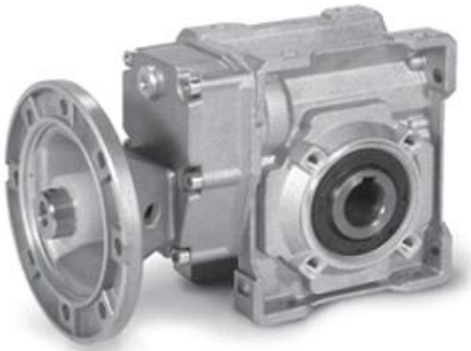


Серия HF Цилиндро-червячный мотор-редуктор.

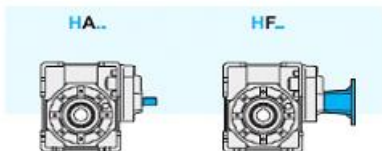


Цилиндро-червячный мотор-редуктор “TRAMEC” серии HF комплектуется электродвигателями мощностью от 0,09 кВт до 2,2 кВт с крутящим моментом от 31 Нм до 1726 Нм и передаточным отношением от 30:1 до 400:1.

Серия редукторов Н предлагает те же самые особенности как серия Х с добавлением предступени и более широкий диапазон передаточных отношений, чем серия Х.

Редуктор TRAMEC серии Н доступен для заказа с двумя видами исполнения входного вала:

- входной цельнометаллический вал серия НА
- входной вал с фланцем и муфтой под электродвигатель серия HF



Корпуса редукторов TRAMEC выполнены, из алюминия с использованием технологии литья, под давлением начиная с HF 90 используется высокопрочный чугун. Доступны опции: выходной фланец, ограничитель крутящего момента, второй

вход, односторонний или двухсторонний вал, реактивная штанга.

Цилиндро-червячный редуктор TRAMEC имеет следующие типоразмеры:

HF 40, HF 50, HF 63, HF 75, HF 90, HF 110, HF 130.

Типоразмер	Нм max	Двух. вала мм
HF 40	66	18
HF 50	116	25
HF 63	220	25
HF 75	350	28
HF 90	560	35
HF 110	970	42
HF 130	1726	48

Технические характеристики:

Присоединительные размеры мотор-редукторов

г.Ростов-на-Дону:

ул. Магнитогорская 1Г, к. 20



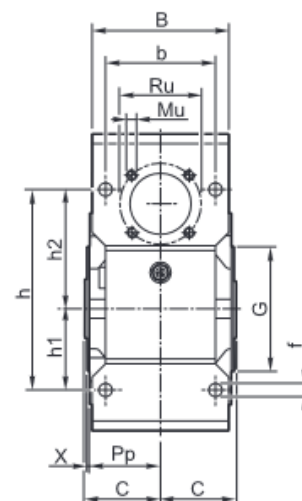
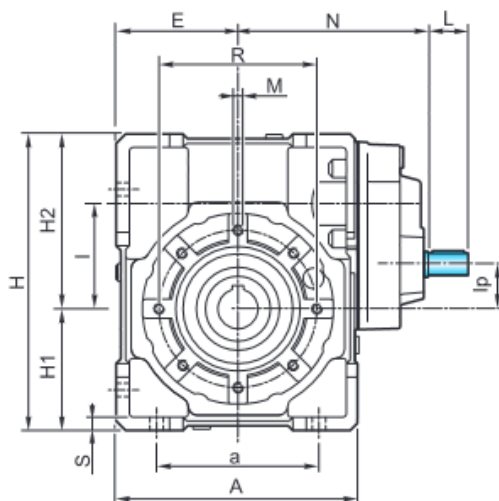
Т.к. (863) 221-25-48
Т.моб.: +7-903-401-25-48

e-mail: zakaz@itrostov.ru

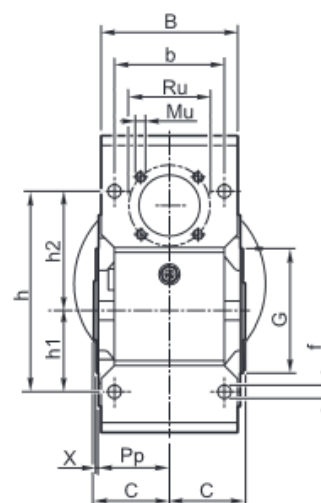
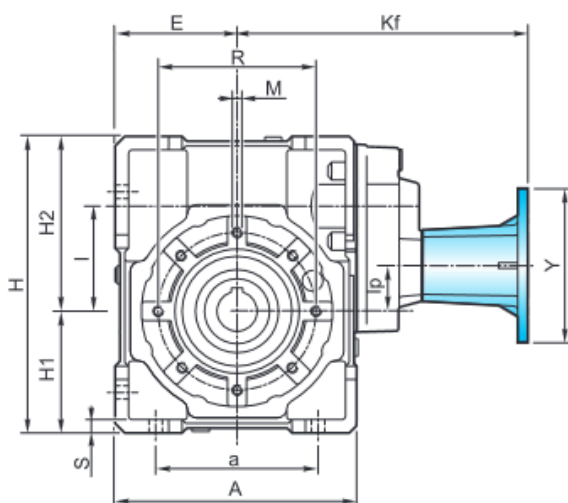
www.itrostov.ru

Редуктор TRAMES HF

HA

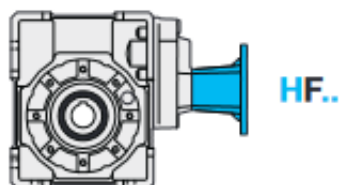


HF



Размеры под электродвигатель

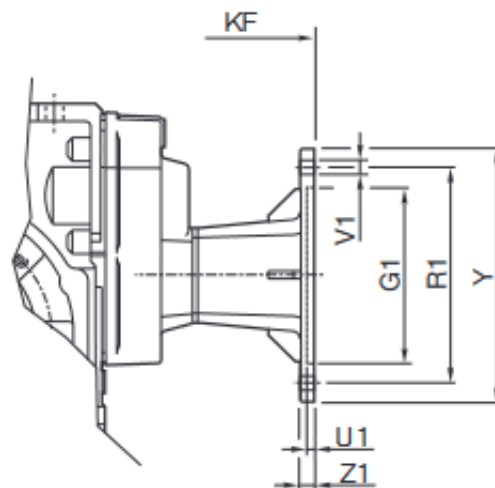
Flangia entrata / Input flange / Antriebsflansch






PM = 1



PM = 2



HF	IEC	PM		G ₁ H7	K _F	R ₁	U ₁	∅	V ₁			Y	Z ₁
		1	2										
40	56 B5	•	•	80	129.5	100	3.5	7		8		120	8
	56 B14		•	50	129.5	65	3.5	6			4	80	8
	63 B5	•	•	95	132.5	115	4	9		8		140	10
	63 B14	•	•	60	132.5	75	3.5	6		8		90	8
50	56 B5	•	•	80	148.5	100	3.5	7		8		120	8
	63 B5	•	•	95	151.5	115	4	9		8		140	10
	63 B14	•	•	60	151.5	75	3.5	6		8		90	8
	71 B5	•	•	110	158.5	130	4.5	9		8		160	10
	71 B14	•	•	70	158.5	85	4	7		8		105	10
63	63 B5	•	•	95	173	115	4	9		8		140	10
	71 B5	•	•	110	180	130	4.5	9		8		160	10
	71 B14		•	70	180	85	3.5	7			4	105	10
	80 B5	•	•	130	190	165	4.5	11		8		200	10
	80 B14	•	•	80	190	100	4	7		8		120	10
75	71 B5	•	•	110	221.5	130	4.5	9		8		160	10
	80/90 B5	•	•	130	232	165	4.5	11		8		200	10
	80 B14	•	•	80	222	100	4	7		8		120	10
	90 B14	•	•	95	232	115	4	9		8		140	10
90	71 B5	•	•	110	221.5	130	4.5	9		8		160	10
	80/90 B5	•	•	130	242	165	4.5	11		8		200	10
	80 B14	•	•	80	232	100	4	7		8		120	10
	90 B14	•	•	95	242	115	4	9		8		140	10
110	80/90 B5	•	•	130	294.5	165	4.5	11		8		200	10
	90 B14		•	95	294.5	115	4	9			4	140	10
	100/112 B5	•	•	180	304.5	215	5	14		8		250	14
	100/112 B14	•	•	110	304.5	130	4.5	9		8		160	10
130	80/90 B5	•	•	130	345.5	165	4.5	11	4			200	12
	100/112 B5	•	•	180	355.5	215	5	14	4			250	14

N.B.: Il montaggio STD di P_M=2 solo quando non è possibile il montaggio STD di P_M=1.

N.B.: STD mounting of P_M=2 only if STD mounting of P_M=1 is not possible.

ANMERKUNG: STD Montage von P_M=2 nur wenn STD Montage von P_M=1 unmöglich ist.

Выходной вал, реактивная штанга

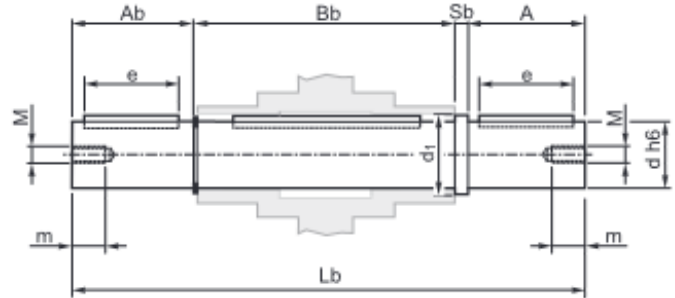
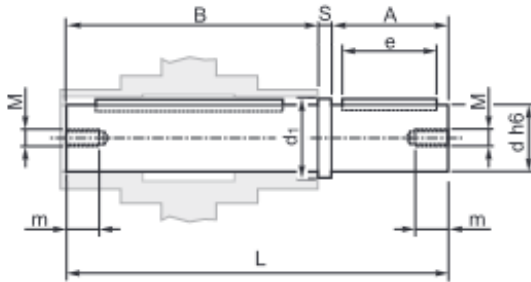
Albero lento

Output shaft

Abtriebswelle

Albero lento semplice
Single output shaft
Standard Abtriebswelle

Albero lento doppio
Double output shaft
Doppelte Abtriebswelle



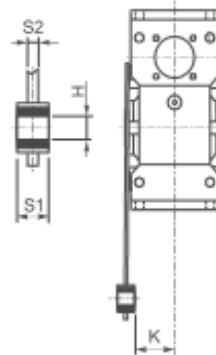
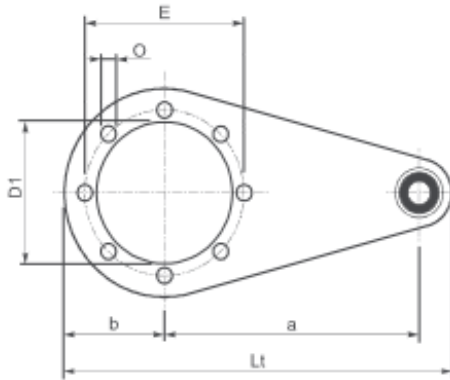
X	A	B	d h6		d ₁	e	L	M	m	S
40	40	77	18	19	23.5	30	120	M6	16	3
50	50	90	25	24	31.5	40	143.5	M8	22	3.5
63	50	111	25	30	31.5	40	165	M8	22	4
75	60	119	28	30	34.5	50	183	M8	22	4
90	80	139	35	30	41.5	60	224	M10	28	5
110	80	154.5	42	30	49.5	60	242.5	M10	28	8
130	80	168	45	30	54.5	70	253	M16	36	5

A	A _b	B _b	d h6		d ₁	e	L _b	S _b
40	39	79	18	19	23.5	30	161	3
50	49	93	25	24	31.5	40	195.5	3.5
50	49	113	25	30	31.5	40	216	4
60	59	121	28	30	34.5	50	244	4
80	78.5	141.5	35	30	41.5	60	305	5
80	77.5	157	42	30	49.5	60	322.5	8
80	78	172	45	30	54.5	70	335	5

Braccio di reazione

Torque arm

Drehmomentstütze



H	a	b	D ₁	E	H	K	L _t	O	S1	S2
40	100	45	60	75	10	31.5	167	7	14	4
50	100	50	70	85	10	39	172	9	14	5
63	150	55	80	95	10	49	227	9	14	6
75	200	70	95	115	20	47.5	302	9	25	6
90	200	80	110	130	20	57.5	312	11	25	6
110	250	100	130	165	25	62	390	11	30	6
130	250	125	180	215	25	69	415	13	30	6

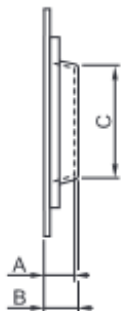
Kit di protezione:

Protection Kit:

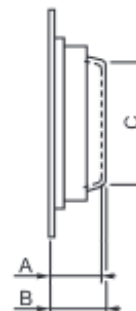
Schutzvorrichtung

Albero cavo / Hollow shaft / Hohlwelle

Limitatore di coppia / Torque limiter / Drehmomentbegrenzer



	A	B	C
40	14	15.5	44
50	15	16.5	54
63	17	19	60
75	18	20	70
90	21.5	24	80
110	22	25	96
130	22	25	130



	A	B	C
40	40	41.5	44
50	47	48.5	53
63	52	54	55
75	58	60	68
90	60.5	63	70
110	72	75	85
130			

Opzioni disponibili:

Available options:

Auf Anfrage ist folgendes Zubehör erhältlich:

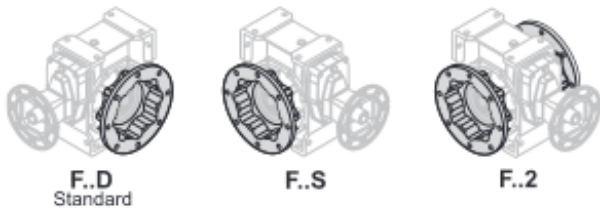
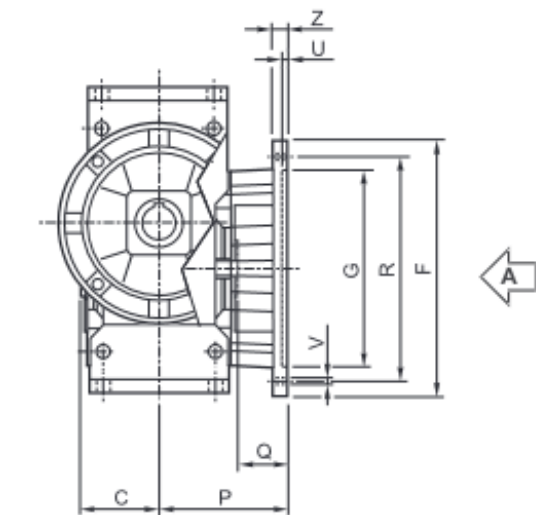
Cuscinetti a rulli conici corona

Tapered roller bearing on worm wheel

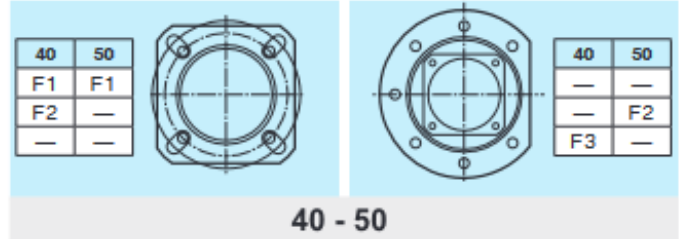
Kegelrollenlager auf Schneckenrad

Выходной фланец

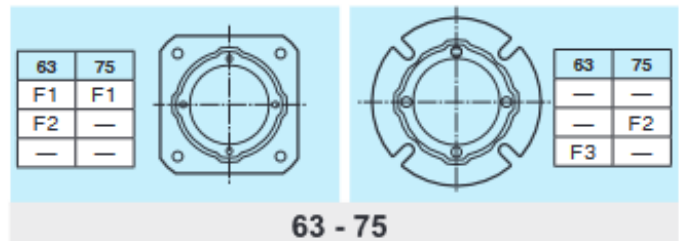
Flangia uscita / Output flange / Abtriebsflansch



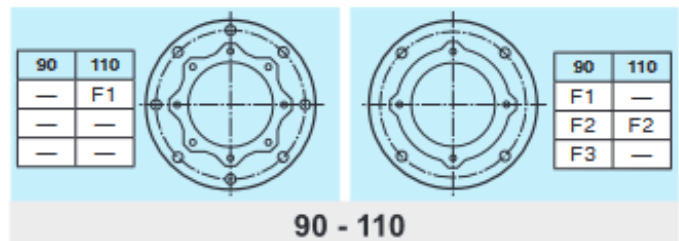
Vista da A / View from A / Ansicht von A



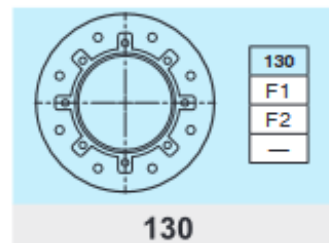
40 - 50





















63 - 75



90 - 110



130

Тро Type Typ	C	F		G H8	P	Q	R	U	V			Z	
											∅		
40	39			85	60	67	28	75-90	4	n° 4		9	8
				85	60	97	58	75-90	4	n° 4		9	8
				140	95	80	41	115	5		n° 7	9	10
50	46			94	70	90	44	85-100	5	n° 4		11	10
				160	110	89	43	130	5		n° 7	11	11
63	56			142	115	82	26	150	5	n° 4		11	11
				142	115	112	56	150	5	n° 4		11	11
				160	110	80.5	24.5	130	5	n° 4		11	12
75	60			160	130	111	51	165	5	n° 4		13	12
				160	110	90	30	130	6	n° 4		11	13
90	70			200	152	111	41	175	5	n° 4		13	12
				200	152	151	81	175	5	n° 4		13	13
				200	130	110	40	165	6	n° 4		11	11
110	77.5			260	170	131	53.5	230	6		n° 8	13	15
				250	180	150	72.5	215	5	n° 4		15	16
130	85			320	180	140	55	255	7		n° 8 *	16	16
				300	230			265					

* Foratura ruotata di 22.5°

* Drilling turned of 22.5°

* Durchbohrung 22.5° versetzt

Таблицы подбора мотор-редукторов

Редуктор HF 40

40	$n_1 = 2800$				HA		HF				
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC	
										B5	B14
	30	93	0.80		52	0.64	30	0.37	1.7		
	40	70	0.77		53	0.50	39	0.37	1.4		
	60	47	0.72		53	0.36	37	0.25	1.4		
	80	35	0.70		50	0.26	47	0.25	1.1		
	100	28	0.65		44	0.20	40	0.18	1.1		
	120	23	0.61		55	0.22	45	0.18	1.2		
	160	18	0.57		52	0.17	40	0.13	1.3		
	200	14	0.51		47	0.13	47	0.13	1.0		
	260	11	0.47		42	0.10	38	0.09	1.1		
	320	9	0.45		39	0.08	44	0.09	0.9		
	400	7	0.42		31	0.05	52*	0.09	0.6*		

40	$n_1 = 1400$				HA		HF				
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC	
										B5	B14
	30	47	0.77	0.60	65	0.41	35	0.22	1.9		
	40	35	0.75	0.60	65	0.32	45	0.22	1.5		
	60	23	0.69	0.50	62	0.23	62	0.22	1.0		
	80	18	0.66	0.40	60	0.17	47	0.13	1.3		
	100	14	0.61	0.40	52	0.12	46	0.11	1.1		
	120	12	0.57	0.30	66	0.14	60	0.13	1.1		
	160	9	0.52	0.30	62	0.11	62	0.11	1.0		
	200	7	0.47	0.30	58	0.09	58	0.09	1.0		
	260	5	0.43	0.20	46	0.06	46	0.06	1.1		
	320	4	0.41	0.20	44	0.05	53	0.06	0.8		
	400	3	0.38	0.20	33	0.03	64*	0.06	0.5*		

40	$n_1 = 900$				HA		HF				
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC	
										B5	B14
	30	30	0.76		66	0.27	31	0.13	2.1		
	40	23	0.73		66	0.21	40	0.13	1.6		
	60	15	0.67		66	0.15	56	0.13	1.2		
	80	11	0.64		66	0.12	49	0.09	1.3		
	100	9	0.59		58	0.09	58	0.09	1.0		
	120	8	0.54		66	0.10	62	0.09	1.1		
	160	6	0.50		66	0.08	51	0.06	1.3		
	200	5	0.44		61	0.06	57	0.06	1.1		
	260	4	0.40		54	0.05	33	0.03	1.6		
	320	3	0.39		46	0.03	39	0.03	1.2		
	400	2	0.36		34	0.02	46*	0.03	0.7*		

40	$n_1 = 500$				HA		HF				
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC	
										B5	B14
	30	17	0.74		66	0.15	—	—	—		
	40	13	0.71		66	0.12	—	—	—		
	60	8	0.66		66	0.09	—	—	—		
	80	6	0.62		66	0.07	—	—	—		
	100	5	0.57		66	0.06	—	—	—		
	120	4	0.52		66	0.06	—	—	—		
	160	3	0.48		66	0.04	—	—	—		
	200	2.5	0.42		66	0.04	—	—	—		
	260	2	0.38		60	0.03	—	—	—		
	320	1.5	0.36		48	0.02	—	—	—		
	400	1	0.34		35	0.01	—	—	—		

* ATTENZIONE: la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* WARNING: Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* ACHTUNG: das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Редуктор HF 50

50	$n_1 = 2800$				HA			HF							
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 4.7	30	93	0.81	—	91	1.10	62	0.75	1.5	71	63	56	71	63	—
	40	70	0.79		94	0.87	81	0.75	1.2						
	60	47	0.74		96	0.63	84	0.55	1.1						
	80	35	0.72		94	0.48	72	0.37	1.3						
	100	28	0.68		81	0.35	58	0.25	1.4						
	120	23	0.64		96	0.37	96	0.37	1.0						
	160	18	0.60		97	0.30	81	0.25	1.2						
	200	14	0.55		86	0.23	67	0.18	1.3						
	260	11	0.51		81	0.18	81	0.18	1.0						
	320	9	0.47		72	0.14	67	0.13	1.1						
	400	7	0.44		59	0.10	54	0.09	1.1						

50	$n_1 = 1400$				HA			HF							
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 4.7	30	47	0.79	0.90	113	0.70	88	0.55	1.3	71	63	56	71	63	—
	40	35	0.76	0.80	116	0.56	116	0.55	1.0						
	60	23	0.71	0.70	116	0.40	108	0.37	1.1						
	80	18	0.68	0.60	114	0.31	93	0.25	1.2						
	100	14	0.63	0.50	97	0.22	97	0.22	1.0						
	120	12	0.59	0.50	107	0.22	107	0.22	1.0						
	160	9	0.55	0.40	115	0.19	108	0.18	1.1						
	200	7	0.50	0.40	102	0.15	89	0.13	1.1						
	260	5	0.46	0.40	90	0.11	90	0.11	1.0						
	320	4	0.42	0.30	83	0.09	83	0.09	1.0						
	400	3	0.40	0.30	65	0.06	65	0.06	0.9						

50	$n_1 = 900$				HA			HF							
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 4.7	30	30	0.77	—	116	0.47	91	0.37	1.3	71	63	56	71	63	—
	40	23	0.75		116	0.37	116	0.37	1.0						
	60	15	0.69		116	0.26	110	0.25	1.1						
	80	11	0.66		116	0.21	101	0.18	1.2						
	100	9	0.61		108	0.17	85	0.13	1.3						
	120	8	0.57		116	0.16	94	0.13	1.3						
	160	6	0.53		116	0.13	116	0.13	1.0						
	200	5	0.48		112	0.11	91	0.09	1.2						
	260	4	0.44		107	0.09	107	0.09	1.0						
	320	3	0.40		90	0.07	82	0.06	1.1						
	400	2	0.38		65	0.04	48	0.03	1.4						

50	$n_1 = 500$				HA			HF							
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 4.7	30	17	0.76	—	116	0.27	39	0.09	3.0	71	63	56	71	63	—
	40	13	0.73		116	0.21	50	0.09	2.3						
	60	8	0.67		116	0.15	69	0.09	1.7						
	80	6	0.64		116	0.12	88	0.09	1.3						
	100	5	0.59		116	0.10	101	0.09	1.1						
	120	4	0.54		116	0.09	112	0.09	1.0						
	160	3	0.50		116	0.08	138*	0.09	0.8						
	200	2.5	0.45		116	0.07	156*	0.09	0.7						
	260	2	0.41		114	0.06	184*	0.09	0.6*						
	320	1.5	0.38		95	0.04	208*	0.09	0.5*						
	400	1	0.35		69	0.03	244*	0.09	0.3*						

* ATTENZIONE: la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* WARNING: Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* ACHTUNG: das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Редуктор HF 63

63	$n_1 = 2800$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5	B14				
Kg 7.9	30	93	0.82	—	158	1.89	126	1.5	1.3	80	71	63	80	71	—
	40	70	0.80		164	1.50	164	1.5	1.0						
	60	47	0.76		170	1.10	170	1.1	1.0						
	80	35	0.74		181	0.90	151	0.75	1.2						
	100	28	0.71		150	0.62	133	0.55	1.1						
	120	23	0.66		177	0.66	148	0.55	1.2						
	160	18	0.62		186	0.55	186	0.55	1.0						
	200	14	0.57		147	0.37	147	0.37	1.0						
	260	11	0.53		142	0.30	118	0.25	1.2						
	320	9	0.51		138	0.25	138	0.25	1.0						
	400	7	0.46		115	0.18	115	0.18	1.0						

63	$n_1 = 1400$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5	B14				
Kg 7.9	30	47	0.79	—	198	1.22	146	0.9	1.4	80	71	63	80	71	—
	40	35	0.77		203	0.96	190	0.9	1.1						
	60	23	0.72		203	0.69	163	0.55	1.2						
	80	18	0.70		211	0.55	211	0.55	1.0						
	100	14	0.67		181	0.40	169	0.37	1.1						
	120	12	0.61		213	0.43	185	0.37	1.1						
	160	9	0.57		220	0.35	156	0.25	1.4						
	200	7	0.52		177	0.25	177	0.25	1.0						
	260	5	0.48		175	0.20	154	0.18	1.1						
	320	4	0.46		160	0.16	130	0.13	1.2						
	400	3	0.41		126	0.11	150	0.13	0.8						

63	$n_1 = 900$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5	B14				
Kg 7.9	30	30	0.78	—	220	0.89	186	0.75	1.2	80	71	63	80	71	—
	40	23	0.76		220	0.69	177	0.55	1.2						
	60	15	0.70		220	0.49	166	0.37	1.3						
	80	11	0.68		220	0.37	220	0.37	1.0						
	100	9	0.65		201	0.29	172	0.25	1.2						
	120	8	0.59		220	0.29	187	0.25	1.2						
	160	6	0.55		220	0.24	168	0.18	1.3						
	200	5	0.50		196	0.18	196	0.18	1.0						
	260	4	0.46		192	0.15	162	0.13	1.2						
	320	3	0.43		175	0.12	133	0.09	1.3						
	400	2	0.39		131	0.08	148	0.09	0.9						

63	$n_1 = 500$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5	B14				
Kg 7.9	30	17	0.76	—	220	0.50	79	0.18	2.8	80	71	63	80	71	—
	40	13	0.74		220	0.39	101	0.18	2.2						
	60	8	0.68		220	0.28	140	0.18	1.6						
	80	6	0.66		220	0.22	182	0.18	1.2						
	100	5	0.62		220	0.18	220	0.18	1.0						
	120	4	0.56		220	0.17	115	0.09	1.9						
	160	3	0.52		220	0.14	143	0.09	1.5						
	200	2.5	0.47		220	0.12	161	0.09	1.4						
	260	2	0.43		215	0.10	193	0.09	1.1						
	320	1.5	0.41		188	0.08	225	0.09	0.8						
	400	1	0.36		138	0.05	250*	0.09	0.6*						

* **ATTENZIONE:** la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* **WARNING:** Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* **ACHTUNG:** das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Редуктор HF 75

75	$n_1 = 2800$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
											B5	B14			
Kg 13.3	30	93	0.82	—	236	2.81	185	2.2	1.3	90	80	71	90	80	—
	40	70	0.80		242	2.20	242	2.2	1.0						
	60	47	0.77		258	1.65	235	1.5	1.1						
	80	35	0.74		285	1.40	223	1.1	1.3						
	100	28	0.72		252	1.03	184	0.75	1.4						
	120	23	0.67		275	1.01	205	0.75	1.3						
	160	18	0.63		290	0.84	259	0.75	1.1						
	200	14	0.60		258	0.63	224	0.55	1.2						
	260	11	0.55		236	0.48	181	0.37	1.3						
	320	9	0.52		214	0.37	214	0.37	1.0						
	400	7	0.48		195	0.30	241	0.37	0.8						

75	$n_1 = 1400$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
											B5	B14			
Kg 13.3	30	47	0.80	1.9	295	1.80	295	1.8	1.0	90	80	71	90	80	—
	40	35	0.78	1.7	319	1.50	319	1.5	1.0						
	60	23	0.73	1.4	329	1.10	329	1.1	1.0						
	80	18	0.71	1.3	350	0.90	350	0.9	1.0						
	100	14	0.68	1.2	305	0.66	255	0.55	1.2						
	120	12	0.62	1.0	331	0.65	280	0.55	1.2						
	160	9	0.58	0.90	348	0.55	348	0.55	1.0						
	200	7	0.55	0.80	307	0.41	277	0.37	1.1						
	260	5	0.50	0.80	279	0.31	223	0.25	1.3						
	320	4	0.47	0.70	256	0.25	256	0.25	1.0						
	400	3	0.43	0.70	213	0.18	300*	0.25	0.7*						

75	$n_1 = 900$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
											B5	B14			
Kg 13.3	30	30	0.78	—	338	1.35	275	1.1	1.2	90	80	71	90	80	—
	40	23	0.76		350	1.10	350	1.1	1.0						
	60	15	0.71		343	0.75	343	0.75	1.0						
	80	11	0.69		350	0.60	321	0.55	1.1						
	100	9	0.66		339	0.49	258	0.37	1.3						
	120	8	0.60		350	0.46	281	0.37	1.2						
	160	6	0.56		350	0.37	350	0.37	1.0						
	200	5	0.52		339	0.31	277	0.25	1.2						
	260	4	0.48		307	0.24	233	0.18	1.3						
	320	3	0.45		282	0.18	282	0.18	1.0						
	400	2	0.40		221	0.13	307*	0.18	0.7*						

75	$n_1 = 500$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
											B5	B14			
Kg 13.3	30	17	0.77	—	350	0.80	110	0.25	3.2	90	80	71	90	80	—
	40	13	0.74		350	0.62	142	0.25	2.5						
	60	8	0.69		350	0.44	198	0.25	1.8						
	80	6	0.67		350	0.34	254	0.25	1.4						
	100	5	0.63		350	0.29	303	0.25	1.2						
	120	4	0.57		350	0.27	325	0.25	1.1						
	160	3	0.53		350	0.22	291	0.18	1.2						
	200	2.5	0.49		350	0.19	348	0.18	1.0						
	260	2	0.45		345	0.16	200	0.09	1.7						
	320	1.5	0.42		303	0.12	231	0.09	1.3						
	400	1	0.38		232	0.08	258	0.09	0.9						

* **ATTENZIONE:** la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* **WARNING:** Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* **ACHTUNG:** das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Редуктор HF 90

90	$n_1 = 2800$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 27.2	30	93	0.83	—	381	4.48	255	3	1.5	90	80	71	90	80	—
	40	70	0.82		396	3.56	334	3	1.2						
	60	47	0.78		410	2.57	352	2.2	1.2						
	80	35	0.76		456	2.20	456	2.2	1.0						
	100	28	0.74		416	1.66	377	1.5	1.1						
	120	23	0.69		439	1.54	439	1.5	1.0						
	160	18	0.65		467	1.31	392	1.1	1.2						
	200	14	0.62		427	1.01	317	0.75	1.3						
	260	11	0.58		384	0.75	384	0.75	1.0						
	320	9	0.55		360	0.60	329	0.55	1.1						
	400	7	0.50		318	0.47	252	0.37	1.3						

90	$n_1 = 1400$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 27.2	30	47	0.81	2.1	482	2.92	297	1.8	1.6	90	80	71	90	80	—
	40	35	0.79	1.9	495	2.30	388	1.8	1.3						
	60	23	0.75	1.6	506	1.65	460	1.5	1.1						
	80	18	0.72	1.4	554	1.40	434	1.1	1.3						
	100	14	0.70	1.3	505	1.06	429	0.9	1.2						
	120	12	0.64	1.1	531	1.01	473	0.9	1.1						
	160	9	0.60	1.0	560	0.85	494	0.75	1.1						
	200	7	0.57	0.90	510	0.66	428	0.55	1.2						
	260	5	0.53	0.80	454	0.49	345	0.37	1.3						
	320	4	0.50	0.80	424	0.39	402	0.37	1.1						
	400	3	0.45	0.70	367	0.29	314	0.25	1.2						

90	$n_1 = 900$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 27.2	30	30	0.79	—	550	2.18	379	1.5	1.5	90	80	71	90	80	—
	40	23	0.77		560	1.71	492	1.5	1.1						
	60	15	0.73		560	1.21	510	1.1	1.1						
	80	11	0.70		560	0.94	447	0.75	1.3						
	100	9	0.68		560	0.78	534	0.75	1.1						
	120	8	0.61		560	0.72	430	0.55	1.3						
	160	6	0.58		560	0.57	533	0.55	1.1						
	200	5	0.54		560	0.49	426	0.37	1.3						
	260	4	0.50		501	0.37	501	0.37	1.0						
	320	3	0.47		466	0.29	399	0.25	1.2						
	400	2	0.42		381	0.21	320	0.18	1.2						

90	$n_1 = 500$				HA		HF								
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5			B14		
Kg 27.2	30	17	0.77	—	560	1.26	111	0.25	5.0	90	80	71	90	80	—
	40	13	0.75		560	0.97	144	0.25	3.9						
	60	8	0.70		560	0.69	202	0.25	2.8						
	80	6	0.68		560	0.54	259	0.25	2.2						
	100	5	0.65		560	0.45	310	0.25	1.8						
	120	4	0.58		560	0.42	334	0.25	1.7						
	160	3	0.54		560	0.34	416	0.25	1.3						
	200	2.5	0.51		560	0.29	488	0.25	1.1						
	260	2	0.47		560	0.24	417	0.18	1.3						
	320	1.5	0.44		517	0.19	485	0.18	1.1						
	400	1	0.39		401	0.13	269	0.09	1.5						

* ATTENZIONE: la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* WARNING: Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* ACHTUNG: das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Редуктор HF 110

110	$n_1 = 2800$				HA		HF								
	i_L	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5		B14		B5	
Kg 48.8	30	93	0.84	—	641	7.50	641	7.5	1.0	112 100	90	80	112 100	90	—
	40	70	0.82		658	5.85	619	5.5	1.1						
	60	47	0.79		698	4.30	649	4	1.1						
	80	35	0.77		782	3.71	632	3	1.2						
	100	28	0.75		727	2.83	566	2.2	1.3						
	120	23	0.70		754	2.61	634	2.2	1.2						
	160	18	0.67		807	2.20	807	2.2	1.0						
	200	14	0.65		749	1.70	661	1.5	1.1						
	260	11	0.60		646	1.21	589	1.1	1.1						
	320	9	0.57		611	0.98	469	0.75	1.3						
400	7	0.53	545	0.75	545	0.75	1.0								

110	$n_1 = 1400$				HA		HF								
	i_L	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5		B14		B5	
Kg 48.8	30	47	0.82	3.2	807	4.83	668	4	1.2	112 100	90	80	112 100	90	—
	40	35	0.80	2.9	825	3.78	655	3	1.3						
	60	23	0.76	2.4	864	2.76	689	2.2	1.3						
	80	18	0.74	2.2	957	2.37	887	2.2	1.1						
	100	14	0.72	2.1	884	1.80	884	1.8	1.0						
	120	12	0.66	1.7	916	1.70	809	1.5	1.1						
	160	9	0.62	1.5	970	1.42	749	1.1	1.3						
	200	7	0.60	1.5	896	1.10	896	1.1	1.0						
	260	5	0.55	1.3	743	0.75	743	0.75	1.0						
	320	4	0.52	1.2	722	0.64	624	0.55	1.2						
400	3	0.47	1.1	644	0.48	705	0.55	0.9							

110	$n_1 = 900$				HA		HF								
	i_L	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5		B14		B5	
Kg 48.8	30	30	0.80	—	922	3.61	766	3	1.2	112 100	90	80	112 100	90	—
	40	23	0.78		937	2.82	732	2.2	1.3						
	60	15	0.74		970	2.06	849	1.8	1.1						
	80	11	0.72		970	1.59	912	1.5	1.1						
	100	9	0.69		970	1.32	811	1.1	1.2						
	120	8	0.63		970	1.21	884	1.1	1.1						
	160	6	0.60		970	0.96	758	0.75	1.3						
	200	5	0.57		970	0.81	902	0.75	1.1						
	260	4	0.52		846	0.60	779	0.55	1.1						
	320	3	0.49		794	0.48	616	0.37	1.3						
400	2	0.45	700	0.37	700	0.37	1.0								

110	$n_1 = 500$				HA		HF								
	i_L	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC					
										B5		B14		B5	
Kg 48.8	30	17	0.78	—	970	2.16	336	0.75	2.9	112 100	90	80	112 100	90	—
	40	13	0.76		970	1.67	437	0.75	2.2						
	60	8	0.72		970	1.18	616	0.75	1.6						
	80	6	0.69		970	0.92	792	0.75	1.2						
	100	5	0.67		970	0.75	970	0.75	1.0						
	120	4	0.60		970	0.71	754	0.55	1.3						
	160	3	0.56		970	0.57	933	0.55	1.1						
	200	2.5	0.53		970	0.48	754	0.37	1.3						
	260	2	0.49		955	0.39	900	0.37	1.1						
	320	1.5	0.46		889	0.32	700	0.25	1.3						
400	1	0.41	727	0.23	568	0.18	1.3								

* ATTENZIONE: la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* WARNING: Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* ACHTUNG: das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Редуктор HF 130

130	$n_1 = 2800$				HA		HF						
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC			
											B5	B14	
Kg 60	30	93	0.85	—	976	11.22	652	7.5	1.5	112 100	90	80	—
	40	70	0.84		994	8.67	860	7.5	1.2				
	60	47	0.80		1086	6.63	900	5.5	1.2				
	80	35	0.78		1216	5.71	1171	5.5	1.0				
	100	28	0.78		1170	4.40	1064	4.0	1.1				
	120	23	0.72		1203	4.08	1179	4	1.0				
	160	18	0.70		1306	3.42	1146	3	1.1				
	200	14	0.67		1175	2.57	1005	2.2	1.2				
	260	11	0.64		1008	1.78	851	1.5	1.2				
	320	9	0.61		971	1.46	732	1.1	1.3				
	400	7	0.57		889	1.14	855	1.1	1.0				

130	$n_1 = 1400$				HA		HF						
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC			
											B5	B14	
Kg 60	30	47	0.83	4.9	1231	7.3	928	5.5	1.3	112 100	90	80	—
	40	35	0.81	4.4	1238	5.6	1216	5.5	1.0				
	60	23	0.77	3.6	1375	4.3	1279	4	1.1				
	80	18	0.75	3.3	1472	3.7	1194	3	1.2				
	100	14	0.74	3.2	1413	2.8	1111	2.2	1.3				
	120	12	0.68	2.6	1407	2.6	1191	2.2	1.2				
	160	9	0.65	2.4	1517	2.2	1517	2.2	1.0				
	200	7	0.62	2.2	1353	1.6	1269	1.5	1.1				
	260	5	0.58	2	1219	1.1	1219	1.1	1.0				
	320	4	0.55	1.8	1182	0.9	1182	0.9	1.0				
	400	3	0.51	1.7	1136	0.7	893	0.55	1.3				

130	$n_1 = 900$				HA		HF						
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC			
											B5	B14	
Kg 60	30	30	0.81	—	1424	5.5	774	3	1.8	112 100	90	80	—
	40	23	0.80		1429	4.2	1019	3	1.4				
	60	15	0.75		1520	3.2	1433	3	1.1				
	80	11	0.72		1694	2.8	1345	2.2	1.3				
	100	9	0.72		1726	2.3	1681	2.2	1.0				
	120	8	0.64		1632	2.0	1508	1.85	1.1				
	160	6	0.61		1723	1.7	1553	1.5	1.1				
	200	5	0.58		1542	1.3	1354	1.1	1.1				
	260	4	0.54		1282	0.87	1102	0.75	1.2				
	320	3	0.51		1298	0.75	1299	0.75	1.0				
	400	2	0.47		1126	0.56	1097	0.55	1.0				

130	$n_1 = 500$				HA		HF						
	i_n	n_2 [min ⁻¹]	Rd	P_{10}	T_{2M} [Nm]	P [kW]	T_2 [Nm]	P_1 [kW]	FS'	Input - IEC			
											B5	B14	
Kg 60	30	17	0.78	—	1659	3.7	335	0.75	4.9	112 100	90	80	—
	40	13	0.76		1616	2.8	435	0.75	3.7				
	60	8	0.72		1786	2.2	619	0.75	2.9				
	80	6	0.70		1819	1.7	802	0.75	2.3				
	100	5	0.69		1821	1.4	988	0.75	1.8				
	120	4	0.61		1816	1.3	1049	0.75	1.7				
	160	3	0.57		1796	1.0	1306	0.75	1.4				
	200	2.5	0.54		1723	0.84	1547	0.75	1.1				
	260	2	0.50		1485	0.60	1366	0.55	1.1				
	320	1.5	0.47		1392	0.48	1063	0.37	1.3				
	400	1	0.44		1282	0.38	1244	0.37	1.0				














* **ATTENZIONE:** la coppia massima utilizzabile $[T_{2M}]$ deve essere calcolata utilizzando il fattore di servizio: $T_{2M} = T_2 \times FS'$

* **WARNING:** Maximum allowable torque $[T_{2M}]$ must be calculated using the following service factor: $T_{2M} = T_2 \times FS'$

* **ACHTUNG:** das max. anwendbare Drehmoment $[T_{2M}]$ muss mit folgendem Betriebsfaktor berechnet werden: $T_{2M} = T_2 \times FS'$

Общие сведения:

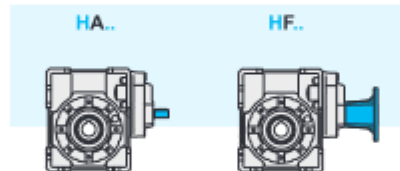
Система обозначений

Riduttore Gearbox Getriebe	Tipo entrata Input type Antriebsart	Grandezza Size Größe	Rapporto rid. Ratio Untersetzung	Precispos att. mot. Motor coupling Motoranschluss	Posizione di mont. Mounting position Einbaulage	Flangia in uscita. Output flange Abtriebsflansch	Limitatore di coppia. Torque limiter Drehmomentbegrenzer	Seconda entrata Additional input Zusatzantrieb	Albero uscita Output shaft Abtriebswelle	Braccio di reazione Torque arm Drehmomentstütze
H	A	50	30/1	P.A.M	B3	F1S	LD	SeA	H	BR
Riduttore a vite senza fine Wormgearbox Schneckengetriebe	 A  F	40 50 63 75 90 110 130	30 40 60 80 100 120 160 200 260 320 400	56 63 71 80 90 100 112	B3, B6 B7, B8 V5, V6	 F1D-F2D-F3D  F1S-F2S-F3S  F12-F22-F32	 LD  LS	 SeA	 H  SD  SS  DD	 BR

Tipo entrata

Input type

Antriebstyp



4.3 Lubrificazione e posizioni di montaggio

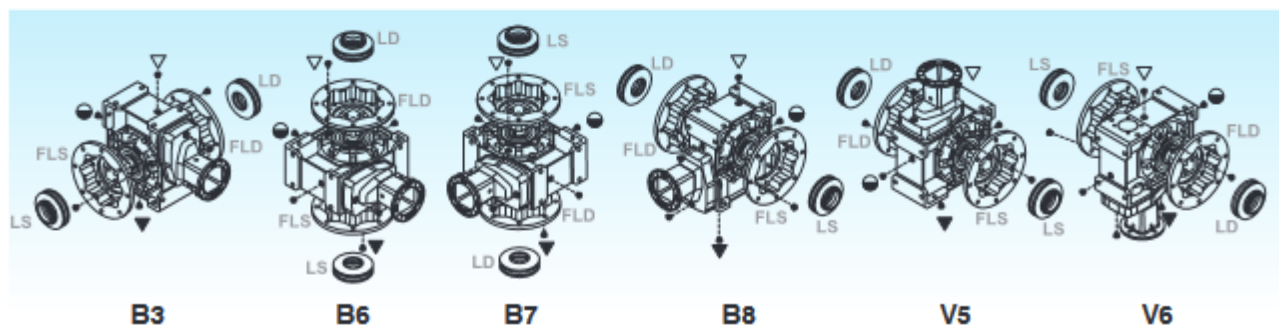
I riduttori a vite senza fine H sono forniti completi di lubrificante sintetico a base PAG con indice di viscosità ISO VG320. Si raccomanda di precisare sempre in fase di ordine, la posizione di lavoro desiderata.

4.3 Lubrication and mounting position

H worm gearboxes are supplied with PAG synthetic lubricant featuring an ISO VG320 viscosity class. Always specify the required mounting position when ordering.

4.3 Schmierung und Einbaulage

Schneckengetriebe der Serie H werden mit synthetischem Schmiermittel auf PAG Basis und Viskosität Index ISO VG320 geliefert. Im Auftrag bitte immer die gewünschte Einbaulage angeben.



- ▽ Carico e sfiato / Filling and breather
Einfüll und Entlüftung
- Livello / Level / Ölstand
- ▼ Scarico / Drain / Ablass

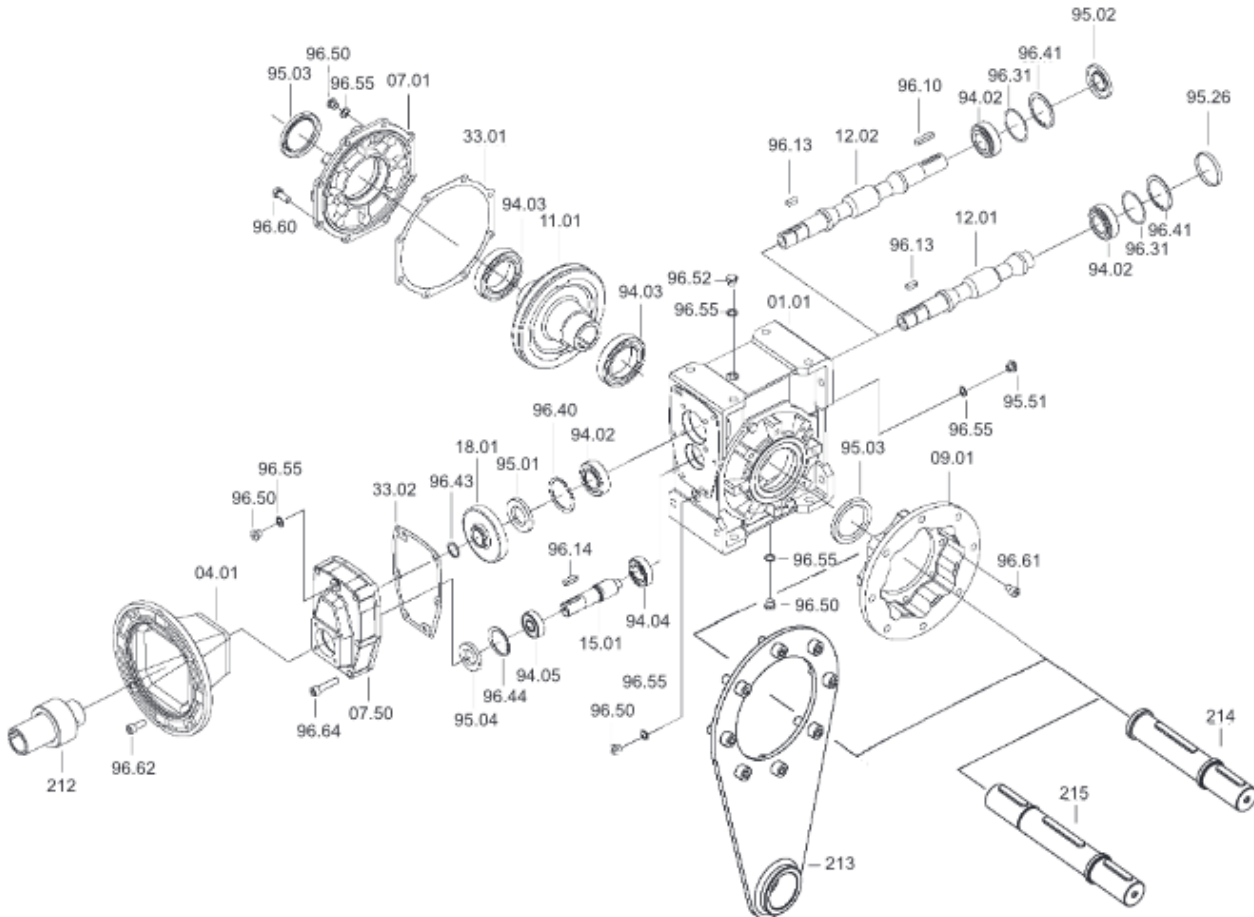
Nei corpi in alluminio 40, 50, 63,75 è presente un solo tappo di riempimento olio.

Aluminium housings size 40, 50, 63 and 75 have one filling plug only.

Aluminiumgehäuse in den Größen 40, 50, 63 und 75 verfügen über Einfüllschraube.

Запасные части

HA - HF

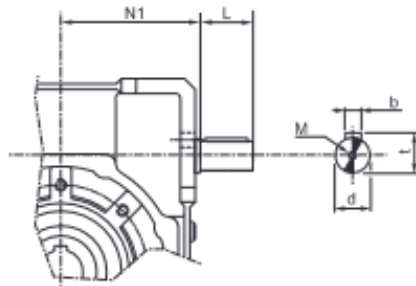


H	Cuscinetti / Bearings / Lager					Anelli di tenuta / Oilseals Öldichtungen				Cappellotto / Closed oil seal Geschlossene Öldichtung
	94.02	94.03	94.04	94.05	95.01	95.02	95.03	95.04	95.26	
40	6201 12x32x10	6006 30x55x13	*32006 30x55x17	6000 10x26x8	6000 10x26x8	12/32/7	12/32/7	30/47/7	10/26/7	ø 32x7
50	6203 17x40x12	6008 40x68x15	*32008 40x68x19	6200 10x30x9	6201 12x32x10	17/40/7	17/40/7	40/62/8	12/32/7	ø 40x7
63	30204 20x47x15.25	6008 40x68x15	*32008 40x68x19	6201 12x32x10	6203 17x40x12	20/47/7	20/47/7	40/62/8	17/40/7	ø 47x7
75	30205 25x52x16.25	6010 50x80x16	*32010 50x80x20	6202 15x35x11	6204 20x47x14	25/52/7	25/52/7	50/72/8	20/47/7	ø 52x7
90	32205 25x52x19.25	6010 50x80x16	*32010 50x80x20	6202 15x35x11	6204 20x47x14	25/52/7	25/52/7	50/72/8	20/47/7	ø 52x7
110	32206B 30x62x21.25	6012 60x95x18	*32012 60x95x23	6303 17x47x14	6205 25x52x15	30/62/7	30/62/7	60/85/8	25/52/7	ø 62x7
130	33208 40x80x32	6015 75x115x20	*32015 75x115x25	6304 20x52x15	6305 25x62x17	40/80/10	40/80/10	75/100/10	25/62/8	ø 80x10

* Cuscinetti a rulli conici a richiesta - Tapered roller bearings on request - Auf Wunsch Kegelrollenlager

Исполнение С.е.А.

S.e.A.



H	d j6	L	M	N1	b	t
40	11	20	M4x12	52.5	4	12.5
50	14	25	M5x13	62.5	5	16
63	19	30	M8x20	74.5	6	21.5
75	24	40	M8x20	91	8	27
90	24	40	M8x20	108	8	27
110	28	50	M8x20	132.5	8	31
130	38	70	M10x25	152	10	41

NOTA: L'entrata supplementare nella serie H si trova nella posizione intermedia del cinematismo. Quindi, se utilizzata come comando, avrà la sola riduzione della coppia vite/corona. Se invece viene utilizzata come asse condotto, la sua velocità sarà quella in entrata ridotta dal rapporto 4:1 della precoppia.

NOTE: the second shaft of the H series gearboxes is placed in the intermediate position of the kinematic motion which if used as a drive will have only the reduction of the worm/wheel set. For the utilization as a driven shaft its speed will correspond to the input speed reduced by the ratio 4:1 of the pre-stage.

BEMERKUNG: das zweite Wellenende der Getriebe der Serie H befindet sich in der Mitte des Getriebes. Falls das zweite Wellenende als zusätzliche Antriebswelle genutzt werden, muss aufgrund der Vorstufe mit einer um 4:1 reduzierte Drehzahl eingetrieben werden.

4.9 Limitatore di coppia cavo passante

Il limitatore di coppia viene consigliato in tutte quelle applicazioni che richiedono una limitazione sulla coppia trasmissibile per proteggere l'impianto e/o preservare il riduttore evitando sovraccarichi o urti indesiderati quanto inaspettati.

È un dispositivo con albero dotato di cavo passante, con funzionamento a frizione, ed è integrato al riduttore, presentando un ingombro limitato.

Concepito per lavorare a bagno d'olio, il dispositivo risulta affidabile nel tempo ed è esente da usura se non viene mantenuto in condizioni prolungate di slittamento (condizione che si verifica quando la coppia presenta valori superiori a quelli di taratura).

La taratura è facilmente regolabile dall'esterno attraverso il serraggio di una ghiera autobloccante che porta a compressione le 4 molle a tazza disposte tra loro in serie.

Il dispositivo non consente:

- l'impiego di cuscinetti a rulli conici in uscita
- funzionamento prolungato in condizioni di slittamento.

Nella tabella seguente vengono riportati i valori delle coppie di slittamento M_{25} in funzione del n° di giri della ghiera.

I valori di taratura presentano una tolleranza del $\pm 10\%$ e si riferiscono ad una condizione statica.

In condizioni dinamiche è da notare che la coppia di slittamento assume valori diversi a seconda del tipo e/o modalità in cui si verifica il sovraccarico: con valori maggiori in caso di carico uniformemente crescente rispetto a valori più contenuti in seguito al verificarsi di picchi improvvisi di carico.

NOTA: quando si supera il valore di taratura si ha slittamento. Il coefficiente di attrito tra le superfici di contatto da statico diventa dinamico e la coppia trasmessa cala del 30% circa.

È quindi opportuno prevedere uno stop per poter ripartire al valore di taratura iniziale.

4.9 Torque limiter with through hollow shaft

The use of a torque limiter is advisable in case of applications requiring the limitation of the torque in order to safeguard the plant and/or the gearbox against unexpected and undesired overloads or shocks.

The torque limiter is equipped with a through hollow shaft and friction clutch. It is integrated in the gearbox, space requirement is therefore limited.

Designed to work in oil bath, it is reliable over time and is not subject to wear unless prolonged slipping occurs (it happens when the torque values are higher than the calibration values).

Calibration can be easily adjusted from the outside by tightening the self-locking ring nut, which causes the compression of 4 Belleville washers arranged in series.

The use of the torque limiter does not go together with:

- the use of tapered roller bearings at output
- Prolonged operation under slipping conditions.

The following table shows the values of M_{25} slipping torques depending on the number of revolutions of the ring nut.

Calibration values feature a $\pm 10\%$ tolerance and refer to static conditions.

Under dynamic conditions, the values of the slipping torque differ depending on the type of overload: the values are higher if the load increase is uniform, the values are lower if sudden load peaks occur.

NOTE: Slipping occurs when the setting values are exceeded.

The friction coefficient between the contact surfaces from static becomes dynamic and the transmitted torque is approx. 30% lower.

It is advisable to have a stop first in order to have a restart based on the initial setting value.

4.9 Drehmomentbegrenzer mit durchgehender Hohlwelle

Die Anwendung eines Drehmomentbegrenzers wird empfohlen, um die Anlage und das Getriebe gegen unerwünschte und unerwartete Überbelastungen und Stößen zu schützen. Der Begrenzer verfügt über eine durchgehende Hohlwelle und eine Kupplung. Er ist in dem Getriebe integriert, d.h. der Raumbedarf ist klein.

Der Drehmomentbegrenzer wurde für Betrieb in Ölbad entworfen. Er ist zuverlässig über Zeit und verschleißfest (ausser wenn Rutschen für lange Zeit besteht: das passiert, wenn das Drehmoment höher als der Eichwert ist).

Die Eichung darf mühelos von aussen durch das Anziehen einer selbstsperrenden Mutter ausgeführt werden. Das Anziehen verursacht die Zusammendrückung der 4 wechselsinnig schichteten Tellerfeder.

Der Drehmomentbegrenzer sieht das folgende nicht vor:

- die Verwendung von Kegellager am Abtrieb
- Längerer Rutschbetrieb.

Die nachstehende Tabelle zeigt die Werte der Rutschmomente M_{25} abhängig von der Zahl der Umdrehungen der Mutter.

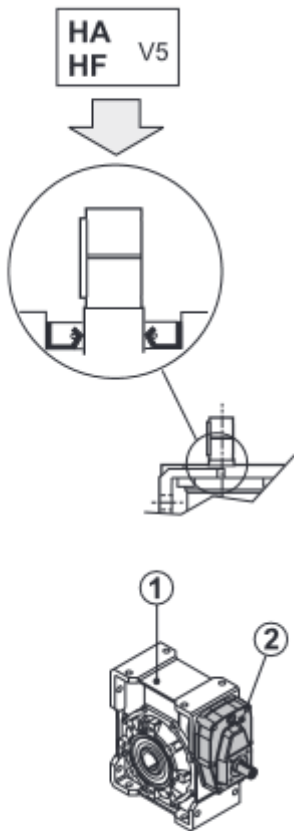
Die Eichwerte weisen $\pm 10\%$ Toleranz auf und beziehen sich auf statische Bedingungen.

Unter dynamischen Bedingungen hat das Rutschmoment verschiedene Werte je nach Art der Überbelastung. Die Werte sind höher, wenn die Belastung gleichmäßig zunimmt; sie sind niedriger im Falle von plötzlichen Belastungsspitzen.

BEMERKUNG: Rutschen tritt auf, wenn die eingestellten Werte überschritten werden. Der Reibungskoeffizient zwischen den Berührungsfächen wird dynamisch anstatt statisch und das übertragene Drehmoment sinkt um ca. 30%.

Es ist daher ratsam, vor dem erneuten Anfahren anzuhalten, um die ursprünglichen Drehmomentwerte zu erreichen.

Монтажные положения



Attenzione! Nelle versioni HA e HF è indispensabile conoscere la posizione di lavoro in quanto nella configurazione V5 occorre posizionare in modo corretto il paraolio della vite per preservare la corretta lubrificazione della coppia d'ingranaggi cilindrici del primo stadio di riduzione.

Warning! It is fundamental to specify the mounting position specially when ordering HA and HF versions. This is because in the V5 configuration the oil seal on the worm shaft must be positioned properly to ensure the lubrication of the spur gearset of the first reduction stage.

Achtung! Bei den HA und HF Versionen ist die Information bez. die Einbaulage unbedingt erforderlich: in der V5 Bauform muss der Ölabdichtung auf der Schnecke korrekt eingebaut werden, um die Schmierung des Stirnradsatz der ersten Stufe aufrechtzuhalten.

		Q.tà olio / Oil quantity / Schmiermittelmenge [lt]			
		Posizione di montaggio / Mounting position / Einbaulage			
		B3	B6 - B7	B8	V5 - V6
① H	40			0.040	
	50			0.080	
	63			0.160	
	75			0.260	
	90	1.1	0.9	1	1.5
	110	2.2	1.8	1.6	2.6
	130	3.6	3	2.5	3.8
		B3	B6	B8	V5
② H	40			0.040	
	50			0.052	
	63			0.095	
	75			0.180	
	90			0.180	
	110			0.250	
	130			0.350	

Specificare sempre in fase di ordinazione la posizione di montaggio e la forma costruttiva.
Posizione morsetti v. pag. 81
(PM=1; PM=2)

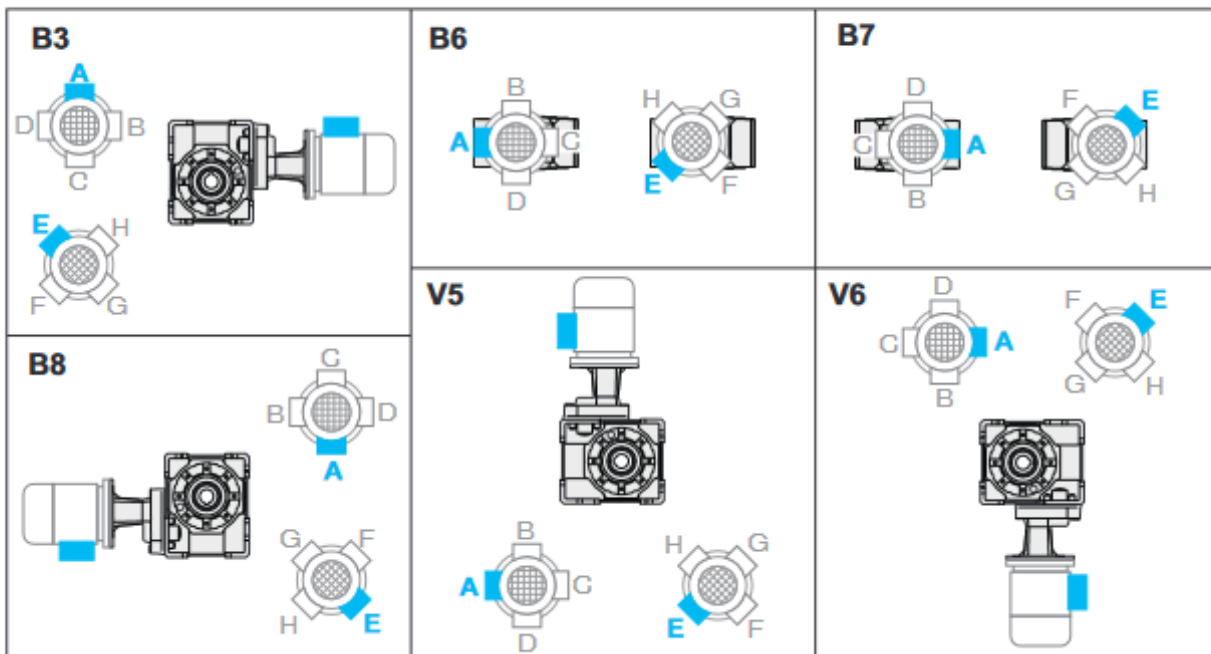
Mounting position always to be specified when ordering.
Terminal board position see page 81
(PM=1; PM=2)

Bei der Bestellung immer die gewünschte Montageposition und Bauform angeben.
Lage der Klemmenkaste Seite 81
(PM=1; PM=2)

4.4 Posizione morsetti

4.4 Terminal board position

4.4 Lage der Klemmenkaste



Ограничитель крутящего момента

E' importante notare che la coppia di slittamento non resta sempre la medesima durante tutta la vita del limitatore.

Tende infatti a diminuire in rapporto al numero e alla durata degli slittamenti che, rodando le superfici di contatto, ne aumentano il rendimento.

E' quindi opportuno verificare periodicamente, soprattutto durante la fase di rodaggio, la taratura del dispositivo.

La dove sia richiesto un errore più contenuto nella taratura, è necessario testare la coppia trasmissibile sull'impianto.

Il dispositivo viene consegnato tarato alla coppia riportata a catalogo T_{2M} salvo diversa indicazione espressa in fase di ordinazione.

It is important to note that the slipping torque is not the same for the entire life of the torque limiter. It usually decreases in connection with the number and the duration of slippings, this is due to the surfaces of the torque limiter becoming more engaged, therefore increasing the efficiency.

For this reason it is advisable to check the calibration of the device at regular intervals, specially during the running-in period.

Should a smaller calibration error be required, it is necessary to test the transmissible torque on the plant. The torque limiter is supplied already calibrated at the torque value reported in the catalogue T_{2M}, unless otherwise specified on the order.

Es ist wichtig zu beachten, dass das Rutschmoment der Rutschkupplung über die gesamte Lebensdauer nicht konstant bleibt, sondern üblicherweise in Verbindung mit längeren Rutschzyklen aufgrund der eingelaufenen Berührungsflächen abnimmt.

Deswegen ist es ratsam, die Einstellung der Vorrichtung besonders während der Einlaufzeit in regelmäßigen Zeitabständen zu prüfen.

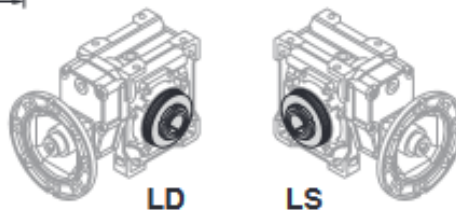
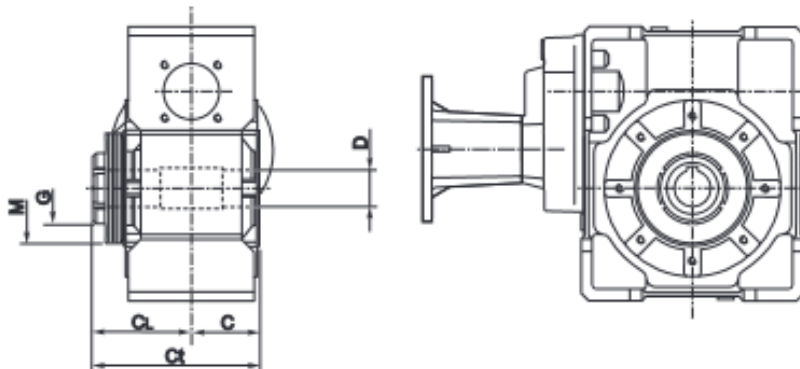
Wenn der Drehmomentbegrenzer geliefert wird, ist dieser schon auf dem im Katalog unter T_{2M} angegebenen Wert eingestellt, außer wenn es in der Bestellung anders angegeben wird.

H	N°. giri della ghiera di regolazione / N°. revolutions of ring nut / Nr. Umdrehungen der Mutter															
	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5
	M ₂₅ [Nm]															
40	35	40	45	50	55	60	65									
50	60	70	80	90	100	110	115	120								
63				115	125	130	140	155	165	175	180	190	200	220		
75		220	245	275	310	350										
90	250	290	330	365	410	435	465	500	530	560	580					
110	500	560	670	730	810	910	940	970								
130																

Disposizione delle molle
Washers' arrangement
Lage der Feder



IN SERIE (min. coppia, max. sensibilità)
SERIES (min. torque, max sensitivity)
SERIE (min. Moment, max. Empfindlichkeit)



H	C	C _L	C _t	D _{H7}	M	G
40	39	65	104	18 (19)	56x30.5x1.5	M30x1.5
50	46	76	122	25 (24)	63x40.5x1.8	M40x1.5
63	56	91	147	25	71x40.5x2	M40x1.5
75	60	100	160	28 (30)	90x50.5x3.5	M50x1.5
90	70	109	179	35 (32)	100x51x2.7	M50x1.5
110	77.5	127.5	205	42	125x61x4	M60x2.0
130						

Nella versione con limitatore non è prevista la fornitura degli alberi lenti.

The version with torque limiter is supplied without output shafts.

Die Version mit Drehmomentbegrenzer wird ohne Abtriebswellen geliefert.