112GT-11	I-⊡VWV-P112	11	12	16	11.0	38.5 x 46.0
I-⊡VWD-P13MGT-11	–	13.5	7	10	11.0	32.0 x 39.5
I-⊡VWD-P130GT-11	I-⊡VWV-P130	13.5	10	12	11.0	34.0 x 42.5
I-⊡VWD-P132GT-11	I-⊡VWV-P132	13.5	12	16	11.0	38.5 x 47.5
I-⊡VWD-P137GT-11	I-⊡VWV-P137	13.5	17	20	11.0	43.5 x 58.5
I-⊡VWD-P167GT-11	I-⊡VWV-P167	16	17	20	11.0	43.5 x 58.5
I-⊡VWD-P213GT	I-⊡VWV-P213	21	23	25	11.0	54.0 x 67.0
I-⊡VWD-P299GT	I-⊡VWV-P299	29	29	32	12.0	61.5 x 74.5
I-⊡VWD-P366GT	I-⊡VWV-P366	36	36	40	13.0	72.0 x 98.0
I-⊡VWD-P488GT	I-⊡VWV-P488	48	48	50	13.0	85.5 x 111.0

⊡ = Replace with "B" to order black or "S" to order grey

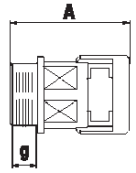
For the sizes NW 17 to NW 48 curved elbows of type VB are available.

PMAFIX | Connectors | Safety and sealing systems



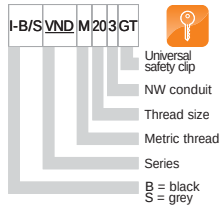
PMAFIX Connectors VN - straight, metric & PG

These PMAFIX connectors are used in a wide range of applications. Together with PMAFLEX conduits they offer the highest grade of safety and sealing. **Features:** ● High-grade formulated polyamide ● Self-extinguishing, free of halogen, phosphor and cadmium ● Excellent impact strength ● Temperature range: -40°C to 105°C; Short-term bis 160°C ● Content of delivery IP66: Fitting with preassembled universal safety clips (AFN2), IP68: Fitting with oval clips (OVN2), conduit and thread seal (NVN3, SVN4)

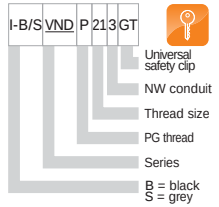


g = Thread length
A = Total length

Part No. structure metric



Part No. structure PG

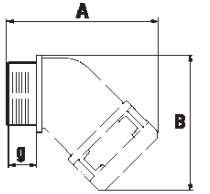


Part No. IP66	Part No. IP68	Thread metric	Fits to conduit size: NW	metric	Thread length [mm]	Total length [mm]
I-⊡VND-M12MGT	I-⊡VNV-M12M	M12 x 1.5	7	10	11.0	34.5
I-⊡VND-M120GT	I-⊡VNV-M120	M12 x 1.5	10	12	11.0	36.5
I-⊡VND-M160GT	I-⊡VNV-M160	M16 x 1.5	10	12	11.0	36.5
I-⊡VND-M162GT	I-⊡VNV-M162	M16 x 1.5	12	16	11.0	39.5
I-⊡VND-M202GT	I-⊡VNV-M202	M20 x 1.5	12	16	11.0	39.5
I-⊡VND-M207GT	I-⊡VNV-M207	M20 x 1.5	17	20	11.0	47.5
I-⊡VND-M257GT	I-⊡VNV-M257	M25 x 1.5	17	20	12.0	48.5
I-⊡VND-M253GT	I-⊡VNV-M253	M25 x 1.5	23	25	12.0	52.0
I-⊡VND-M323GT	I-⊡VNV-M323	M32 x 1.5	23	25	15.0	55.5
I-⊡VND-M329GT	I-⊡VNV-M329	M32 x 1.5	29	32	15.0	56.0
I-⊡VND-M409GT	I-⊡VNV-M409	M40 x 1.5	29	32	19.0	60.0
I-⊡VND-M406GT	I-⊡VNV-M406	M40 x 1.5	36	40	19.0	72.5
I-⊡VND-M506GT	I-⊡VNV-M506	M50 x 1.5	36	40	19.0	72.0
I-⊡VND-M508GT	I-⊡VNV-M508	M50 x 1.5	48	50	19.0	72.5
I-⊡VND-M638GT	I-⊡VNV-M638	M63 x 1.5	48	50	19.0	72.0

Part No. IP66	Part No. IP68	Thread PG	Fits to conduit size: NW	metric	Thread length [mm]	Total length [mm]
I-⊡VND-P07MGT-11	I-⊡VNV-P07M	7	7	10	11.0	34.5
I-⊡VND-P070GT-11	I-⊡VNV-P070	7	10	12	11.0	36.5
I-⊡VND-P072GT-11	–	7	12	16	11.0	39.0
I-⊡VND-P09MGT-11	I-⊡VNV-P09M	9	7	10	11.0	34.5
I-⊡VND-P090GT-11	I-⊡VNV-P090	9	10	12	11.0	36.5
I-⊡VND-P092GT-11	I-⊡VNV-P092	9	12	16	11.0	39.0
I-⊡VND-P097GT-11	I-⊡VNV-P097	9	17	20	11.0	47.5
I-⊡VND-P11MGT-11	I-⊡VNV-P11M	11	7	10	11.0	34.5
I-⊡VND-P110GT-11	I-⊡VNV-P110	11	10	12	11.0	36.5
I-⊡VND-P112GT-11	I-⊡VNV-P112	11	12	16	11.0	39.0
I-⊡VND-P117GT-11	I-⊡VNV-P117	11	17	20	11.0	47.5
I-⊡VND-P13MGT-11	–	13.5	7	10	11.0	34.5
I-⊡VND-P130GT-11	I-⊡VNV-P130	13.5	10	12	11.0	36.5
I-⊡VND-P132GT-11	I-⊡VNV-P132	13.5	12	16	11.0	39.0
I-⊡VND-P137GT-11	I-⊡VNV-P137	13.5	17	20	11.0	47.5
I-⊡VND-P160GT-11	–	16	10	12	11.0	36.5
I-⊡VND-P162GT-11	I-⊡VNV-P162	16	12	16	11.0	39.0
I-⊡VND-P167GT-11	I-⊡VNV-P167	16	17	20	11.0	47.5
I-⊡VND-P163GT-11	I-⊡VNV-P163	16	23	25	11.0	51.0
I-⊡VND-P213GT	I-⊡VNV-P213	21	23	25	12.0	52.0
I-⊡VND-P299GT	I-⊡VNV-P299	29	29	32	12.0	53.0
I-⊡VND-P296GT	I-⊡VNV-P296	29	36	40	12.0	67.5
I-⊡VND-P366GT	I-⊡VNV-P366	36	36	40	13.0	66.0
I-⊡VND-P368GT	–	36	48	50	13.0	68.5
I-⊡VND-P428GT	I-⊡VNV-P428	42	48	50	13.0	68.5
I-⊡VND-P488GT	I-⊡VNV-P488	48	48	50	13.0	66.5

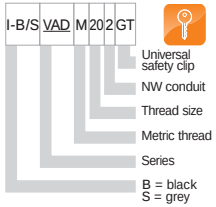
⊡ = Replace with "B" to order black or "S" to order grey



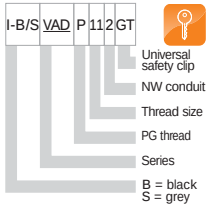


g = Thread length
A x B = External dim.

Part No. structure metric



Part No. structure PG



PMAFIX Connectors VA - 45° elbow, metric & PG

These PMAFIX connectors are used in a wide range of applications. Together with PMAFLEX conduits they offer the highest grade of safety and sealing. **Features:** ● High-grade formulated polyamide, thread made of nickel-plated brass ● Self-extinguishing, free of halogen, phosphor and cadmium ● Excellent impact strength ● Temperature range: -40°C to 105°C; Short-term to160°C ● Content of delivery IP66: Fitting with preassembled universal safety clips (AFN2), IP68: Fitting with oval clips (OVN2), conduit and thread seal (NVN3, SVN4)

Part No. IP66	Part No. IP68	Thread metric	Fits to conduit size: NW	metric	Thread length [mm]	External dim. [mm]
I-⍟VAD-M120GT	–	M12 x 1.5	10	12	11.0	43.5 x 37.0
I-⍟VAD-M160GT	I-⍟VAV-M160	M16 x 1.5	10	12	11.0	43.5 x 38.0
I-⍟VAD-M162GT	I-⍟VAV-M162	M16 x 1.5	12	16	11.0	48.0 x 40.0
I-B⍟VAD-M202GT	I-B⍟VAV-M202	M20 x 1.5	12	16	11.0	48.0 x 41.5
I-⍟VAD-M207GT	I-⍟VAV-M207	M20 x 1.5	17	20	11.0	55.5 x 51.5
I-⍟VAD-M253GT	I-⍟VAV-M253	M25 x 1.5	23	25	12.0	65.0 x 58.5
I-⍟VAD-M329GT	I-⍟VAV-M329	M32 x 1.5	29	32	15.0	73.5 x 66.5
I-⍟VAD-M406GT	I-⍟VAV-M406	M40 x 1.5	36	40	19.0	92.5 x 85.5
I-⍟VAD-M506GT	I-⍟VAV-M506	M50 x 1.5	36	40	19.0	100.0 x 89.5
I-⍟VAD-M508GT	I-⍟VAV-M508	M50 x 1.5	48	50	19.0	100.0 x 96.0
I-⍟VAD-M638GT	I-⍟VAV-M638	M63 x 1.5	48	50	19.0	100.0x 104.0

Part No. IP66	Part No. IP68	Thread PG	Fits to conduit size: NW	metric	Thread length [mm]	External dim. [mm]
I-⍟VAD-P090GT	I-⍟VAV-P090	9	10	12	11.0	43.5 x 37.0
I-⍟VAD-P112GT	I-⍟VAV-P112	11	12	16	11.0	48.0 x 40.0
I-⍟VAD-P132GT	I-⍟VAV-P132	13.5	12	16	11.0	48.0 x 41.5
I-B⍟VAD-P137GT	I-B⍟VAV-P137	13.5	17	20	11.0	55.0 x 50.0
I-⍟VAD-P167GT	I-⍟VAV-P167	16	17	20	11.0	55.0 x 51.5
I-⍟VAD-P213GT	I-⍟VAV-P213	21	23	25	12.0	67.0 x 59.0
I-⍟VAD-P299GT	I-⍟VAV-P299	29	29	32	12.0	69.0 x 67.0
I-⍟VAD-P366GT	I-B⍟VAV-P366	36	36	40	13.0	86.0 x 86.0
I-⍟VAD-P488GT	I-B⍟VAV-P488	48	48	50	13.0	93.0 x 99.0

⍟ = Replace with "B" to order black or "S" to order grey

PMAFIX Connectors VB - 90° curved elbow, metric & PG

These PMAFIX connectors are used in a wide range of applications. Together with PMAFLEX conduits they offer the highest grade of safety and sealing. **Features:** ● High-grade formulated polyamide ● Self-extinguishing, free of halogen, phosphor and cadmium ● Excellent impact strength ● Temperature range: -40°C to 105°C; Short-term to 160°C ● Content of delivery IP66: Fitting with preassembled universal safety clips (AFN2), IP68: Fitting with oval clips (OVN2), conduit and thread seal (NVN3, SVN4)

Part No. IP66	Part No. IP68	Thread metric	Fits to conduit size: NW	metric	Thread length [mm]	External dim. [mm]
I-⍟VBD-M207GT	I-⍟VBV-M207	M20 x 1.5	17	20	11.0	47.5 x 73.0
I-⍟VBD-M257GT	I-⍟VBV-M257	M25 x 1.5	17	20	12.0	48.5 x 76.0
I-⍟VBD-M253GT	I-⍟VBV-M253	M25 x 1.5	23	25	12.0	57.5 x 83.0
I-⍟VBD-M323GT	I-⍟VBV-M323	M32 x 1.5	23	25	15.0	61.0 x 87.5
I-⍟VBD-M329GT	I-⍟VBV-M329	M32 x 1.5	29	32	15.0	70.5 x 93.0
I-⍟VBD-M409GT	I-⍟VBV-M409	M40 x 1.5	29	32	19.0	74.5 x 98.5
I-⍟VBD-M406GT	I-⍟VBV-M406	M40 x 1.5	36	40	19.0	85.0 x 121.0
I-⍟VBD-M506GT	I-⍟VBV-M506	M50 x 1.5	36	40	19.0	85.0 x 125.0
I-⍟VBD-M508GT	I-⍟VBV-M508	M50 x 1.5	48	50	19.0	98.5 x 130.0
I-⍟VBD-M638GT	I-⍟VBV-M638	M63 x 1.5	48	50	19.0	98.5 x 138.0

Part No. IP66	Part No. IP68	Thread PG	Fits to conduit size: NW	metric	Thread length [mm]	External dim. [mm]
I-⍟VBD-P167GT	I-⍟VBV-P167	16	17	20	11.0	47.4 x 73.0
I-⍟VBD-P213GT	I-⍟VBV-P213	21	23	25	12.0	57.5 x 85.0
I-⍟VBD-P299GT	I-⍟VBV-P299	29	29	32	12.0	67.5 x 96.0
I-⍟VBD-P366GT	I-⍟VBV-P366	36	36	40	13.0	79.0 x 123.0
I-⍟VBD-P488GT	I-⍟VBV-P488	48	48	50	13.0	92.5 x 135.0

⍟ = Replace with "B" to order black or "S" to order grey

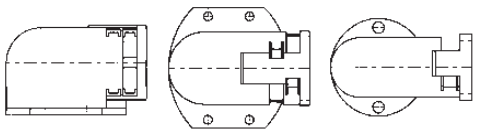
For smaller conduit sizes NW 07 to NW 12 appropriate standard elbows of type VW are available

PMAFIX Connectors VO - flange 90°

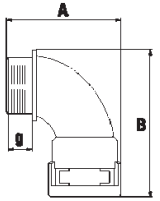
These PMAFIX connectors are used in a wide range of applications. Together with PMAFLEX conduits they offer the highest grade of safety and sealing. **Features:** ● IP66: Fitting with preassembled universal safety clips (AFN2), flange seal (OR) ● IP68: Fitting with oval clips (OVN2), conduit and flange seal (NVN3, OR)

Part No. IP66	Part No. IP68	Fits to conduit size: size NW	size metric	Dimensions width x length x depth	Fixing screws
I-⍟VOD-P167GT	I-⍟VOV-P167	17	20	45.0 x 66.0 x 34.0	2 x M5
I-⍟VOD-P213GT	I-⍟VOV-P213	23	25	63.0 x 70.0 x 42.0	2 x M6
I-⍟VOD-P299GT	I-⍟VOV-P299	29	32	67.0 x 78.0 x 48.0	4 x M6
I-⍟VOD-P366GT	I-⍟VOV-P366	36	40	85.0 x 102.0 x 64.0	4 x M6
I-⍟VOD-P488GT	I-⍟VOV-P488	48	50	86.0 x 119.0 x 76.0	4 x M6

⍟ = Replace with "B" to order black or "S" to order grey

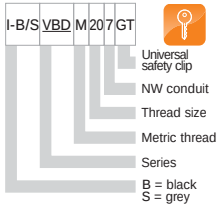




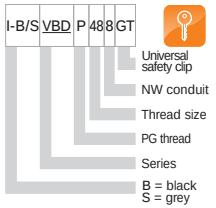


g = Thread length
A x B = External dim.

Part No. structure metric

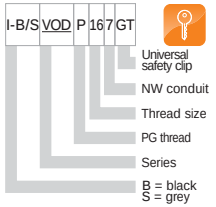


Part No. structure PG





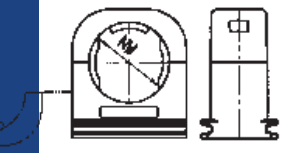
Part No. structure PG





PMAFIX FH-0 - one-piece system supports

The one-piece PMACLIP system support is designed for fixation of PMAFLEX conduits. This product can be used in all machine and installation applications for easy assembly of the PMA system. **Features:** ● High-grade formulated polyamide ● Self-extinguishing, free of halogen, phosphor and cadmium ● Excellent impact strength ● Temperature range: -40°C to 105°C; Short-term 160°C



Part No. black	Part No. grey	Fits to conduit size: NW	metric	Dimensions width x length x depth	Fixing screws
I-BFH-07-0	I-SFH-07-0	7	10	17.0 x 21.5 x 20.0	1 x M4
I-BFH-10-0	I-SFH-10-0	10	12	20.5 x 24.5 x 20.0	1 x M5
I-BFH-12-0	I-SFH-12-0	12	16	24.0 x 27.0 x 20.0	1 x M5
I-BFH-17-0	I-SFH-17-0	17	20	30.0 x 34.0 x 20.0	1 x M6
I-BFH-23-0	I-SFH-23-0	23	25	38.5 x 42.0 x 20.0	1 x M6
I-BFH-29-0	I-SFH-29-0	29	32	45.5 x 48.0 x 20.0	1 x M6
I-BFH-36-0	I-SFH-36-0	36	40	55.5 x 56.0 x 20.0	1 x M6
I-BFH-48-0	I-SFH-48-0	48	50	67.5 x 68.0 x 20.0	1 x M6

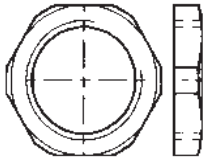


PMA MN - hexagon lock nuts, metric & PG

These hexagon lock nuts are suitable for a wide range of applications. High torque guarantees a safe connection of the system. **Features:** ● Polyamide glass fiber reinforced ● Temperature range: -40°C to 105°C; Short-term 150°C

Part No. black	Part No. grey	Fits to Thread: metric	Wrench size	Dimensions height
I-BMN-M12	I-GMN-M12	M12 x 1.5	17.0	5.0
I-BMN-M16	I-GMN-M16	M16 x 1.5	22.0	5.0
I-BMN-M20	I-GMN-M20	M20 x 1.5	27.0	6.0
I-BMN-M25	I-GMN-M25	M25 x 1.5	32.0	6.0
I-BMN-M32	I-GMN-M32	M32 x 1.5	41.0	7.0
I-BMN-M40	I-GMN-M40	M40 x 1.5	50.0	7.0
I-BMN-M50	I-GMN-M50	M50 x 1.5	60.0	8.0
I-BMN-M63	I-GMN-M63	M63 x 1.5	75.0	8.0

Part No. black	Part No. grey	Fits to Thread: PG	Wrench size	Dimensions height
I-BMN-07	I-GMN-07	7	19.0	5.0
I-BMN-09	I-GMN-09	9	22.0	5.0
I-BMN-11	I-GMN-11	11	24.0	5.0
I-BMN-13	I-GMN-13	13.5	27.0	6.0
I-BMN-16	I-GMN-16	16	30.0	6.0
I-BMN-21	I-GMN-21	21	36.0	7.0
I-BMN-29	I-GMN-29	29	46.0	7.0
I-BMN-36	I-GMN-36	36	60.0	8.0
I-BMN-48	I-GMN-48	48	70.0	8.0

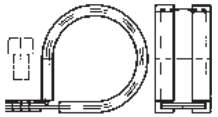


PMA SGB - Conduit clamps

These conduit clamps are used for the mounting and smooth connection to the PMA conduits in the general machine and installation constructions. They are especially suitable for the mounting of static conduits. **Features:** ● Galvanized steel according to DIN 3016 ● Elastomer free of halogen ● Temperature range: -50°C to 105°C



Part No.	Fits to: size NW	Fits to: size metric	Dimensions Width [mm]	Fixing screw
I-SGB-07	7	10	13.0	1 x M4
I-SGB-09	10	12	13.0	1 x M4
I-SGB-11	12	16	13.0	1 x M4
I-SGB-16	17	20	16.0	1 x M5
I-SGB-21	23	25	16.0	1 x M5
I-SGB-29	29	32	19.0	1 x M6
I-SGB-36	36	40	19.0	1 x M6
I-SGB-48	48	50	19.0	1 x M6



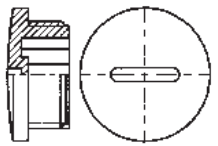
PMA 514 - Plug screws, metric & PG

These plug screws are suitable for an accurate termination where no thread holes in casing and distribution boxes are needed. **Features:** ● Product with metric thread: PA-GF. Product with PG thread: PS ● Free of halogen, phosphor and cadmium ● IP54 ● Temperature range: -20°C to 60°C; Short-term 100°C



Part No.	Fits to Thread metric	Outside Ø [mm]	Total length [mm]	Thread length [mm]
I-514-M12	M12 x 1.5	15.0	8.0	6.0
I-514-M16	M16 x 1.5	20.0	9.0	6.0
I-514-M20	M20 x 1.5	24.0	9.5	6.0
I-514-M25	M25 x 1.5	30.0	11.5	8.0
I-514-M32	M32 x 1.5	37.0	12.0	8.0
I-514-M40	M40 x 1.5	46.0	13.0	8.0
I-514-M50	M50 x 1.5	56.0	15.0	10.0
I-514-M63	M63 x 1.5	70.0	17.0	12.0

Part No.	Fits to Thread PG	Outside Ø [mm]	Total length [mm]	Thread length [mm]
I-514-07	7	15.0	8.0	6.0
I-514-09	9	19.0	9.5	6.5
I-514-11	11	22.0	10.0	6.5
I-514-13	13.5	25.0	10.0	6.5
I-514-16	16	27.0	10.0	6.5
I-514-21	21	33.0	12.0	8.0
I-514-29	29	44.0	11.5	8.0
I-514-36	36	55.0	14.0	10.0
I-514-48	48	69.0	16.0	12.0



Standard Corrugated Conduits



Products		PCL PA6		CYL PA6		VOH PA6		PIS PA12		FH
Conduit size: metric	NW	Very flexible medium wall conduits		Very flexible medium wall conduits		Flexible, very heavy conduits		Highly flexible medium wall Conduits		PMACLIP - one-piece system support
10	07	PCLT-07*	–	CYLT-07*	–	VDHD-07*	–	PIST-07*	–	*FH-07-0
12	10	PCLT-10*	–	CYLT-10*	–	VOHD-10*	–	PIST-10*	–	*FH-10-0
16	12	PCLT-12*	–	CYLT-12*	–	VOHD-12*	–	PIST-12*	–	*FH-12-0
20	17	PCLT-17*	PCLG-17*	CYLT-17*	–	-	VOHG-17*	PIST-17*	PISG-17*	*FH-17-0
25	23	PCLT-23*	PCLG-23*	CYLT-23*	CYLG-23*	–	VOHG-23*	PIST-23*	PISG-23*	*FH-23-0
32	29	PCLT-29*	PCLG-29*	CYLT-29*	CYLG-29*	–	VOHG-29*	PIST-29*	PISG-29*	*FH-29-0
40	36	PCLT-36*	PCLG-36*	CYLT-36*	CYLG-36*	–	VOHG-36*	PIST-36*	PISG-36*	*FH-36-0
50	48	PCLT-48*	PCLG-48*	CYLT-48*	CYLG-48*	–	VOHG-48*	PIST-48*	PISG-48*	*FH-48-0

* = replace with "B" for black or "S" for grey T or D = fine profile G = coarse profile

Standard Conduits



Products		PCL PA6		CYL PA6		VOH PA6		PIS PA12		FH
Conduit size: metric	NW	Very flexible medium wall conduits		Very flexible medium wall conduits		Flexible, very heavy conduits		Highly flexible medium wall Conduits		PMACLIP - one-piece system support
10	07	PCLT-07*	–	CYLT-07*	–	VDHD-07*	–	PIST-07*	–	*FH-07-0
12	10	PCLT-10*	–	CYLT-10*	–	VOHD-10*	–	PIST-10*	–	*FH-10-0
16	12	PCLT-12*	–	CYLT-12*	–	VOHD-12*	–	PIST-12*	–	*FH-12-0
20	17	PCLT-17*	PCLG-17*	CYLT-17*	–	-	VOHG-17*	PIST-17*	PISG-17*	*FH-17-0
25	23	PCLT-23*	PCLG-23*	CYLT-23*	CYLG-23*	–	VOHG-23*	PIST-23*	PISG-23*	*FH-23-0
32	29	PCLT-29*	PCLG-29*	CYLT-29*	CYLG-29*	–	VOHG-29*	PIST-29*	PISG-29*	*FH-29-0
40	36	PCLT-36*	PCLG-36*	CYLT-36*	CYLG-36*	–	VOHG-36*	PIST-36*	PISG-36*	*FH-36-0
50	48	PCLT-48*	PCLG-48*	CYLT-48*	CYLG-48*	–	VOHG-48*	PIST-48*	PISG-48*	*FH-48-0

* = replace with "B" for black or "S" for grey T or D = fine profile G = coarse profile

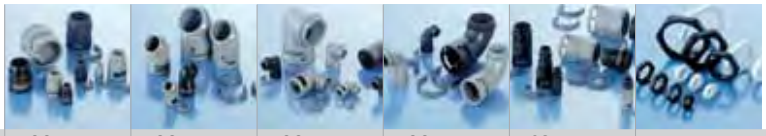
JUMBO Conduits PMAGRIP



Products	PCLG PA6	PIHG PA12	BGG	BGO	SGS
Conduit size: NW	Very flexible medium wall conduits	Very flexible medium wall conduits	PMAGRIP- straight	PMAGRIP- 90° angle	PMAGRIP- Conduit clamps
56	PCLG-56*	PIHG-56*	*GG-56	*GO-56	SGS-56
70	PCLG-70*	PIHG-70*	*GG-70	*GO-70	SGS-70
95	PCLG-95*	PIHG-95*	*GG-95	*GO-95	SGS-95
125	PCLG-125*	PIHG-125*	*GG-125	–	SGS-125

* = replace with "B" for black or "S" for grey T or D = fine profile G = coarse profile

PMAFIX



Products	IP66 - VN	IP66 - VA	IP66 - VW	IP66 - VB	IP68 - VNZ	MN
Thread type	PMAFIX straight	PMAFIX 45° angle	PMAFIX 90° angle	PMAFIX 90° elbow	Straight with strain relief	PMA hexagon lock nuts
M12x1.5	*VND-M12MGT	–	*VWD-M12MGT	–	–	*MN-M12
M12x1.5	*VND-M120GT	*VAD-M120GT	*VWD-M120GT	–	–	*MN-M12
M16x1.5	*VND-M162GT	*VAD-M162GT	*VWD-M162GT	–	*VNZ-M162S	*MN-M16
M20x1.5	*VND-M207GT	*VAD-M207GT	*VWD-M207GT	*VBD-M207GT	*VNZ-M207S	*MN-M20
M25x1.5	*VND-M253GT	*VAD-M253GT	*VWD-M253GT	*VBD-M253GT	*VNZ-M253S	*MN-M25
M32x1.5	*VND-M329GT	*VAD-M329GT	*VWD-M329GT	*VBD-M329GT	*VNZ-M329S	*MN-M32
M40x1.5	*VND-M406GT	*VAD-M406GT	*VWD-M406GT	*VBD-M406GT	*VNZ-M406S	*MN-M40
M50x1.5	*VND-M508GT	*VAD-M508GT	*VWD-M508GT	*VBD-M508GT	*VNZ-M508S	*MN-M50

* = replace with "B" for black or "S" for grey

PMAFIX



Products		IP66 - VOD	IP66 - VY	IP66 - FT/VT	IP66 - FV	SGB
Conduit size: metric NW		PMAFIX flange 90°	PMAFIX Y-distribution piece	PMAFIX T-distribution piece	PMAFIX V-distribution piece	PMAFIX- Conduit clamps
10	07	–	–	–	–	SGB-07
12	10	–	*VYD-100707GT	*FTD-101010GT	*FVD-100707GT	SGB-09
16	12	–	*VYD-121010GT	*FTD-121212GT	*FVD-121010GT	SGB-11
20	17	*VOD-P167GT	*VYD-171212GT	*FTD-171717GT	*FVD-171212GT	SGB-16
25	23	*VOD-P213GT	*VYD-231717GT	*VTD-232323GT	*FVD-231717GT	SGB-21
32	29	*VOD-P299GT	*VYD-292323GT	*FTD-292929GT	–	SGB-29
40	36	*VOD-P366GT	*VYD-362929GT	*VTD-363636GT	–	SGB-36
50	48	*VOD-P488GT	*VYD-483636GT	–	–	SGB-48

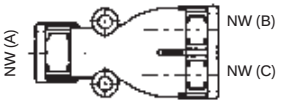
* = replace with "B" for black or "S" for grey

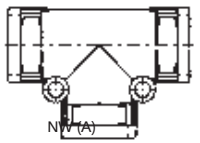
PMAFIX - Order example

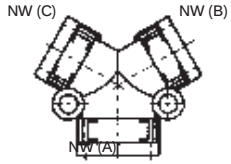
XXXX-10 07 07 XX

NW (A)
NW (B)
NW (C)

PMAFIX - Distribution







Please note: Since 2003 are only complete packaging units available on request!

igus®
fax-forms & addresses



Fax | e-chainsystems® | Fax-Order | Fax- Enquiry

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Order No.

page_____ of _____ pages

Item No.	igus® Order No.	Number	Price

We are ordering according to igus® general terms of sale.
The prices are exclusive of the statutory value-added tax.

Delivery date

Signature/stamp

Fax | e-chainsystems® | Fax-Order | Fax- Enquiry

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Order No.

page_____ of _____ pages

Item No.	igus® Order No.	Number	Price

We are ordering according to igus® general terms of sale.
The prices are exclusive of the statutory value-added tax.

Delivery date

Signature/stamp

Please copy, fill in and fax to +49 2203 9649-222 or visit our homepage ▶ www.igus.eu

Fax | e-chainsystems® | Project application

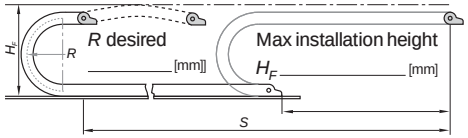
Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Type of Application - please mark with a cross

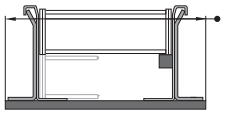
Unsupported application ☐ | Gliding application ☐ | Hanging application ☐ | Standing application ☐ | Side-mounted application ☐ | Rotary motion application ☐ | Horizontal + vertical ☐ | Nested application ☐ | Side by side application ☐ | Zig-Zag application ☐ | Combined motions ☐

Travel *S*
_____ [mm]

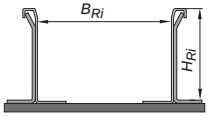
Fixed end
center of travel ☐ yes or
_____ [mm] from the center



Assembly point (floor, wall, console, etc.) _____ [mm]



Construction width
Max. width permitted?
_____ [mm]



Guide trough?
☐ yes. if yes which:
Dim. B_{Ri} _____ [mm]
Dim. H_{Ri} _____ [mm]

Span (standard = 2 m) _____ [mm]

Dynamics

Speed _____ [m/s] Acceleration _____ [m/s²] Ø Outer diameter _____ [mm]
Cycles/Day _____ Days/Year _____

Environment

Temperature _____ [°C] Humidity _____ [%] Dust, dirt, chips _____
Special parameters _____

Cables/Hoses

Number	Manufacturer/Type, No.	Conductor/AWG	Ø [mm]	Weight [kg/m]	Bending Radius

Further individual components desired

e-chains® / e-tubes ☐
chainflex® cables/special conduits ☐
Guide troughs ☐
Strain relief ☐
Harnessing ☐
On-site assembly ☐
Others _____

e-chain® ☐
e-tube ☐
To be openedon both sides ☐
Along the outer radius ☐
Along the inner radius ☐
Special requests _____

Fax | e-chainsystems® | Harnessing application

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

e-chain® type	Length

Cable/hose requirements:

Interior separation / Vertical separators

Cable/hose layout within carrier

Cable/Hose End 1	Connector End 1	Union 1	Cable/Hose End 2	Union 2	Connector End 2

Fax | Project analysis | Zig-Zag application

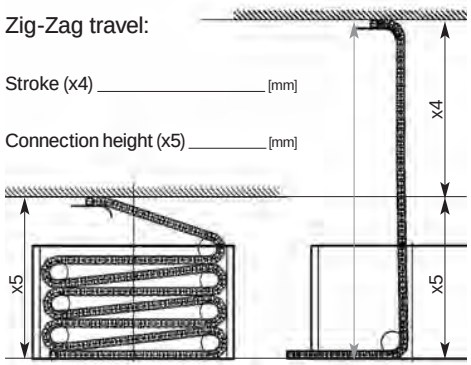
Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Zig-Zag application - Installation space

Zig-Zag travel:

Stroke (x4) _____ [mm]

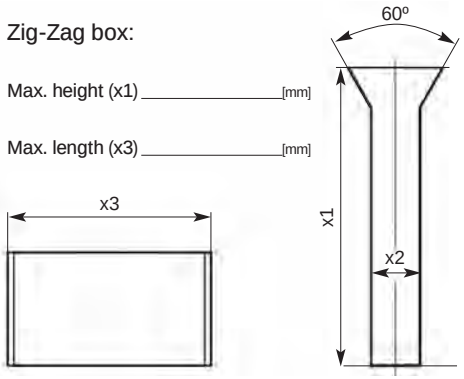
Connection height (x5) _____ [mm]



Zig-Zag box:

Max. height (x1) _____ [mm]

Max. length (x3) _____ [mm]



e-chain® Series _____ Min. permitted radius _____ [mm] Max. additional load _____ [kg/m]

Dynamics

Speed _____ [m/s] Acceleration _____ [m/s²] Ø Outer diameter _____ [mm]

Cycles/Day _____ Days/Year _____

Environment

Temperature _____ [°C] Humidity _____ [%] Special parameters _____

Cables/Hoses

Number	Manufacturer/Type, No.	Conductor/AWG	Ø [mm]	Weight [kg/m]	Bending Radius

Further individual components desired

e-chains® / e-tubes	☐	e-chain®	☐
chainflex® cables/special conduits	☐	e-tube	☐
Guide troughs	☐	To be openedon both sides	☐
Strain relief	☐	Along the outer radius	☐
Harnessing	☐	Along the inner radius	☐
On-site assembly	☐	Special requests _____	
Others _____			

Fax | Project analysis | RBR* application (*Reverse Bending Radius)

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

RBR application - Installation space

Side View

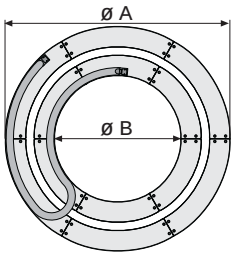
h _____ [mm]



Top View

ø A _____ [mm]

ø B _____ [mm]



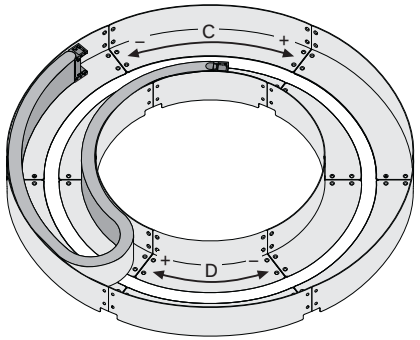
3D View

C Outer rotating ☐

D Inner rotating ☐

Rotation angle

± _____ [°/mm]



Dynamics

Speed _____ [m/s] Acceleration _____ [m/s²] Ø Outer diameter _____ [mm]

Cycles/Day _____ Days/Year _____

Environment

Temperature _____ [°C] Kind of _____ (e.g. chips)

Humidity _____ [%] ESD _____

Dirt/Dust _____ Special parameters _____

Cables/Hoses

Number	Manufacturer/Type, No.	Conductor/AWG	Ø [mm]	Weight [kg/m]	Bending Radius

Further individual components desired

e-chains® / e-tubes	☐	e-chain®	☐
chainflex® cables/special conduits	☐	e-tube	☐
Guide troughs	☐	To be openedon both sides	☐
Strain relief	☐	Along the outer radius	☐
Harnessing	☐	Along the inner radius	☐
On-site assembly	☐	Special requests _____	
Others _____			

Fax | Project analysis | Zig-Zag application

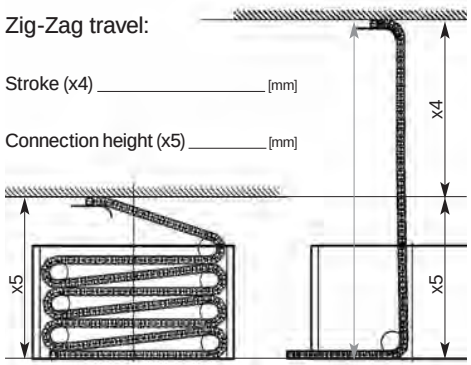
Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

Zig-Zag application - Installation space

Zig-Zag travel:

Stroke (x4) _____ [mm]

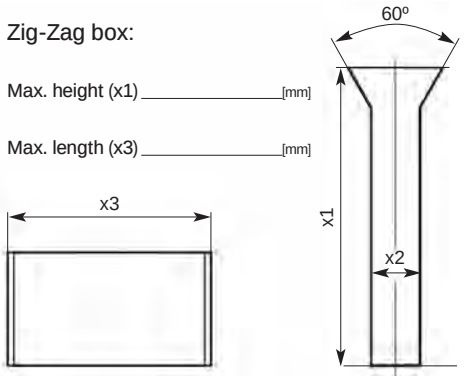
Connection height (x5) _____ [mm]



Zig-Zag box:

Max. height (x1) _____ [mm]

Max. length (x3) _____ [mm]



e-chain® Series _____ Min. permitted radius _____ [mm] Max. additional load _____ [kg/m]

Dynamics

Speed _____ [m/s] Acceleration _____ [m/s²] Ø Outer diameter _____ [mm]

Cycles/Day _____ Days/Year _____

Environment

Temperature _____ [°C] Humidity _____ [%] Special parameters _____

Cables/Hoses

Number	Manufacturer/Type, No.	Conductor/AWG	Ø [mm]	Weight [kg/m]	Bending Radius

Further individual components desired

e-chains® / e-tubes	☐	e-chain®	☐
chainflex® cables/special conduits	☐	e-tube	☐
Guide troughs	☐	To be openedon both sides	☐
Strain relief	☐	Along the outer radius	☐
Harnessing	☐	Along the inner radius	☐
On-site assembly	☐	Special requests _____	
Others _____			

Fax | Project analysis | RBR* application (*Reverse Bending Radius)

Date:	Phone: +49 2203 9649-800 Fax: +49 2203 9649-222
From: Phone: Fax:	To: **igus® GmbH - Technical Sales** e-chainsystems® Spicher Str. 1a 51147 Cologne (Porz-Lind)

RBR application - Installation space

Side View

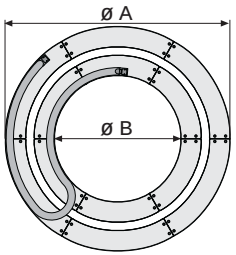
h _____ [mm]



Top View

ø A _____ [mm]

ø B _____ [mm]



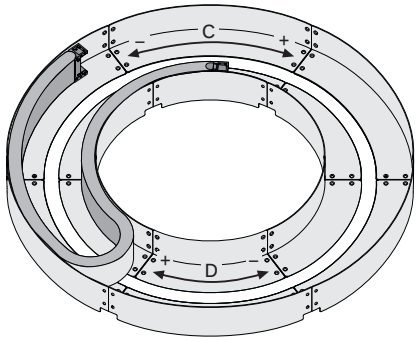
3D View

C Outer rotating ☐

D Inner rotating ☐

Rotation angle

± _____ [°/mm]



Dynamics

Speed _____ [m/s] Acceleration _____ [m/s²] Ø Outer diameter _____ [mm]

Cycles/Day _____ Days/Year _____

Environment

Temperature _____ [°C] Kind of _____ (e.g. chips)

Humidity _____ [%] ESD _____

Dirt/Dust _____ Special parameters _____

Cables/Hoses

Number	Manufacturer/Type, No.	Conductor/AWG	Ø [mm]	Weight [kg/m]	Bending Radius

Further individual components desired

e-chains® / e-tubes	☐	e-chain®	☐
chainflex® cables/special conduits	☐	e-tube	☐
Guide troughs	☐	To be openedon both sides	☐
Strain relief	☐	Along the outer radius	☐
Harnessing	☐	Along the inner radius	☐
On-site assembly	☐	Special requests _____	
Others _____			

A

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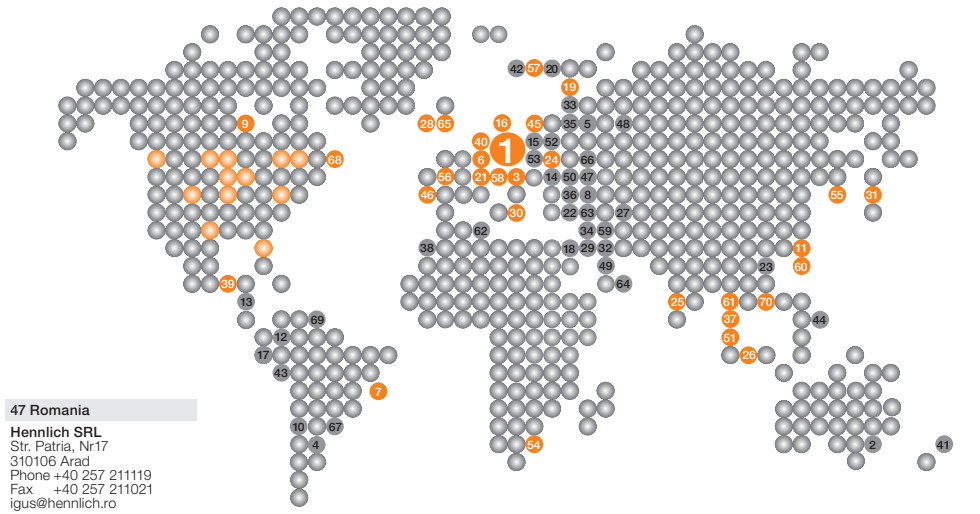

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