3 RIDUTTORI A VITE SENZA FINE COMBINATI SCFK-SCRK — *SCFK-SCRK COMBINED WORM GEARBOXES* — KOMBINIERTE-SCHNECKENGETRIEBE SCFK-SCRK

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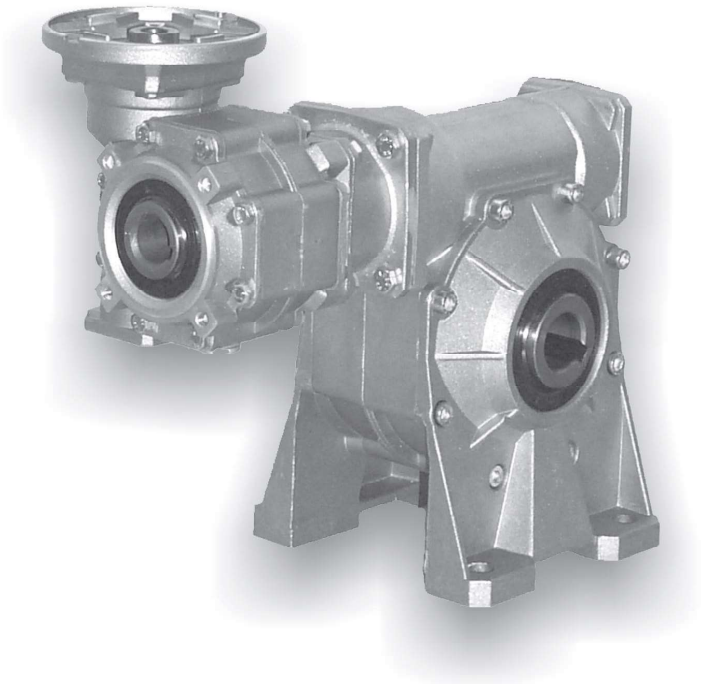


02/2020

3.1 Caratteristiche

La combinazione di due riduttori a vite senza fine comporta rendimenti molto bassi, ma l'elevata riduzione di velocità ottenuta in uno spazio ridottissimo rende comunque interessante, e a volte insostituibile, questa soluzione.

Sono forniti con albero cavo di serie ed esiste un'ampia gamma di accessori: seconda entrata, cuscinetti conici sulla corona, flangia uscita, albero lento con 1 o 2 sporgenze, limitatore di coppia con cavo passante, braccio di reazione.

3.1 Characteristics

The combination of two worm gearboxes provides very low efficiency, however the fact that substantial reduction in speed can be obtained in an extremely reduced space makes this solution very interesting and sometimes irreplaceable.

The hollow shaft is supplied as standard. A broad range of accessories is avalable: second input, tapered roller bearings on the worm wheel, output flange, single or double extended output shaft, torque limiter with through hollow shaft, torque arm.

3.1 Merkmale

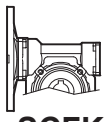
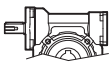
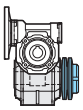
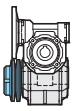
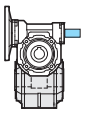
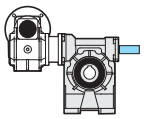
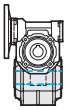
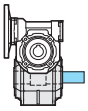
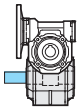
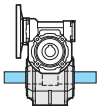
Die Kombination zweier Schneckengetriebe bringt sehr niedrigen Wirkungsgrad mit sich, es handelt sich jedoch um eine interessante und manchmal unersetzbare Lösung, weil eine hohe Drehzahlverringerung in einem beträchtlich reduzierten Raum erzielt werden kann.

Die Hohlwelle gehört zur serienmäßigen Ausstattung. Eine breite Auswahl an Zubehör ist erhältlich: zweiter Antrieb, Kegelrollenlager auf Schneckenrad, Abtriebs- flansch, standard oder doppelseitig herausragende Abtriebswelle, Drehmomentbegrenzer mit durchgehender Hohlwelle, Drehmomentstütze.

3.2 Designazione

3.2 Designation

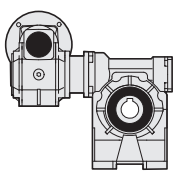
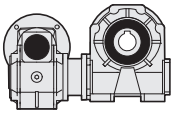
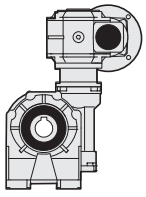
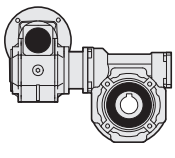
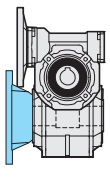
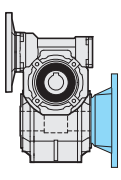
3.2 Bezeichnung

Riduttore / *Gearbox* / Getriebe	Grandezza / *Size* / Größe	Rapporto rid. / *Ratio* / *Untersetzung*	Predispos.att. mot. / *Motor coupling* / Motoranschluss	Versione / *Version* / Version	Forma costruttiva / *Execution* / Bauform	Posizione di mont. / *Mounting position* / Einbaulage	Limitatore di coppia. / *Torque limiter* / Drehmoment-begrenzer	Seconda entrata / *Additional input* / Zusatzantrieb	Albero uscita / *Output shaft* / Abtriebswelle	Braccio di reazione / *Torque arm* / Drehmomentstütze
SCFK	**50/75**	**1200**	**P.A.M.**	**FS**	**a**	**B3**	**LD**	**SeA1**	**H**	**BR**
 **SCFK**  **SCRK**	30/30 30/40 30/50 30/63 40/63 40/75 50/75	150 200 300 450 600 900 1200 1500 1950 2500 3250 4000 5000 10000	56 63 71 80 90	A B V P F...S F...D	ab cd ef gh ik im no pq	B3 B6 B7 B8 V5 V6	 LD  LS	 SeA1  SeA2	 H  SD  SS  DD	 BR1  BR2

Versioni

Versions

Ausführungen

SCFK..A_ SCRK..A_	SCFK..B_ SCRK..B_	SCFK..V_ SCRK..V_	SCFK..P_ SCRK..P_	SCFK..F_S SCRK..F_S	SCFK..F_D SCRK..F_D
					

Specificare sempre in fase di ordinazione la versione.

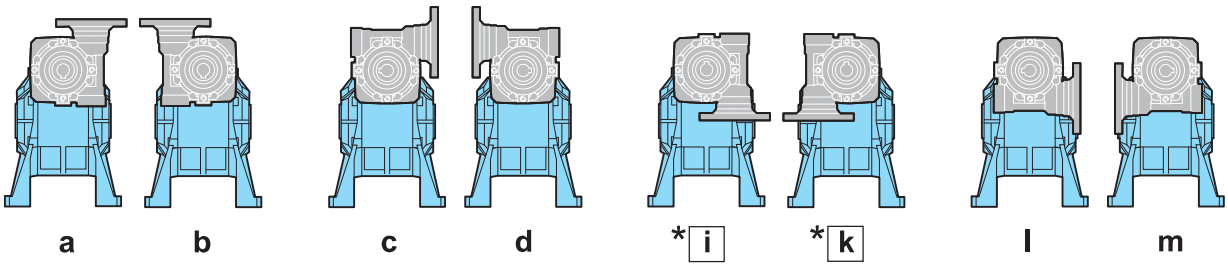
Specify the version when ordering.

Bei der Bestellung immer die Bauform angeben.

3.2 Designazione — *3.2 Designation* — 3.2 Bezeichnung

Forma costruttiva / *version* / Bauform

A



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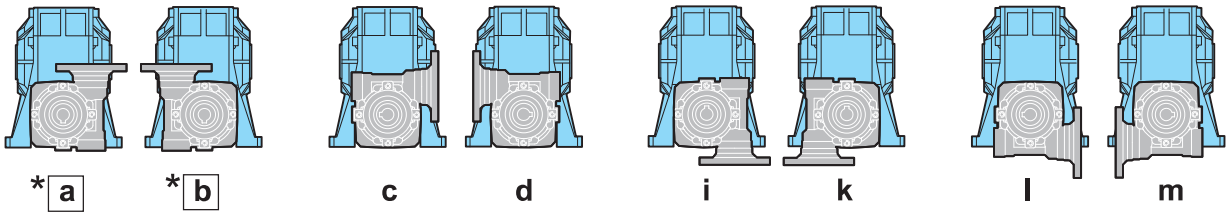
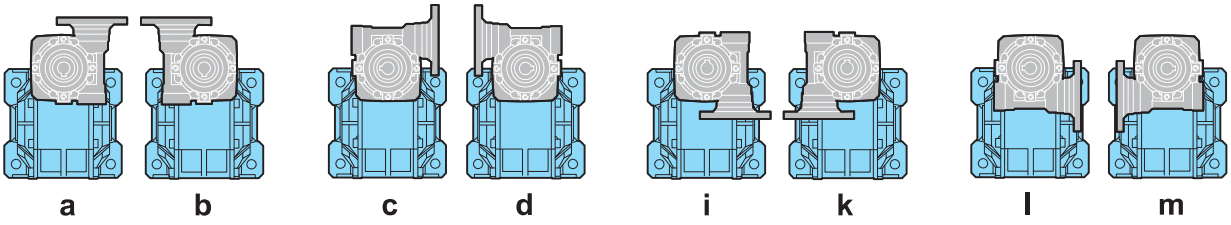
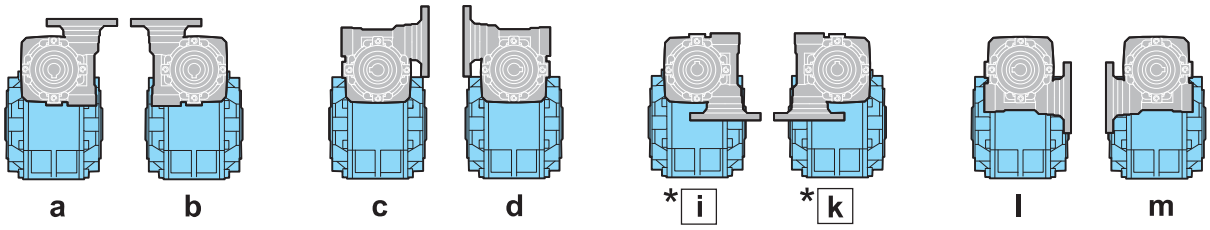


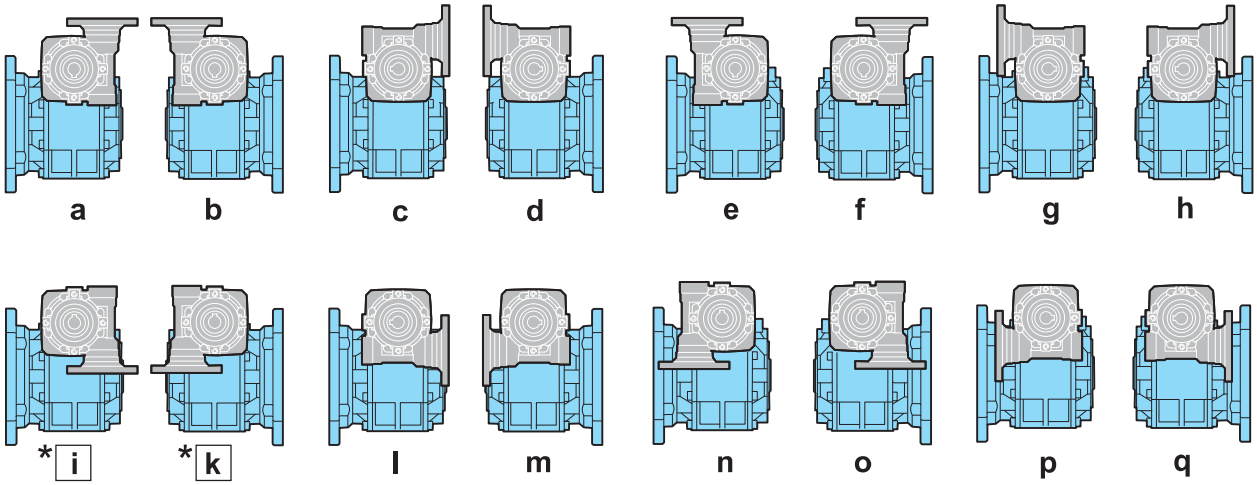
V



P



F



*☐ Forma costruttiva non realizzabile su: / *Version not feasible on:* / Bauform nicht ausführbar für:
30/30, 30/40, 30/50 PAM 63B5 (ø 140), 40/63 PAM 71B5 (ø 160)

3.3 Lubrificazione

I riduttori a vite senza fine SCFK - SCRK sono forniti tutti e sempre completi di lubrificante sintetico a base PAG con classe di viscosità ISO 320.
Nei corpi in alluminio è presente un solo tappo di riempimento olio.
Si raccomanda di precisare sempre in fase di ordine la forma costruttiva e la posizione di lavoro desiderata.
Per ulteriori dettagli consultare pag. 12 paragrafo 1.13.

3.3 Lubrication

SCFK - SCRK worm gearboxes are supplied with PAG synthetic lubricant featuring an ISO 320 viscosity class.
Aluminium housings have one filling plug only.
Always specify the version and the mounting position when ordering.

For more details, see page 12, paragraph 1.13.

3.3 Schmierung

SCFK - SCRK Schneckengetriebe werden mit PAG synthetischen Schmierstoff Viskositätsklasse ISO 320 geliefert.
Gehäuse aus Alumiunium verfügen über nur eine Einfüllschraube.
Im Auftrag sind immer Einbaulage und Bauform anzugeben.

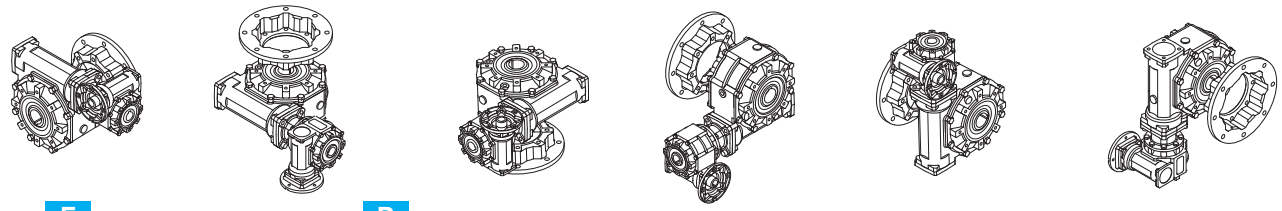
Weitere Einzelheiten finden Sie auf Seite 12, Absatz 1.13

Posizioni di montaggio

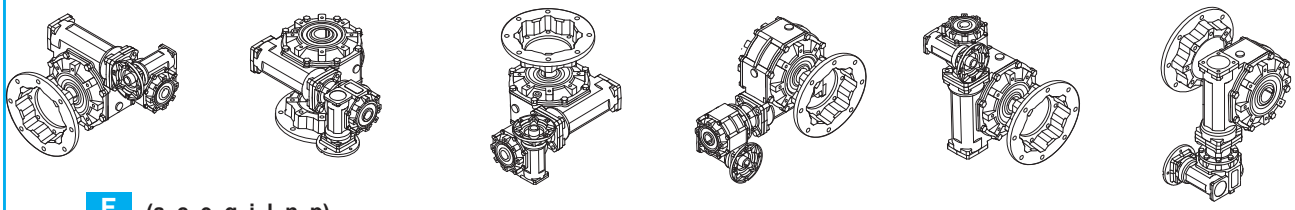
Mounting positions

Bezeichnung

F,P

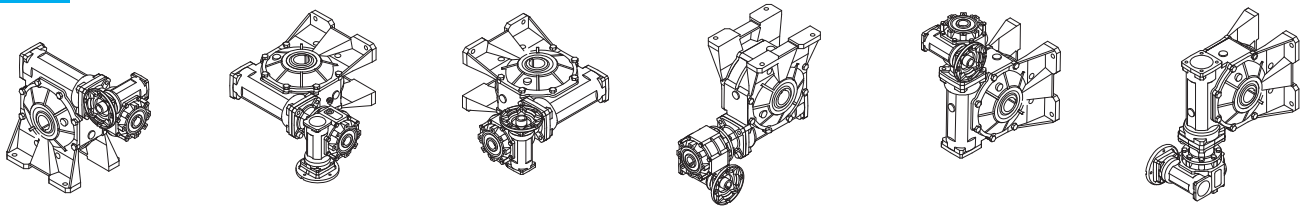


F (b, d, f, h, k, m, o, q) **P** (a, b, c, d, i, k, l, m)

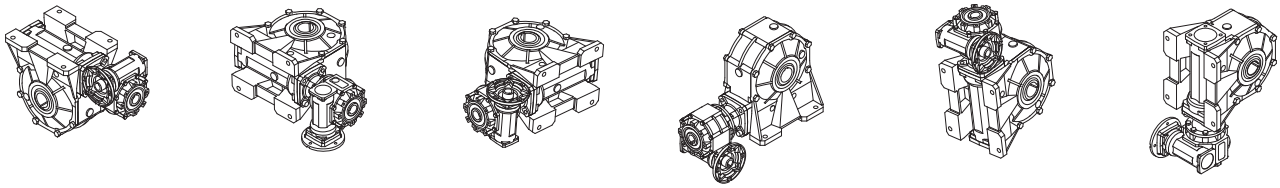


F (a, c, e, g, i, l, n, p)

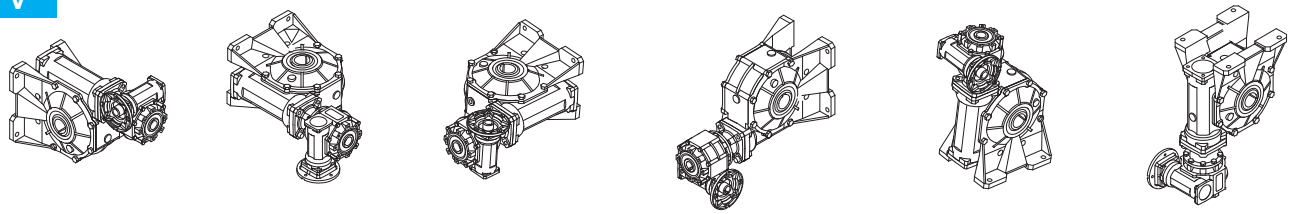
A



B



V



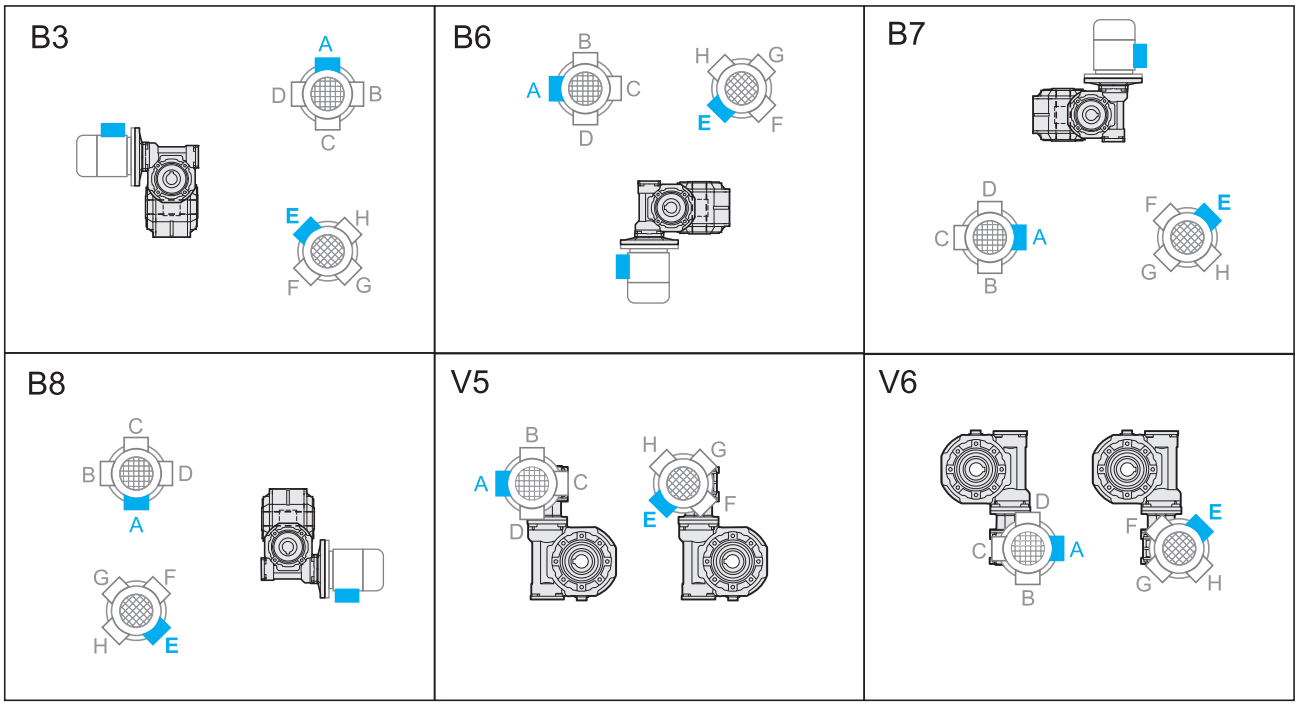
B3 **B6** **B7** **B8** **V5** **V6**

Quantità di lubrificante | *Lubricant quantity* | Schmiermittelmenge

Posizioni di montaggio *Mounting positions* Einbaulage			Q.tà olio / *Oil quantity* / Schmiermittelmenge [lt]						
			SCFK - SCRK						
			30/30	30/40	30/50	30/63	40/63	40/75	50/75
	B3	IN	0.015				0.04		0.08
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.26
	B6	IN	0.015				0.04		0.08
		OUT	0.030	0.060	0.120	0.220	0.220	0.34	0.26
	B7	IN	0.015				0.04		0.08
		OUT	0.030	0.060	0.120	0.220	0.220	0.34	0.26
	B8	IN	0.015				0.04		0.08
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.26
	V5	IN	0.030				0.06		0.120
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.26
	V6	IN	0.030				0.06		0.120
		OUT	0.015	0.04	0.08	0.16	0.16	0.26	0.26

IN = Riduttore entrata / *Gearbox at input* / Getriebe am Antrieb **OUT =** Riduttore uscita / *Gearbox at output* / Getriebe am Abtrieb

3.4 **Posizione morsettiera** | *3.4* ***Terminal board position*** | 3.4 ***Lage der Klemmenkaste***



3.5 Dati tecnici — *3.5 Technical data* — 3.5 Technische Daten

30/30

Kg 3.0

n_1 = 1400				SCFK					SCRK		
i_n	30 i_1	30 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	32	0.06	1.2	56-63		**37**	0.070	0.51
200		20	7.0	39	0.06	0.8			**32**	0.050	0.47
300		30	4.7	52*	0.06	0.8*			**39**	0.045	0.42
450	15		3.1	73*	0.06	0.5*			**39**	0.032	0.40
600	20		2.3	91*	0.06	0.4*			**39**	0.026	0.37
900	30		1.6	125*	0.06	0.3*			**39**	0.019	0.34
1200	40		1.2	149*	0.06	0.3*			**39**	0.016	0.30
1500	50		0.9	173*	0.06	0.2*			**39**	0.014	0.28
1950	65		0.7	209*	0.06	0.2*	56		**39**	0.011	0.26
2500	50	50	0.6	235*	0.06	0.1*	56-63		**30**	0.008	0.23
3250	65		0.4	283*	0.06	0.11*			**30**	0.006	0.21
4000	80		0.4	328*	0.06	0.09*	56		**30**	0.005	0.20
5000	100		0.3	385*	0.06	0.08*			**30**	0.005	0.19
10000		100	0.1	609*	0.06	0.03*			**17**	0.002	0.15

30/40

Kg 4.0

n_1 = 1400				SCFK					SCRK		
i_n	30 i_1	40 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	72	0.13	1.1	56-63		**82**	0.148	0.54
200		20	7.0	76	0.11	1.0			**76**	0.110	0.51
300		30	4.7	79	0.09	1.0			**82**	0.094	0.43
450	15		3.1	74	0.06	1.1			**82**	0.067	0.40
600	20		2.3	92	0.06	0.9			**82**	0.054	0.37
900	30		1.6	126*	0.06	0.6*			**82**	0.039	0.34
1200	40		1.2	151*	0.06	0.5*			**82**	0.033	0.31
1500	50		0.9	176*	0.06	0.5*			**82**	0.028	0.29
1950	65		0.7	212*	0.06	0.4*	56		**82**	0.023	0.27
2500	50	50	0.6	236*	0.06	0.3*	56-63		**68**	0.017	0.23
3250	65		0.4	285*	0.06	0.24*			**68**	0.014	0.21
4000	80		0.4	330*	0.06	0.21*	56		**68**	0.012	0.20
5000	100		0.3	387*	0.06	0.18*			**68**	0.011	0.19
10000		100	0.1	626*	0.06	0.06*			**35**	0.003	0.15

30/50

Kg 6.0

n_1 = 1400				SCFK					SCRK		
i_n	30 i_1	50 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	124	0.22	1.2	56-63		**149**	0.265	0.55
200		20	7.0	129	0.18	1.1			**144**	0.201	0.52
300		30	4.7	118	0.13	1.3			**150**	0.166	0.44
450	15		3.1	140	0.11	1.1			**150**	0.118	0.42
600	20		2.3	143	0.09	1.0			**150**	0.094	0.39
900	30		1.6	131	0.06	1.1			**150**	0.069	0.36
1200	40		1.2	156	0.06	1.0			**150**	0.058	0.32
1500	50		0.9	182	0.06	0.8			**150**	0.049	0.30
1950	65		0.7	220*	0.06	0.7*	56		**150**	0.041	0.28
2500	50	50	0.6	253*	0.06	0.5*	56-63		**125**	0.030	0.25
3250	65		0.4	305*	0.06	0.41*			**125**	0.025	0.23
4000	80		0.4	354*	0.06	0.35*	56		**125**	0.021	0.22
5000	100		0.3	414*	0.06	0.30*			**125**	0.018	0.20
10000		100	0.1	645*	0.06	0.11*			**69**	0.006	0.16

*** 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: $T_{2M} = T_2 \times FS'$

3.5 Dati tecnici — *3.5 Technical data* — 3.5 Technische Daten

30/63

Kg 8.5

n_1 = 1400				SCFK					SCRK		
i_n	30 i_1	63 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	126	0.22	1.8	56-63		**228**	0.400	0.56
200		20	7.0	162	0.22	1.7			**279**	0.378	0.54
300		30	4.7	207	0.22	1.3			**268**	0.285	0.46
450	15		3.1	238	0.18	1.1			**268**	0.202	0.43
600	20		2.3	215	0.13	1.2			**268**	0.162	0.40
900	30		1.6	250	0.11	1.1			**268**	0.118	0.37
1200	40		1.2	243	0.09	1.1			**268**	0.099	0.33
1500	50		0.9	189	0.06	1.4			**268**	0.085	0.31
1950	65		0.7	228	0.06	1.2	56		**268**	0.071	0.29
2500	50	50	0.6	265	0.06	0.8	56-63		**222**	0.050	0.26
3250	65		0.4	319*	0.06	0.70*	56		**222**	0.042	0.24
4000	80		0.4	369*	0.06	0.60*			**222**	0.036	0.23
5000	100		0.3	433*	0.06	0.51*			**222**	0.031	0.21
10000		100	0.1	663*	0.06	0.21*			**138**	0.012	0.16

40/63

Kg 9.5

n_1 = 1400				SCFK					SCRK		
i_n	40 i_1	63 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	214	0.37	1.2	63-71		**261**	0.452	0.56
200		20	7.0	277	0.37	1.0			**279**	0.373	0.55
300		30	4.7	238	0.25	1.1			**268**	0.282	0.46
450	15		3.1	244	0.18	1.1			**268**	0.197	0.44
600	20		2.3	226	0.13	1.2			**268**	0.154	0.43
900	30		1.6	257	0.11	1.0			**268**	0.115	0.38
1200	40		1.2	264	0.09	1.0			**268**	0.091	0.36
1500	50		0.9	203	0.06	1.3	63		**268**	0.079	0.33
1950	65		0.7	241	0.06	1.1	56-63		**268**	0.067	0.30
2500	50	50	0.6	284	0.06	0.8			**222**	0.047	0.28
3250	65		0.4	338*	0.06	0.66*			**222**	0.039	0.25
4000	80		0.4	400*	0.06	0.55*			**222**	0.033	0.24
5000	100		0.3	471*	0.06	0.47*			**222**	0.028	0.23
10000		100	0.1	722*	0.06	0.19*			**138**	0.011	0.18

*** 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: $T_{2M} = T_2 \times FS'$

3.5 **Dati tecnici** | *3.5* ***Technical data*** | 3.5 **Technische Daten**

40/75

Kg 14.5

n_1 = 1400				SCFK					SCRK		
i_n	40 i_1	75 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	322	0.55	1.3	63-71		**409**	0.698	0.57
200		20	7.0	417	0.55	1.1			**442**	0.593	0.56
300		30	4.7	358	0.37	1.2			**418**	0.432	0.47
450	15		3.1	346	0.25	1.2			**418**	0.302	0.45
600	20		2.3	390	0.22	1.1			**418**	0.236	0.43
900	30		1.6	309	0.13	1.4			**418**	0.176	0.39
1200	40		1.2	388	0.13	1.1			**418**	0.140	0.36
1500	50		0.9	379	0.11	1.1	63		**418**	0.121	0.34
1950	65		0.7	368	0.09	1.1	56-63		**418**	0.102	0.31
2500	50	50	0.6	296	0.06	1.3			**381**	0.077	0.29
3250	65		0.4	352	0.06	1.08			**381**	0.065	0.26
4000	80		0.4	417	0.06	0.91			**381**	0.055	0.25
5000	100		0.3	491*	0.06	0.78*			**381**	0.047	0.24
10000		100	0.1	762*	0.06	0.30*			**232**	0.018	0.19

50/75

Kg 14.5

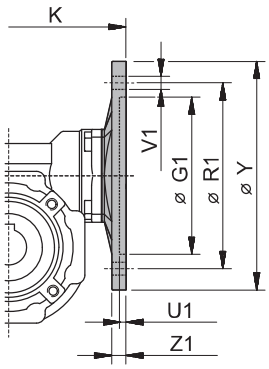
n_1 = 1400				SCFK					SCRK		
i_n	50 i_1	75 i_2	n_2 [min^{-1}]	T_2 [Nm]	P_1 [kW]	FS'	input IEC B5	input IEC B14	T_{2M} [Nm]	P [kW]	Rd
150	10	15	9.3	409	0.75	1.0	71-80		**409**	0.750	0.57
200		20	7.0	422	0.55	1.0			**442**	0.576	0.56
300		30	4.7	363	0.37	1.2			**418**	0.427	0.48
450	15		3.1	350	0.25	1.2			**418**	0.299	0.46
600	20		2.3	418	0.25	1.0			**418**	0.250	0.42
900	30		1.6	418	0.18	1.0			**418**	0.180	0.40
1200	40		1.2	406	0.13	1.0			**418**	0.134	0.38
1500	50		0.9	470	0.13	0.9	71		**418**	0.116	0.35
1950	65		0.7	572*	0.13	0.7*	63-71		**418**	0.095	0.33
2500	50	50	0.6	674*	0.13	0.6*			**381**	0.074	0.30
3250	65		0.4	819*	0.13	0.47*			**381**	0.060	0.28
4000	80		0.4	939*	0.13	0.41*			**381**	0.053	0.26
5000	100		0.3	1108*	0.13	0.34*			**381**	0.045	0.25
10000		100	0.1	1719*	0.13	0.13*			**232**	0.018	0.19

*** 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: $T_{2M} = T_2 \times FS'$

3.6 Predisposizioni possibili — *3.6 Possible set-ups* — 3.6 Mögliche Vorrichtungen

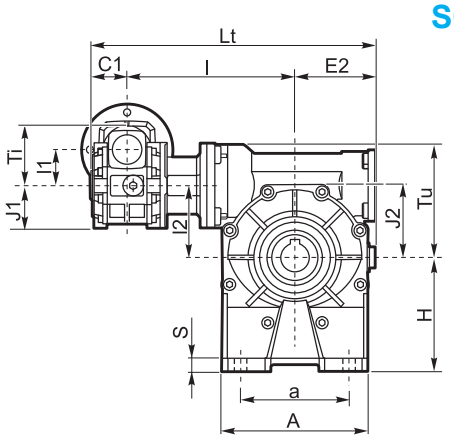


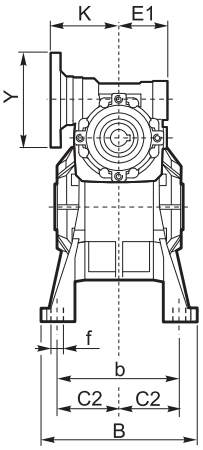
SCFK	PAM IEC	G_1	K	R_1	U1	V1			Y	Z_1	Diametro fori PAM / *Holes diameter IEC-Input* Bohrungdurchmesser IEC-Antrieb								
						Ø					150 200 300	450	600	900	1200	1500 2500	1950 3250	4000	5000 10000
30/30 30/40 30/50 30/63	56 B5	80	57	100	4	7	n° 8		120	8	9	9	9	9	9	9	9	9	9
	56 B14	50		65	3.5	6	n° 8		80	8	9	9	9	9	9	9	9	9	9
	63 B5	95		115	4	9	n° 8		140	8	11	11	11	11	11	11	11	11	/
	63 B14	60		75	4	6	n° 8		90	8	11	11	11	11	11	11	11	11	/
40/63 40/75	56 B5	80	75	100	4	7	n° 8		120	9	/	/	/	/	/	/	/	9	9
	56 B14	50		65	3.5	6		n° 4	80	8	/	/	/	/	/	/	/	9	9
	63 B5	95		115	4	9	n° 8		140	9	11	11	11	11	11	11	11	11	11
	63 B14	60		75	3.5	6		n° 4	90	8	11	11	11	11	11	11	11	11	11
	71 B5	110		130	4.5	9	n° 8		160	10	14	14	14	14	14	14	14	/	/
	71 B14	70		85	3.5	7	n° 8		105	8	14	14	14	14	14	14	14	/	/
50/75	63 B5	95	82	115	4	9	n° 8		140	9	/	/	/	/	/	/	11	11	11
	63 B14	60		75	3.5	6		n° 4	90	8	/	/	/	/	/	/	11	11	11
	71 B5	110		130	4.5	9	n° 8		160	10	14	14	14	14	14	14	14	14	14
	71 B14	70		85	3.5	7	(n° 8)*	n° 4	105	8	14	14	14	14	14	14	14	14	14
	80 B5	130		165	4.5	11	n° 8		200	10	19	19	19	19	19	19	19	/	/
	80 B14	80		100	4	7	n° 8		120	10	19	19	19	19	19	19	19	/	/

* A richiesta, solo con corpo speciale / *Upon request, only with special body* / Auf Wunsch nur mit speziellen Körper

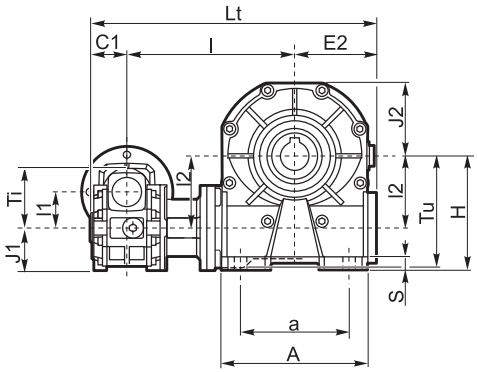
3.7 Dimensioni — *3.7 Dimensions* — 3.7 Abmessungen

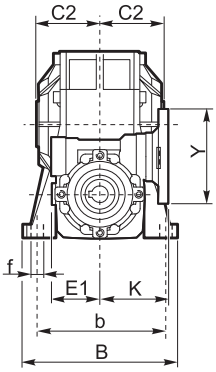
SCFK.../A



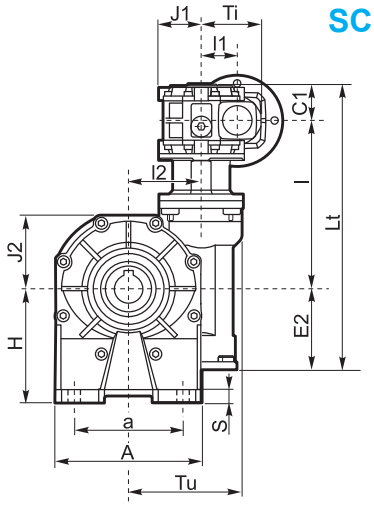


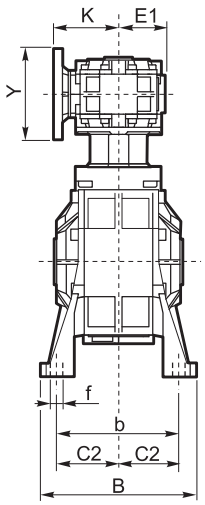
SCFK.../B

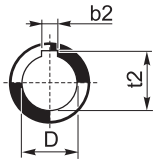




SCFK.../V





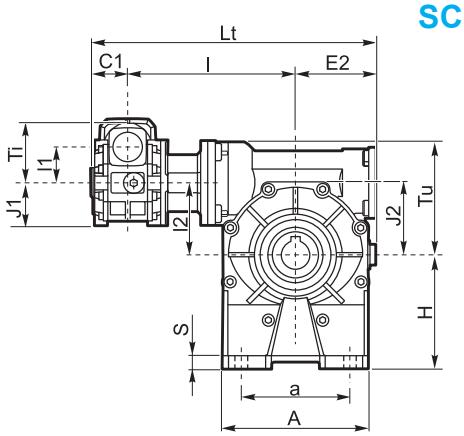


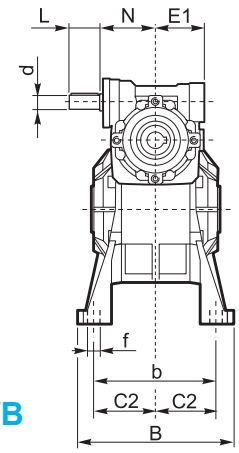
SCFK	Albero lento cavo *Hollow output shaft* Ausgangshohlwelle		
	D H8	**b2**	**t2**
30/30	**14**	5	16.3
30/40	**19**	6	21.8
30/50	**24**	8	27.3
30/63 40/63	**25**	8	28.3
40/75 50/75	**28** (30)	8 (8)	31.3 (33.3)

A, B, V

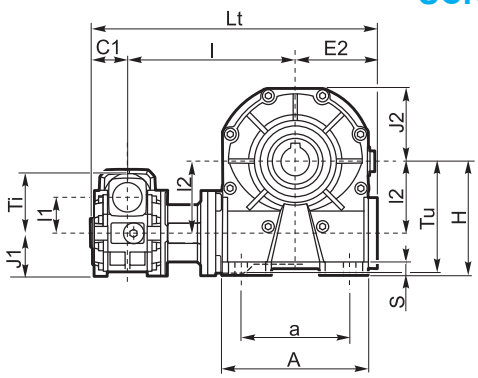
SCFK	A	a	B	b	C1	C2	E1	E2	f	H	I	I1	I2	J1	J2	Kc	Lt	S	Ti	Tu
30/30	67	52 ÷ 40	78	66	31.5	31.5	41	41	6.5	52	100	31.5	31.5	37.5	37.5	57	171.5	5	52.5	52.5
30/40	87	70	100	80 ÷ 88		41		51	7	71	122		40		43.5	57	203.5	9		68.5
30/50	115	85	119	96 ÷ 102		49		60	9	85	132		50		53.5	57	223.5	11		82.5
30/63	127.5	95	136	111		60		71	11	100	147		63		64	57	248.5	12		100.5
40/63	127.5	95	136	111	39	60	51	71	11	100	152	40	63	43.5	64	75	261	12	68.5	100.5
40/75	155.5	120	140	115		60		85	11	115	176.5		75		78	75	301.5	12		116.5
50/75	155.5	120	140	115	46	60	60	85	11	115	192	50	75	53.5	78	82	324	12	82.5	116.5

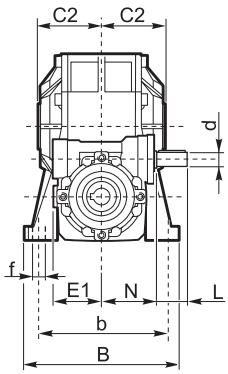
SCRK.../A



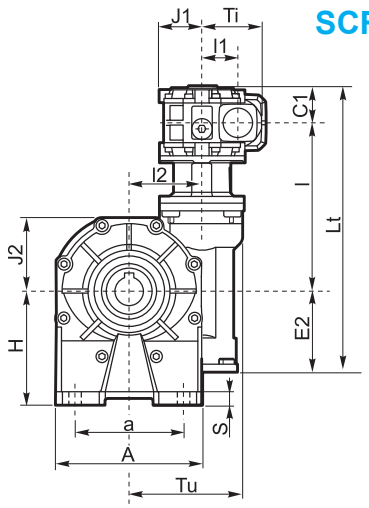


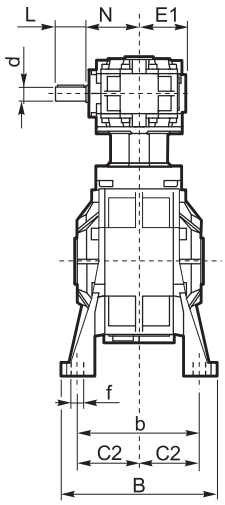
SCRK.../B

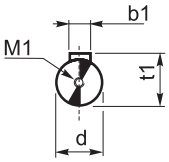




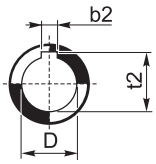
SCRK.../V







SCRK	Albero entrata *Input shaft* Eingangswelle			
	d (j6)	**b1**	**t1**	**M1**
30/30 30/40 30/50 30/63	9	3	10.2	M4x10
40/63 40/75	11	4	12.5	M4x10
50/75	14	5	16	M5x13

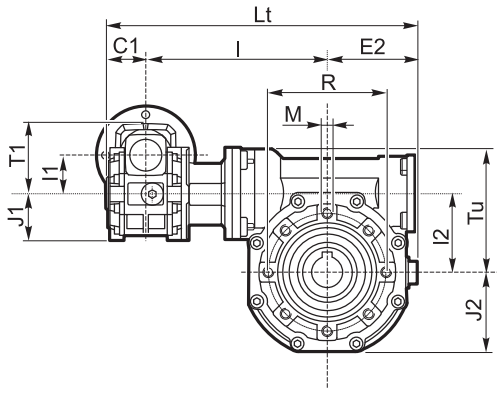


SCRK	Albero lento cavo *Hollow output shaft* Ausgangshohlwelle		
	D H8	**b2**	**t2**
3030	**14**	5	16.3
30/40	**19**	6	21.8
30/50	**24**	8	27.3
30/63 40/63	**25**	8	28.3
40/75 50/75	**28** (30)	8 (8)	31.3 (33.3)

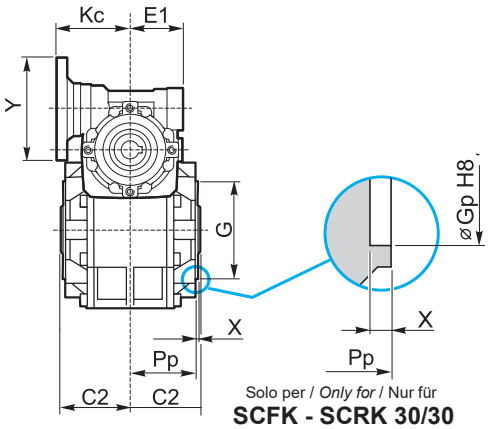
A, B, V

SCRK	A	a	B	b	C1	C2	E1	E2	f	H	I	I1	I2	J1	J2	Lt	L	N	S	Ti	Tu
30/30	67	52 ÷ 40	78	66		31.5		41	6.5	52	100		31.5		37.5	171.5			5		52.5
30/40	87	70	100	80 ÷ 88	31.5	41	41	51	7	71	122	31.5	40	37.5	43.5	203.5	20	47	9	52.5	68.5
30/50	115	85	119	96 ÷ 102		49		60	9	85	132		50		53.5	223.5			11		82.5
30/63	127.5	95	136	111		60		71	11	100	147		63		64	248.5			12		100.5
40/63	127.5	95	136	111	39	60	51	71	11	100	152	40	63	43.5	64	261	22	64	12	68.5	100.5
40/75	155.5	120	140	115		60		85	11	115	176.5		75		78	301.5			12		116.5
50/75	155.5	120	140	115	46	60	60	85	11	115	192	50	75	53.5	78	324	30	74	12	82.5	116.5

3.7 Dimensioni — *3.7 Dimensions* — 3.7 Abmessungen

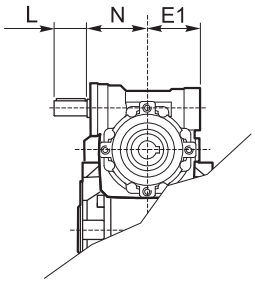


SCFK.../P
SCFK.../FP2



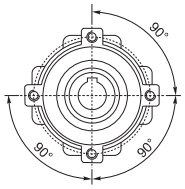
Solo per / *Only for* / Nur für
SCFK - SCRK 30/30

SCRK.../P
SCRK.../FP2



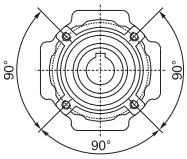
Flangia pendolare / *Side cover for shaft mounting* / Flansch für Drehmomentstutze

30

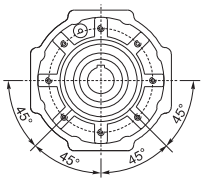


4 Fori / *Holes* / Bohrungen

40 - 50(FP2)



50 - 63 - 75

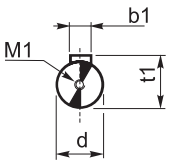


8 Fori / *Holes* / Bohrungen

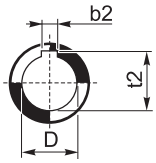
P					
SCFK SCRK	**30/30**	**30/40**	**30/50**	**30/63 40/63**	**40/75 50/75**
G_p	42* **H8**	60 **h8**	70 **h8**	70 **h8**	80 **h8**
M	M6x8	M6X10	M8x10	M8x14	M8x14
P_p	36	38	46	57.5	57
R_p	56	83	85	85	100
X	5.5	2	2	3.5	2

* Vedere dettaglio (SCFK - SCRK 30/P)
Pls refer to above detail (SCFK - SCRK 30/P)
Siehe o.g. Einzelheit (SCFK - SCRK 30/P)

FP2					
SCFK SCRK	**30/30**	**30/40**	**30/50**	**30/63 40/63**	**40/75 50/75**
G_p h8	—	50 h8	60 h8	—	—
M	—	M6X8.5	M6X9	—	—
P_p	—	38	46	—	—
R_p	—	65	75	—	—
X	—	2	2	—	—



SCRK	Albero entrata *Input shaft* Eingangswelle			
	d (j6)	**b1**	**t1**	**M1**
30/30 30/40 30/50 30/63	9	3	10.2	M4x10
40/63 40/75	11	4	12.5	M4x10
50/75	14	5	16	M5x13

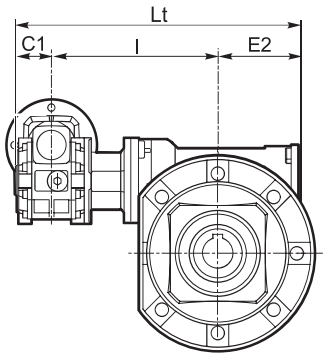


SCFK SCRK	Albero lento cavo *Hollow output shaft* Ausgangshohlwelle		
	D H8	**b2**	**t2**
30/30	**14**	5	16.3
30/40	**19** (18)	6 (6)	21.8 (20.8)
30/50	**24**	8	27.3
30/63 40/63	**25**	8	28.3
40/75 50/75	**28** (30)	8 (8)	31.3 (33.3)

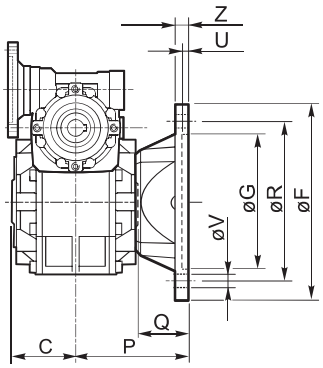
P - FP2															
SCFK SCRK	**C1**	**C2**	**E1**	**E2**	**I**	**I1**	**I2**	**J1**	**J2**	**Kc**	**L**	**Lt**	**N**	**Ti**	**Tu**
30/30	31.5	31.5	41	41	100	31.5	31.5	37.5	37.5	57	20	171.5	47	52.5	52.5
30/40		41		51	122		40		43.5	57		203.5			68.5
30/50		49		60	132		50		53.5	57		223.5			82.5
30/63		60		71	147		63		64	57		248.5			100.5
40/63	39		51	71	152	40	63	43.5	64	75	22	261	64	68.5	100.5
40/75		60		85	176.6		75		78	75		301.5			116.5
50/75	46		60	85	192	50	75	53.5	78	82	30	324	74	82.5	116.5

3.7 **Dimensioni** — *3.7 **Dimensions*** — 3.7 **Abmessungen**

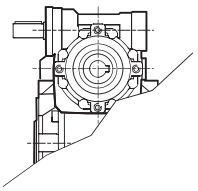
Flangia uscita / *Output flange* / Abtriebsflansch

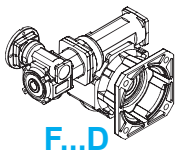


SCFK.../F

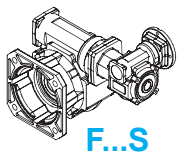


SCRK.../F



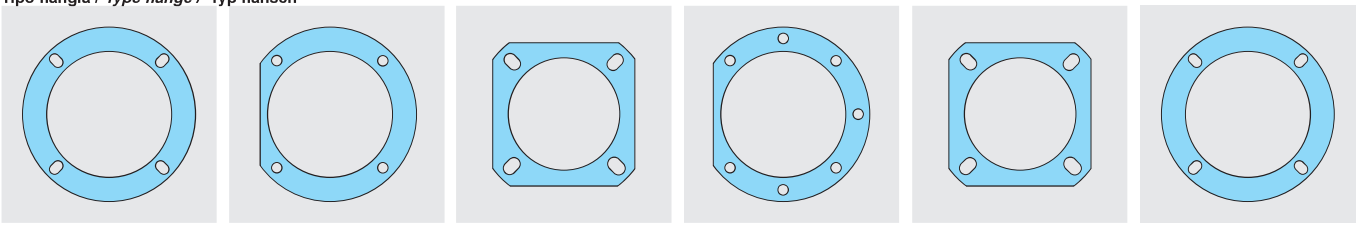


F...D
Standard

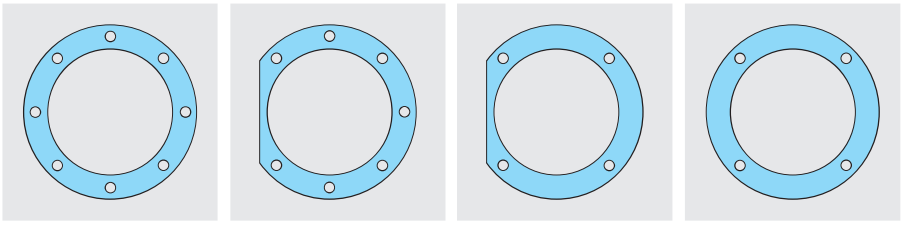


F...S

Tipo flangia / *Type flange* / Typ flansch



30/30	30/40		30/50		
F	F	F1* - F2*	F	F1	F2 - F3



30/63 40/63	63	40/75 50/75	30/63 40/63	40/75 50/75	40/75 50/75
F*	F1*	F* - F1*	F2*	F2* - F3* F3A*	F4*

N.B.

La flangia uscita può essere montata solo sul riduttore in versione P.
Le flangie indicate con (*) necessitano di un coperchio speciale.

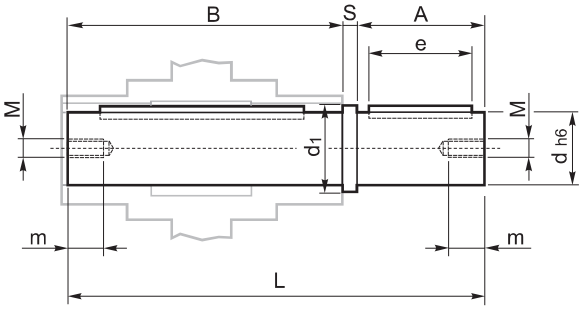
The output flange is to be mounted to the gearbox P version only.
A special cover is required for the flanges marked by (*).

Der Abtriebsflansch darf nur auf das Getriebe Version P montiert werden
Für die Flansche mit (*) ausgezeichnet ist einen Sonderdeckel nötig.

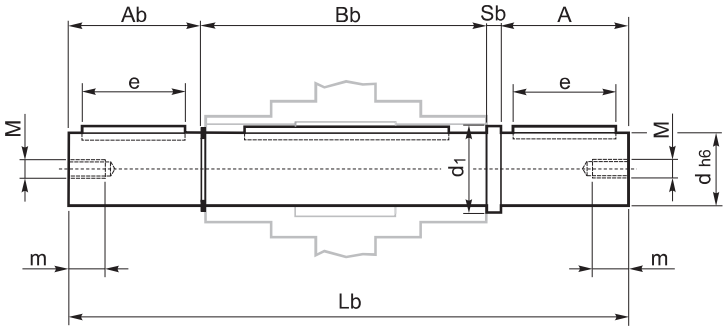
SCFK SCRK	Tipo flangia *Type flange* Typ flansch	C	F		G (H8)	P	Q	R	U	V			Z
												ø	
30/30	F	31.5	71		40	50.5	19	56 ÷ 60	3	n° 4		6.5	6
30/40	F	41	140		95	82	41	115	5	n° 4		9	9
	F1*			85	60	68.5	27.5	75 ÷ 90	4	n° 4		9	8
	F2*			85	60	98.5	57.5	75 ÷ 90	4	n° 4		9	8
30/50	F	49	160		110	92	43	130	5		n° 7	11	11
	F1			94	70	92.5	43.5	85 ÷ 100	5	n° 4		11	10
	F2		125		70	73	24	90 ÷ 100	5	n° 4		10.5	10
	F3		125		70	85	36	90	5	n° 4		10.5	10
30/63 40/63	F*	60	180		115	116	56	150	7		n° 8	11	12
	F1*		180		115	86	26	150	5		n° 7	11	11
	F2*		200		130	102	42	165	6	n° 4		11	11
40/75 50/75	F*	60	200		130	111	51	165	6		n° 7	13	13
	F1*		200		130	85	25	165	6		n° 7	13	13
	F2*		175		115	116	56	150	6	n° 4		11	12
	F3*		175		115	85	25	150	5	n° 4		11	12
	F3A*		160		110	85	25	130	5	n° 4		11	12
	F4*		160		110	101	41	130	6	n° 4		11	12

3.8 Accessori — *3.8 Accessories* — 3.8 Zubehör

Albero lento semplice / *Single output shaft* / Standard Abtriebswelle



Albero lento doppio / *Double output shaft* / Doppelte Abtriebswelle



SCFK SCRK	A	Ab	B	Bb	d (h6)	d1	e	L	Lb	M	m	S	Sb
30/30	30	29	62	64	14	18.5	20	94.5	126	M6	16	2.5	2.5
30/40	40	39	77	83.2	19	24.5	30	120	165.2	M6	16	3	3
30/50	50	49	90	99.2	24	29.5	40	143.5	201.2	M8	22	3.5	3.5
30/63 40/63	60	59	119	121.2	25	29.5	50	183	244.2	M8	22	4	4
40/75 50/75	60	59	119	121.5	28	34.5	50	183	244.5	M8	22	4	4

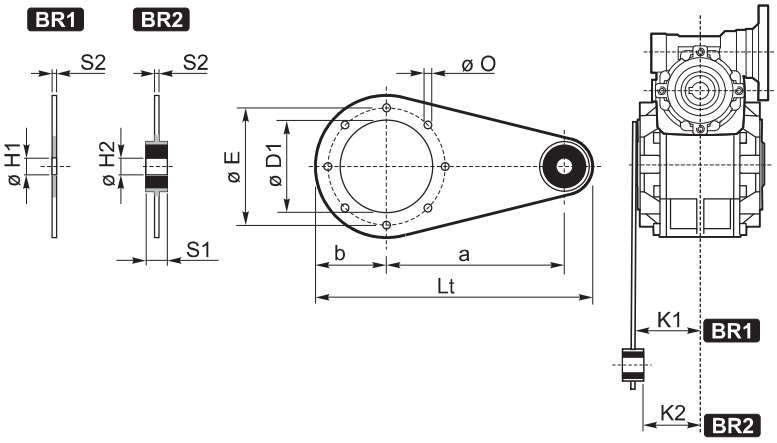
BR1 Senza boccola / *Without bush* / Ohne Büchse

SCFK SCRK	a	b	D1	E	H1	K1	Lt	O	S1	S2
30/30	70	34.5	42	56	9	36	119.5	7	—	4
30/40	90	50	60	83	10	38	165	7	—	4
30/50	100	55	70	85	10	46	180	9	—	4
30/63	150	53	70	85	10	57.5	230	9	—	6
40/63										

BR2 Con boccola / *With bush* / Mit Büchse

SCFK SCRK	a	b	D1	E	H2	K2	Lt	O	S1	S2
30/40	90	50	60	83	8	33	165	7	14	4
30/50	100	50	70	85	10	40.5	180	9	14	4
30/63 40/63	150	53	70	85	10	50.5	230	9	20	6
40/75 50/75	150	62	80	100	10	50	240	9	20	6

Braccio di reazione / *Torque arm* / Drehmomentstütze



Opzioni disponibili:

Cuscinetti a rulli conici corona

Available options:

Tapered roller bearing for worm wheel

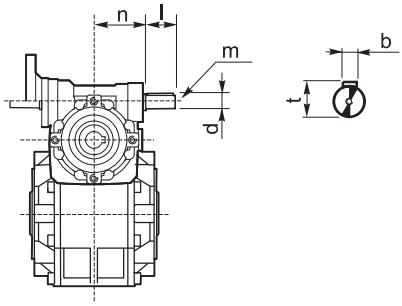
Auf Anfrage ist folgendes Zubehör erhältlich:
Kegelrollenlager für Schneckenrad

3.9 Esecuzione con vite bisporgente

3.9 Double extended worm shaft design

3.9 Versionen mit Doppelseitig Herausragender Schneckenwelle

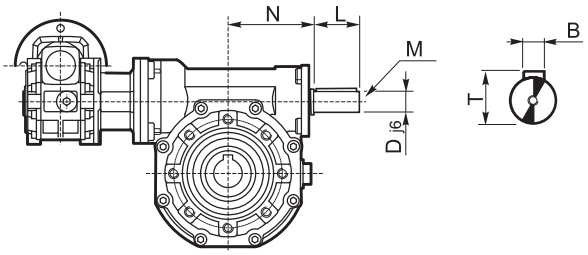
SeA1



SCFK	SeA1					
	b	d j6	l	m	n	t
30/30 30/40 30/50 30/63	3	9	15	M4x10	42.5	10.2
40/63 40/75	4	11	20	M4x12	52.5	12.5
50/75	5	14	25	M5x13	62.5	16

SCRK	SeA1					
	b	d j6	l	m	n	t
30/30 30/40 30/50 30/63	3	9	20	M4x10	42.5	10.2
40/63 40/75	4	11	22	M4x10	52.5	12.5
50/75	5	14	30	M5x13	62.5	16

SeA2



SCFK SCRK	SeA2					
	B	D j6	L	M	N	T
30/30	3	9	15	M4x10	42.5	10.2
30/40	4	11	20	M4x12	52.5	12.5
30/50	5	14	25	M5x13	62.5	16
30/63 40/63	6	19	30	M8x20	72.5	21.5
40/75 50/75	8	24	40	M8x20	93	27

L'entrata supplementare del riduttore in uscita (SeA2) non può essere utilizzata come comando in quanto il relativo movimento risulta impedito dalla irreversibilità del primo riduttore.
Utilizzato come asse condotto, avrà veliocità corrispondente a quella di ingresso ridotta del rapporto del primo riduttore.

The second input shaft of the output gearbox (SeA2) can not be utilized as a drive because its motion will be stopped by the reversibility of the first gearbox.
If utilized as a drive shaft its speed will be equal to the input speed decreased by the ratio of the first gearbox.

Die verlängerte Schneckenwelle des zweiten Getriebes (SeA2) kann nicht als Antrieb verwendet werden, da die Selbshemmung des ersten Getriebes entgegengewirkt.
Wird sie als Abtriebswelle verwendet, besitzt sie eine um die Untersetzung des ersten Getriebes entsprechend reduzierte Drehzahl und Drehmoment.

3.10 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 compres- sione 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_{2S} in funzione del n° di giri della ghiera.

3.10 Torque limiter with through hollow shaft

The use of a torque limiter is advisable when the application requires the limitation of the transmissible torque to safeguard the plant and/or the gearbox from unexpected or undesired overloads.
The torque limiter is equipped with a through hollow shaft and a friction clutch. It is integrated in the gearbox, therefore space requirement is limited.
Designed to be working in oil bath, the device is reliable over time and is not subject to wear unless in case of operation with prolonged slipping (it occurs when the torque values are higher than the calibration values).
Calibration can be easily adjusted from outside by tightening of the self-locking ring nut, which causes the compression of the 4 Belleville washers arranged in series.

The device 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_{2S} slipping torques depending on the number of revolutions of the ring nut.

3.10 Drehmomentenbegrenzer mit durchgehender Hohlwelle

Die Anwendung eines Drehmomentbegrenzers wird empfohlen, um die Anlage und/oder das Getriebe gegen ungewünschte und unerwartete Überbelastungen zu schützen.
Es handelt sich um eine Vorrichtung mit einer durchgehenden Hohlwelle.
Er ist in dem Getriebe integriert, d.h. der Raumbedarf ist klein. Der Begrenzer wurde für Betrieb in einem Ölbad entworfen.
Er ist zuverlässig und verschleißfrei (nur im Falle eines dauerhaften Rutschens entsteht Verschleiß, hier ist das Drehmoment größer als der eingestellte Eichwert).
Die Eichung kann mühelos von aussen durch das Anziehen einer selbstsperrenden Mutter ausgeführt werden, dadurch wird der Druck auf die 4 wechselseitig angeordneten Tellerfedern erhöht.

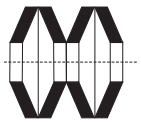
Die Vorrichtung sieht das folgende nicht vor:
- die Verwendung von Kegelrollenlager am Abtrieb
- Längerer Rutschbetrieb

Die nachstehende Tabelle zeigt die Werte der Rutschmomente M_{2S} abhängig von der Anzahl der Umdrehungen der Mutter.
Die Eichwerte weisen ±10% Toleranz

SCFK SCRK	N°. giri della ghiera di regolazione *N°. revolutions of ring nut* / Nr. Umdrehungen der Mutter												
	1	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
30/30	20	25	30	35	40								
30/40	50	60	70	80	90								
30/50	75	95	115	135	155								
30/63		110	125	145	160	180	200	220	230	245	255	265	285
40/63													
40/75			220	245	275	310	350	375	410	450			
50/75													

Disposizione delle molle
Washers' arrangement
Lage der Feder

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



I valori di taratura presentano una tolleranza del ±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 volori 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.
E' quindi opportuno prevedere uno stop per poter ripartire al valore di taratura iniziale.

Calibration values feature a ±10% tolerance and refer to static conditions.
Under dynamic conditions the values of the slipping torque will change according to 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.

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 Reibungsfaktor zwischen den Berüehrungsflächen 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.

3.10 Limitatore di coppia cavo passante

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.
È quindi opportuno verificare periodicamente, soprattutto durante la fase di rodaggio, la taratura del dispositivo.
Là dove sia richiesto un errore più contenuto nella taratura, è necessario testare la coppia trasmissibile sull'impianto.

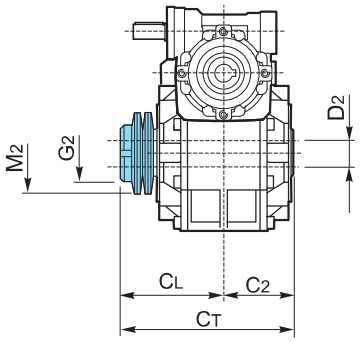
Il dispositivo viene consegnato tarato alla coppia riportata a catalogo T_{2M} salvo diversa indicazione espressa in fase di ordinazione.

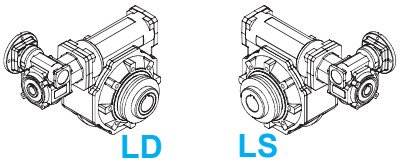
3.10 Torque limiter with through hollow shaft

It is important to note that the slipping torque is not the same for the whole life of the torque limiter.
It usually decreases in connection with the numbers and the duration of the slipping which because of the surfaces' lapping will increase 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 device is supplied already calibrated at the torque reported in the catalogue T_{2M}, unless otherwise specified in the order.

3.10 Drehmomentenbegrenzer mit durchgehender Hohlwelle

Es ist wichtig zu beachten, dass das Rutschmoment über die gesamte Lebensdauer der Rutschkupplung nicht konstant bleibt, sondern üblicherweise in Verbindung mit längeren Rutschzyklen aufgrund der eingelaufenen Berührungsflächen abnimmt.
Deswegen ist es ratsam, die Eichung der Vorrichtung besonders während der Einlaufzeit zu prüfen.
Falls ein niedrigerer Eichfehler gewünscht ist, sollte das übertragbare Drehmoment auf der Anlage getestet werden.
Wenn die Vorrichtung geliefert wird, ist sie schon auf das im Katalog T_{2M} angegebenen Drehmoment geeicht, ausser wenn es in der Bestellung anders angegebene wird.





SCFK SCRK LD - LS	C_2	C_L	C_t	D_2 H8	M_2	G_2
30/30	31.5	61.5	93	14	50x25.4x1.5	M25X1.5
30/40	41	67	108	19	56x30.5x2	M30X1.5
30/50	49	79	128	24	63x40.5x2.5	M40X1.5
30/63 40/63	60	97	157	25	71x40.5x2.5	M40X1.5
40/75 50/75	60	100	160	28 (30)	90x50.5x3.5	M50X1.5

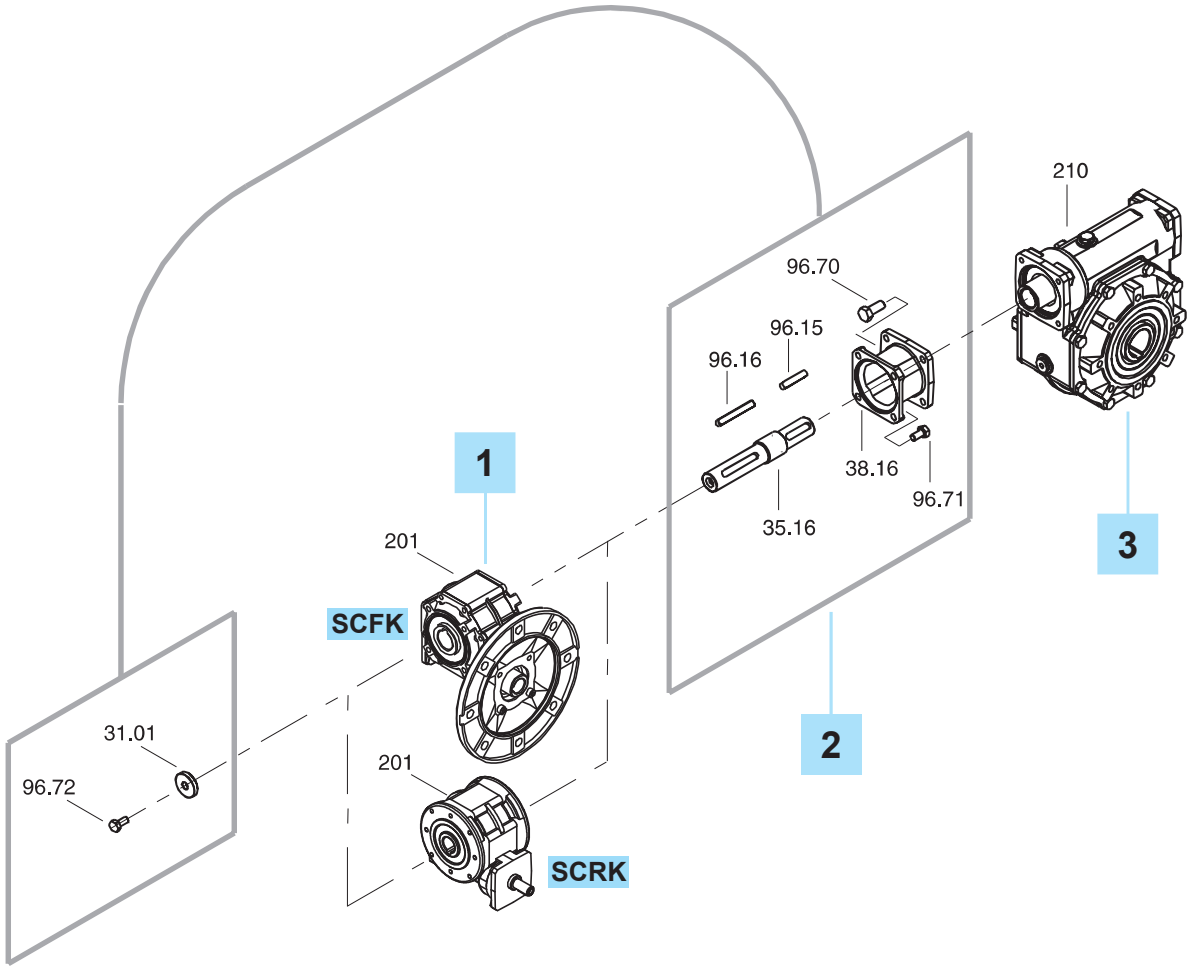
( ) A richiesta / *On request* / Auf Anfrage

Nella versione con limitatore non è prevista la fornitura degli alberi lenti.
Il dispositivo viene consegnato tarato alla coppia riportata a catalogo T_{2M} salvo diversa indicazione espressa in fase di ordinazione.

The version with torque limiter is supplied without output shafts.
The device is supplied already calibrated at the torque reported in the catalogue T_{2M}, unless otherwise specified in the order.

Die Version mit Drehmomentbegrenzer wird ohne Abtriebswellen geliefert.
Wenn die Vorrichtung geliefert wird, ist sie schon auf dem im Katalog T_{2M} angegebenen Drehmoment geeicht, ausser wenn es in der Bestellung anders angegeben wird.

SCFK - SCRK

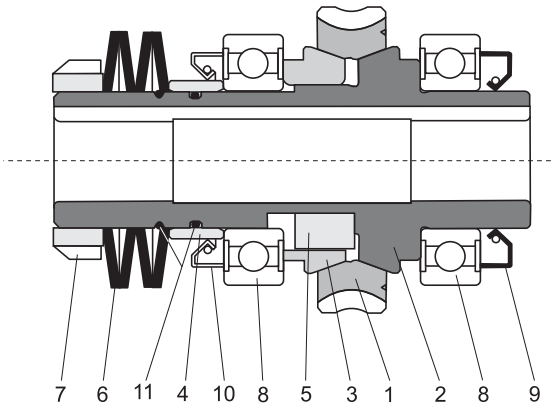


	1		2	3
	IN (SCFK)	IN (SCRK)	KIT	OUT
30/30	KC30	KA30	**KIT 30/30** (2850002010)	30/9
30/40			**KIT 30/40** (2850002013)	40/11
30/50			**KIT 30/50** (2850002016)	50/14
30/63			**KIT 30/63** (2850002019)	63/19
40/63	KC40	KA40	**KIT 40/63** (2850002028)	63/19
40/75			**KIT 40/75** (2850002031)	75/24
50/75	KC50	KA50	**KIT 50/75** (2850002034)	75/24

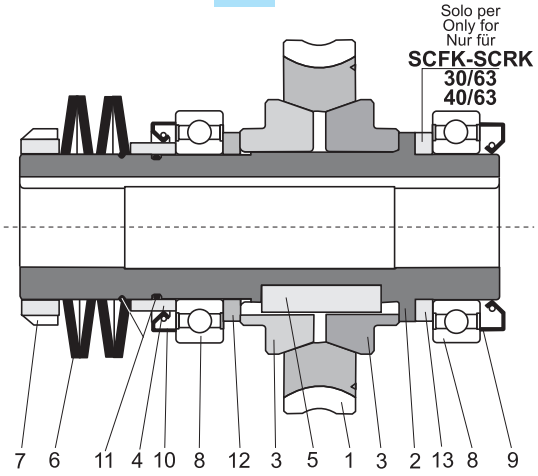
SCFK - SCRK

Limitatore di coppia cavo passante | *Torque limiter with through hollow shaft* | Drehmomentbegrenzer mit durchgehende Hohlwelle

A



B



	A			B	
	SCFK - SCRK				
	30/30 (L1-LD-LS) **30/40** (L1) **30/50** (L1) **30/63** (L1)	**30/40** (LD - LS) **40/63** (L1) **40/75** (L1)	**30/50** (LD - LS) **50/75** (L1)	**30/63** (LD - LS) **40/63** (LD - LS)	**40/75** (LD - LS) **50/75** (LD - LS)
1	Corona in bronzo / *Bronze wheel* / Bronzerad				
2	Albero cavo limitatore / *Hollow shaft torque limiter* / Rutschkupplungs-Hohlwelle				
3	Anello di frizione / *Friction ring* / Reibring				
4	Distanziale molle / *Washers' distance ring* / Federdistanzring				
5	Linguetta / *Key* / Passfeder				
	8x7x10AB	10x8x13AB	12x8x18AB	12x8x40A	16x10x40A
6	Molle a tazza / *Belleville washers* / Tellerfeder				
7	Ghiera / *Metal ring* / Metall Ring				
8	Cuscinetti / *Bearings* / Lager				
	6005 25x47x12	6006 30x55x13	6008 40x68x15	6008 40x68x15	6010 50x80x16
9	Anelli di tenuta / *Oilseals* / Öldichtungen				
	25x40x7	30x47x7	40x62x8	40x62x8	50x72x8
10	Anelli di tenuta / *Oilseals* / Öldichtungen				
	30x40x5	35x47x7	48x62x8	48x62x8	58x72x8
11	O-rings in gomma / *Rubber O-rings* / Gummi-O-ringe				
	OR2087 21.95x1.78	OR2106 26.7x1.78	OR 36.27x1.78	OR 36.27x1.78	OR2187 47.37x1.78
12	-			Distanziale / *Spacer* / Abstandshülse	
13	-			Distanziale / *Spacer* / Abstandshülse	-