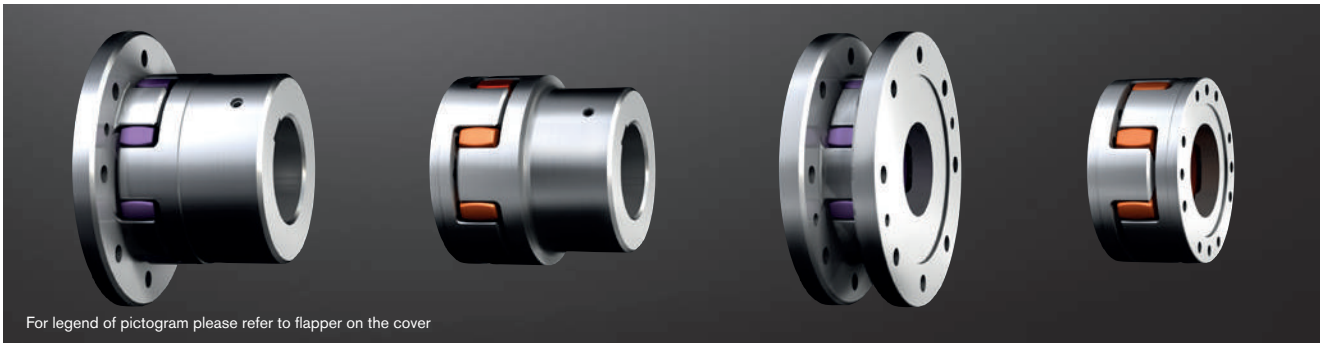


ROTEX® CF, CFN, DF and DFN Flexible jaw couplings

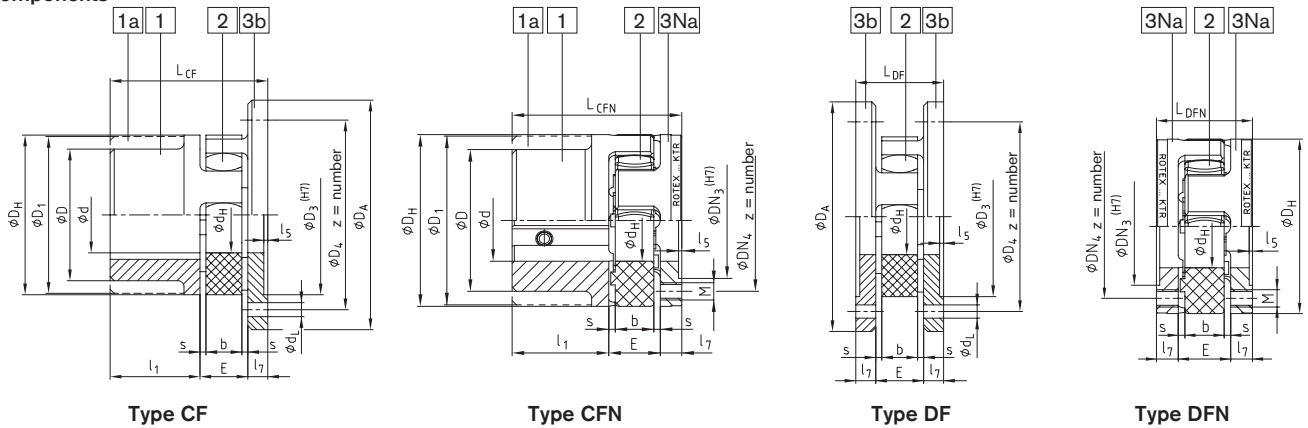
Flange programme



For legend of pictogram please refer to flapper on the cover



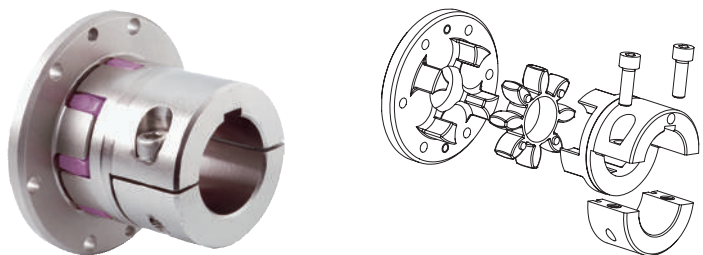
Components



ROTEX® Type CF, CFN and DF, DFN																							
Size	d, D, D ₁	Dimensions general [mm]							Dimensions CF and DF [mm]							Dimensions CFN and DFN [mm]							
		D _H	d _H	l ₁	E	s	b	l ₅	l ₇	D _A	D ₃	D ₄	z	d _L	L _{CF}	L _{DF}	DN ₃	DN ₄	M	z	Pitch	L _{CFN}	L _{DFN}
24		55	27	30	18	2.0	14	1.5	8	80	55	65	5	4.5	56	34	36	45	M5	8		56	34
28		65	30	35	20	2.5	15	1.5	10	100	65	80	6	6.6	65	40	44	54	M6	8	8x45°	65	40
38		80	38	45	24	3.0	18	1.5	10	115	80	95	6	6.6	79	44	54	66	M8	8		79	44
42		95	46	50	26	3.0	20	2.0	12	140	95	115	6	9.0	88	50	65	80	M8	12		88	50
48		105	51	56	28	3.5	21	2.0	12	150	105	125	8	9.0	96	52	75	90	M8	12	16x22.5°	96	52
55		120	60	65	30	4.0	22	2.0	16	175	120	145	8	11.0	111	62	84	102	M10	8	8x45°	111	62
65		135	68	75	35	4.5	26	2.0	16	190	135	160	10	11.0	126	67	96	116	M10	12	16x22.5°	126	67
75		160	80	85	40	5.0	30	2.5	19	215	160	185	10	13.5	144	78	112	136	M12	15		144	78
90		200	100	100	45	5.5	34	3.0	20	260	200	225	12	13.5	165	85	145	172	M16	15		165	85
100		225	113	110	50	6.0	38	4.0	25	285	225	250	12	13.5	185	100	165	195	M16	15		185	100
110		255	127	120	55	6.5	42	4.0	26	330	255	290	12	18.0	201	107	180	218	M20	15	20x18°	201	107
125		290	147	140	60	7.0	46	5.0	30	370	290	325	16	18.0	230	120	215	252	M20	15		230	120
140		320	165	155	65	7.5	50	5.0	34	410	320	360	16	22.0	254	133	245	282	M20	15		254	133
160		370	190	175	75	9.0	57	5.0	38	460	370	410	16	22.0	288	151	280	325	M24	15		288	151
180		420	220	195	85	10.5	64	5.5	40	520	420	465	16	26.0	320	165	330	375	M24	18	24x15°	320	165

For other flange programmes see page 45.

Other types: ROTEX® CF-H
Flange drop-out center design coupling
Please order our separate dimension sheet
(M412069).



Ordering example:	ROTEX® 38	CF	92 ShA	1	GJL	Ø20
	Coupling size	Type	Spider hardness	Hub side, component	Material	Finish bore

Legend of pictograms



Torsionally rigid



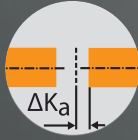
Light-weight



Protected against corrosion



Torsionally flexible



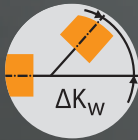
Axial compensation



Electrically insulating



Highly flexible



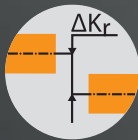
Angular compensation



Maximum speed



Damping vibrations



Radial compensation



No eddy current losses



Axial plug-in



Shiftable at standstill



Torque limiter slipping



Consider shaft distance



Double-cardanic



Torque limiter with synchronous ratcheting



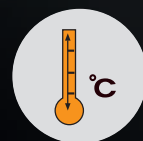
Relatively short shaft distance



Radial disassembly
Ease of service



Torque limiter with idle rotation type



Maximum operating temperature



Standard drop-out center lengths available



Hardened surface



High speeds



Available in accordance with API



Accuracy X %



Backlash-free



Complying with ATEX
For details refer to our ATEX leaflet



Consider axial displacement



Shear type, separating, slipping



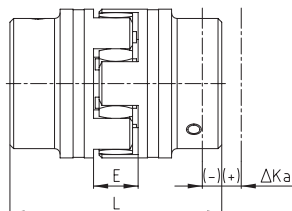
Maintenance-free



Additional features compared to standard version

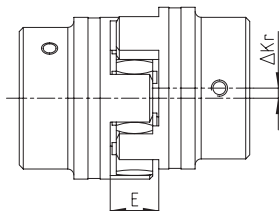
Displacements

Axial displacement ΔK_a

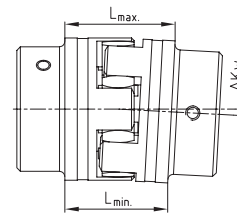


$$L_{\max.} = L + \Delta K_a$$

Radial displacement ΔK_r



Angular displacement ΔK_w [degree]



$$\Delta K_w \text{ [mm]} = L_{\max} - L_{\min}$$

Displacements for spider 92 and 98 Shore A

ROTEX® size	14	19	24	28	38	42	48	55	65	90	100	110	125	140	160	180	
Max. axial displacement ΔK_a [mm]	-0.5 +1.0	-0.5 +1.2	-0.5 +1.4	-0.7 +1.5	-0.7 +1.8	-1.0 +2.0	-1.0 +2.1	-1.0 +2.2	-1.0 +2.6	-1.5 +3.0	-1.5 +3.4	-1.5 +3.8	-2.0 +4.2	-2.0 +4.6	-2.0 +5.0	-2.5 +5.7	-3.0 +6.4
Max. radial displacement with $n=1500$ rpm ΔK_r [mm]	0.17	0.20	0.22	0.25	0.28	0.32	0.36	0.38	0.42	0.48	0.50	0.52	0.55	0.60	0.62	0.64	0.68
Max. angular displacement with $n=1500$ rpm ΔK_w [degree]	1.2	1.2	0.9	0.9	1.0	1.0	1.1	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.2	1.2	1.2
ΔK_w [mm]	0.67	0.82	0.85	1.05	1.35	1.70	2.00	2.30	2.70	3.30	4.30	4.80	5.60	6.50	6.60	7.60	9.00

Displacements of spider 64 Shore D

ROTEX® size	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
Max. axial displacement ΔK_a [mm]	-0.5 +1.0	-0.5 +1.2	-0.5 +1.4	-0.7 +1.5	-0.7 +1.8	-1.0 +2.0	-1.0 +2.1	-1.0 +2.2	-1.0 +2.6	-1.5 +3.0	-1.5 +3.4	-1.5 +3.8	-2.0 +4.2	-2.0 +4.6	-2.0 +5.0	-2.5 +5.7	-3.0 +6.4
Max. radial displacement with $n=1500$ rpm ΔK_r [mm]	0.11	0.13	0.15	0.18	0.21	0.23	0.25	0.27	0.30	0.34	0.36	0.37	0.40	0.43	0.45	0.46	0.49
Max. angular displacement with $n=1500$ rpm ΔK_w [degree]	1.1	1.1	0.8	0.8	0.9	0.9	1.0	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.1	1.1	1.1
ΔK_w [mm]	0.57	0.76	0.76	0.90	1.25	1.40	1.80	2.00	2.50	3.00	3.80	4.30	5.30	6.00	6.10	7.10	8.00

Displacements for spider PA, PEEK

ROTEX® size	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140
Max. axial displacement ΔK_a [mm]	-0.5 +1.0	-0.5 +1.2	-0.5 +1.4	-0.7 +1.5	-0.7 +1.8	-1.0 +2.0	-1.0 +2.1	-1.0 +2.2	-1.0 +2.6	-1.5 +3.0	-1.5 +3.4	-1.5 +3.8	-2.0 +4.2	-2.0 +4.6	-2.0 +5.0
Max. radial displacement with $n=1500$ rpm ΔK_r [mm]	0.08	0.10	0.11	0.12	0.14	0.16	0.18	0.19	0.21	0.24	0.25	0.26	0.27	0.30	0.31
Max. angular displacement with $n=1500$ rpm ΔK_w [degree]	0.60	0.45	0.45	0.50	0.50	0.55	0.55	0.55	0.60	0.60	0.60	0.60	0.65	0.65	0.60
ΔK_w [mm]	0.33	0.41	0.42	0.52	0.67	0.85	1.00	1.15	1.35	1.65	2.15	2.40	2.80	3.25	3.30

The above-mentioned displacement figures of the flexible ROTEX® couplings are standard values taking into account the load of the coupling up to the rated torque T_{KN} and an operating speed $n = 1500$ rpm along with an ambient temperature of $+30^\circ\text{C}$. The displacement figures may only be used one by one - if they appear simultaneously, they must be limited in proportion. Care should be taken to maintain the distance dimension E accurately in order to allow for axial clearance of the coupling while in operation. Detailed mounting instructions are shown on our homepage www.ktr.com.

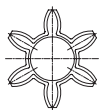
ROTEX® Flexible jaw couplings

Properties of standard spiders

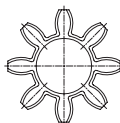
ROTEX® 14



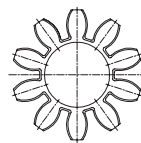
ROTEX® 19



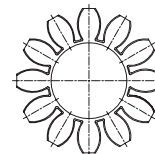
ROTEX® 24 - 65



ROTEX® 75 - 160








ROTEX® 180



Degree of hardness



Spider type (Shore hardness)	92 Shore A (T-PUR®)	92 Shore A
	 T-PUR®	
Size	14 to 180	14 to 90
Material	T-PUR®	Polyurethane (PUR)
Permissible temperature range		
Permanent temperature	-50 °C to +120 °C	-40 °C to +90 °C
Short-term temperature	-50 °C to +150 °C	-50 °C to +120 °C
Features	<ul style="list-style-type: none"> - significantly higher service life expectancy - very good temperature resistance - improved damping of vibrations - good damping, average flexibility - suitable for all hub materials 	<ul style="list-style-type: none"> - good damping, average flexibility - suitable for all hub materials
Spider type (Shore hardness)	98 Shore A (T-PUR®) ¹⁾	98 Shore A ¹⁾
	 T-PUR®	
Size	14 to 180	14 to 90
Material	T-PUR®	Polyurethane (PUR)
Permissible temperature range		
Permanent temperature	-50 °C to +120 °C	-30 °C to +90 °C
Short-term temperature	-50 °C to +150 °C	-40 °C to +120 °C
Features	<ul style="list-style-type: none"> - significantly higher service life expectancy - very good temperature resistance - improved damping of vibrations - transmission of high torques with average damping - recommended hub material: steel, GJL and GJS 	<ul style="list-style-type: none"> - transmission of high torques with average damping - recommended hub material: steel, GJL and GJS
Spider type (Shore hardness)	64 Shore D (T-PUR®)	
	 T-PUR®	
Size	14 to 180	
Material	T-PUR®	
Permissible temperature range		
Permanent temperature	-50 °C to +120 °C	
Short-term temperature	-50 °C to +150 °C	
Features	<ul style="list-style-type: none"> - significantly higher service life expectancy - very good temperature resistance - improved damping of vibrations - transmission of very high torques with low damping - recommended hub material: steel and GJS 	

Technical data of standard spiders

92 Shore A spider made of T-PUR® and PUR															
ROTEX® size	Max. speed		Torsion angle ϕ with		Torque [Nm]				Damping power P _{KW} [W] ³⁾	Relative damping ψ	Resonance factor V _R	Torsion spring stiffness C dyn. [Nm/rad]			
	v=35 m/s cast material	v=40 m/s steel	T _{KN}	T _{K max}	DIN 740 ¹⁾			T _{K max} ²⁾				1.0 T _{KN}	0.75 T _{KN}	0.5 T _{KN}	0.25 T _{KN}
			Rated T _{KN}	Max. T _{K max}	Vibratory T _{KW}										
14	22200	25400	6.4°	10°	7.5	15	2.0	22.5	—			0.38x10 ³	0.31x10 ³	0.24x10 ³	0.14x10 ³
19	16700	19000			10	20	2.6	30	4.8			1.28x10 ³	1.05x10 ³	0.8x10 ³	0.47x10 ³
24	12100	13800			35	70	9.1	105	6.6			4.86x10 ³	3.98x10 ³	3.01x10 ³	1.79x10 ³
28	10100	11500			95	190	25	285	8.4			10.9x10 ³	8.94x10 ³	6.76x10 ³	4.01x10 ³
38	8300	9500			190	380	49	570	10.2			21.05x10 ³	17.26x10 ³	13.05x10 ³	7.74x10 ³
42	7000	8000			265	530	69	795	12.0			23.74x10 ³	19.47x10 ³	14.72x10 ³	8.73x10 ³
48	6350	7250			310	620	81	930	13.8			36.7x10 ³	30.09x10 ³	22.75x10 ³	13.49x10 ³
55	5550	6350			410	820	107	1230	15.6			50.7x10 ³	41.59x10 ³	31.45x10 ³	18.64x10 ³
65	4950	5650	3.2°	5°	625	1250	163	1875	18.0	0.80	7.90	97.1x10 ³	79.65x10 ³	60.2x10 ³	35.7x10 ³
75	4150	4750			1280	2560	333	3840	21.6			113.3x10 ³	92.9x10 ³	70.3x10 ³	41.65x10 ³
90	3300	3800			2400	4800	624	7200	30.0			190.1x10 ³	155.9x10 ³	117.9x10 ³	69.9x10 ³
100	2950	3350			3300	6600	858	9900	36.0			253.1x10 ³	207.5x10 ³	156.9x10 ³	93x10 ³
110	2600	2950			4800	9600	1248	14400	42.0			415.5x10 ³	336.9x10 ³	257.6x10 ³	177.4x10 ³
125	2300	2600			6650	13300	1729	19950	48.0			647.7x10 ³	537.3x10 ³	412.2x10 ³	277.5x10 ³
140	2050	2350			8550	17100	2223	25650	54.6			813.4x10 ³	670.2x10 ³	519.7x10 ³	351.7x10 ³
160	1800	2050			12800	25600	3328	38400	75.0			1298x10 ³	1104x10 ³	901.9x10 ³	655.7x10 ³
180	1550	1800			18650	37300	4849	55950	78.0			2327x10 ³	1981x10 ³	1618x10 ³	1176x10 ³

98 Shore A spider made of T-PUR® and PUR															
ROTEX® size	Max. speed		Torsion angle ϕ with		Torque [Nm]				Damping power P _{KW} [W] ³⁾	Relative damping ψ	Resonance factor V _R	Torsion spring stiffness C dyn. [Nm/rad]			
	v=35 m/s cast material	v=40 m/s steel	T _{KN}	T _{K max}	DIN 740 ¹⁾			T _{K max} ²⁾				1.0 T _{KN}	0.75 T _{KN}	0.5 T _{KN}	0.25 T _{KN}
			Rated T _{KN}	Max. T _{K max}	Vibratory T _{KW}										
14	22200	25400	6.4°	10°	12.5	25	3.3	37.5	—			0.56x10 ³	0.46x10 ³	0.35x10 ³	0.21x10 ³
19	16700	19000			17	34	4.4	51	4.8			2.92x10 ³	2.39x10 ³	1.81x10 ³	1.07x10 ³
24	12100	13800			60	120	16	180	6.6			9.93x10 ³	8.14x10 ³	6.16x10 ³	3.65x10 ³
28	10100	11500			160	320	42	480	8.4			26.77x10 ³	21.95x10 ³	16.6x10 ³	9.84x10 ³
38	8300	9500			325	650	85	975	10.2			48.57x10 ³	39.83x10 ³	30.11x10 ³	17.85x10 ³
42	7000	8000			450	900	117	1350	12.0			54.5x10 ³	44.69x10 ³	33.79x10 ³	20.03x10 ³
48	6350	7250			525	1050	137	1575	13.8			65.3x10 ³	53.54x10 ³	40.48x10 ³	24x10 ³
55	5550	6350			685	1370	178	2055	15.6			95x10 ³	77.9x10 ³	58.88x10 ³	34.9x10 ³
65	4950	5650	3.2°	5°	940	1880	244	2820	18.0	0.80	7.90	129.5x10 ³	106.2x10 ³	80.3x10 ³	47.6x10 ³
75	4150	4750			1920	3840	499	5760	21.6			197.5x10 ³	162x10 ³	122.5x10 ³	72.6x10 ³
90	3300	3800			3600	7200	936	10800	30.0			312.2x10 ³	256x10 ³	193.6x10 ³	114.7x10 ³
100	2950	3350			4950	9900	1287	14850	36.0			383.3x10 ³	314.3x10 ³	237.6x10 ³	140.9x10 ³
110	2600	2950			7200	14400	1872	21600	42.0			805.9x10 ³	663.1x10 ³	515.3x10 ³	360.5x10 ³
125	2300	2600			10000	20000	2600	30000	48.0			1207x10 ³	1003x10 ³	773.1x10 ³	552.5x10 ³
140	2050	2350			12800	25600	3328	38400	54.6			1549x10 ³	1283x10 ³	979.8x10 ³	674.1x10 ³
160	1800	2050			19200	38400	4992	57600	75.0			2481x10 ³	2137x10 ³	1781x10 ³	1275x10 ³
180	1550	1800			28000	56000	7280	84000	78.0			4220x10 ³	3635x10 ³	3031x10 ³	2170x10 ³

64 Shore D spider made of T-PUR® and PUR															
ROTEX® size	Max. speed		Torsion angle ϕ with		Torque [Nm]				Damping power P _{KW} [W] ³⁾	Relative damping ψ	Resonance factor V _R	Torsion spring stiffness C dyn. [Nm/rad]			
	v=35 m/s cast material	v=40 m/s steel	T _{KN}	T _{K max}	DIN 740 ¹⁾			T _{K max} ²⁾				1.0 T _{KN}	0.75 T _{KN}	0.5 T _{KN}	0.25 T _{KN}
			Rated T _{KN}	Max. T _{K max}	Vibratory T _{KW}										
14	22200	25400	4.5°	7.0°	16	32	4.2	48	9.0			0.76x10 ³	0.62x10 ³	0.47x10 ³	0.28x10 ³
19	16700	19000			21	42	5.5	63	7.2			5.35x10 ³	4.39x10 ³	3.32x10 ³	1.97x10 ³
24	12100	13800			75	150	19.5	225	9.9			15.11x10 ³	12.39x10 ³	9.37x10 ³	5.55x10 ³
28	10100	11500			200	400	52	600	12.6			27.52x10 ³	22.57x10 ³	17.06x10 ³	10.12x10 ³
38	8300	9500			405	810	105	1215	15.3			70.15x10 ³	57.52x10 ³	43.49x10 ³	25.78x10 ³
42	7000	8000			560	1120	146	1680	18.0			79.9x10 ³	65.5x10 ³	49.52x10 ³	29.35x10 ³
48	6350	7250			655	1310	170	1965	20.7			95.5x10 ³	78.3x10 ³	59.22x10 ³	35.1x10 ³
55	5550	6350			825	1650	215	2475	23.4			107.9x10 ³	88.5x10 ³	66.9x10 ³	39.66x10 ³
65	4950	5650	2.5°	3.6°	1175	2350	306	3525	27.0	0.75	8.50	151.1x10 ³	123.9x10 ³	93.7x10 ³	55.53x10 ³
75	4150	4750			2400	4800	624	7200	32.4			248.2x10 ³	203.5x10 ³	153.9x10 ³	91.2x10 ³
90	3300	3800			4500	9000	1170	13500	45.0			674.5x10 ³	553.1x10 ³	418.2x10 ³	247.9x10 ³
100	2950	3350			6185	12370	1608	18555	54.0			861.2x10 ³	706.2x10 ³	533.9x10 ³	316.5x10 ³
110	2600	2950			9000	18000	2340	27000	63.0			1230x10 ³	1001x10 ³	773.1x10 ³	531.4x10 ³
125	2300	2600			12500	25000	3250	37500	72.0			1749x10 ³	1436x10 ³	1149x10 ³	832.1x10 ³
140	2050	2350			16000	32000	4160	48000	81.9			2312x10 ³	1929x10 ³	1521x10 ³	1082x10 ³
160	1800	2050			24000	48000	6240	72000	112.5			3415x10 ³	2961x10 ³	2471x10 ³	1830x10 ³
180	1550	1800			35000	70000	9100	105000	117.0			5670x10 ³	4917x10 ³	4103x10 ³	3038x10 ³

¹⁾ see catalogue page 15
²⁾ ≤ 1000 load cycles
³⁾ with +30°C



Temperature factor S _t											
	-50 °C	-30 °C +30 °C	+40 °C	+50 °C	+60 °C	+70 °C	+80 °C	+90 °C	+100 °C	+110 °C	+120 °C
T-PUR®	1.0	1.0	1.1	1.2	1.3	1.45	1.6	1.8	2.1	2.5	3.0
PUR	—	1.0	1.2	1.3	1.4	1.55	1.8	2.2	—	—	—

Unless explicitly specified in your order, we will supply spiders with Shore hardness 92 Shore A T-PUR®.
For circumferential speeds exceeding v = 30 m/s dynamic balancing is required. For circumferential speeds exceeding v = 35 m/s only steel or nodular iron.

ROTEX®

Flexible jaw couplings

Technical data and properties of special spiders

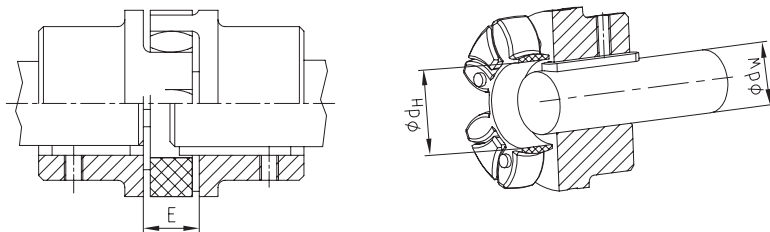
		
Designation	PA	PEEK
Material	Polyamide	Polyetheretherketone
Permissible temperature range		
Permanent temperature	-20 °C to +130 °C ¹⁾	up to +180 °C (ATEX up to +160 °C)
Short-term temperature	-30 °C to +150 °C ¹⁾	up to +250 °C
Features	<ul style="list-style-type: none"> - small twisting angle and high torsion spring stiffness - transmission of very high torques with very low damping - good resistance to chemicals ¹⁾ - recommended hub material: steel - high restoring forces with displacements 	<ul style="list-style-type: none"> - small twisting angle and high torsion spring stiffness - transmission of very high torques with very low damping - highly temperature-resistant, resistant to hydrolysis - good resistance to chemicals - recommended hub material: steel - high restoring forces with displacements

¹⁾ different properties depending on compound

Torques			
ROTEX® size	PA, PEEK		
	T _{KN} [Nm]	T _{K max} [Nm]	T _{KW} [Nm]
14	22	44	5.5
19	30	60	8.0
24	105	210	27.5
28	280	560	73
38	565	1130	147
42	785	1570	204
48	915	1830	238
55	1200	2400	312
65	1645	3290	427
75	2560	5130	667
90	6300	12600	1640
100	8650	17300	2250
110	10500	21000	2730
125	13000	26000	3380

Temperature factor S _t												
	-50 °C	-30 °C +30 °C	+40 °C	+50 °C	+60 °C	+70 °C	+80 °C	+90 °C	+100 °C	+110 °C	+120 °C	+180 °C
PA	-	1.0	1.15	1.25	1.4	1.6	1.9	2.3	3.0	-	-	-
PEEK	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Installation of spider

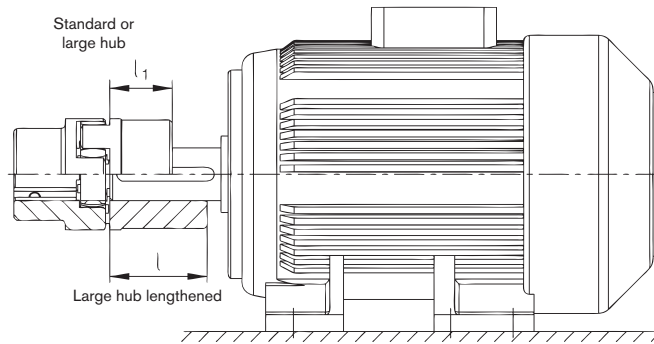


Shaft ϕd_H with feather key (acc. to DIN 6885 sheet 1) protruding into the spider ϕd_H

Assembly dimensions																	
ROTEX® size	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
Distance dimension E	13	16	18	20	24	26	28	30	35	40	45	50	55	60	65	75	85
Dimension d _H	10	18	27	30	38	46	51	60	68	80	100	113	127	147	165	190	220
Dimension d _{VV} ²⁾	7	12	20	22	28	36	40	48	55	65	80	95	100	120	135	160	185

²⁾ If the shaft diameter is smaller than or equal to dimension d_H, one shaft end or both shaft ends may protrude with the feather keyway into the spider.

Selection of standard IEC motors



ROTEX® couplings for standard IEC motors, protection class IP 54/IP 55 (spider 92 Shore A)

Size	A. C. motor 50 Hz		Motor power n=3000 rpm 2 poles		ROTEX® coupling size	Motor power n=1500 rpm 4 poles		ROTEX® coupling size	Motor power n=1000 rpm 6 poles		ROTEX® coupling size	Motor power n=750 rpm 8 poles		ROTEX® coupling size
	Shaft end d x l [mm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]	
	2 poles	4, 6, 8 poles												
56	9 x 20		0.09	0.32	9 ¹⁾	0.06	0.43	9 ¹⁾	0.037	0.43	9 ¹⁾			
			0.12	0.41			0.09		0.64			0.045	0.52	
63	11 x 23		0.18	0.62	14	0.12	0.88	14	0.06	0.7	14			
			0.25	0.86			0.18		1.3			0.09	1.1	
71	14 x 30		0.37	1.3	14	0.25	1.8	14	0.18	2	14	0.09	1.4	14
			0.55	1.9			0.37		2.5			0.25	2.8	
80	19 x 40		0.75	2.5	19	0.55	3.7	19	0.37	3.9	19	0.18	2.5	19
			1.1	3.7			0.75		5.1			0.55	5.8	
90S	24 x 50		1.5	5	19	1.1	7.5	19	0.75	8	19	0.37	5.3	19
90L			2.2	7.4			1.5		10			1.1	12	
100L	28 x 60		3	9.8	24	2.2	15	24	1.5	15	24	0.75	11	24
			4	13			3		20			2.2	22	
112M			4	13	24	4	27	24	2.2	22	24	1.5	21	24
132S			5.5	18			5.5		36			3	30	
132M	38 x 80		7.5	25	28	7.5	49	28	4	40	28	3	40	28
												5.5	55	
160M	42 x 110		11	36	38	11	72	38	7.5	75	38	4	54	38
			15	49			15		98			11	109	
160L			18.5	60	38	15	98	38	11	109	38	7.5	100	38
180M	48 x 110		22	71			18.5		121					
180L					42	22	144	42	15	148	42	11	145	42
200L	55 x 110		30	97			30		196			18.5	181	
			37	120	42			42	22	215	42			42
225S							37		240	48				
225M	55 x 110	60 x 140	45	145	48	45	292	55	30	293	55	22	290	55
250M	60 x 140	65 x 140	55	177			55		356			37	361	
280S			75	241	55	75	484	65 ²⁾	45	438	65 ²⁾	37	483	65 ²⁾
280M	75 x 140		90	289			90		581			55	535	
315S			110	353	65	110	707	75	75	727	75	55	712	75
315M			132	423			132		849			90	873	
	65 x 140		160	513	65	160	1030	90	110	1070	90	90	1170	90
315L			200	641			200		1290			132	1280	
					75			90	160	1550	90	132	1710	90
315	85 x 170		250	802			250		1600			200	1930	
			315	1010	90	315	2020	100	250	2410	100	200	2580	100
			355	1140			355		2280					
355	75 x 140	95 x 170	400	1280	90	400	2570	110	315	3040	110	250	3220	110
			500	1600			500		3210			400	3850	
			560	1790	100	560	3580	125	450	4330	125	355	4570	125
400	80 x 170	110 x 210	630	2020			630		4030			500	4810	
			710	2270	100	710	4540	140	560	5390	140	450	5790	140
			800	2560			800		5120			630	6060	
450	90 x 170	120 x 210	900	2880	110	900	5760	160	710	6830	160	560	7190	160
			1000	3200			1000		6400			800	7690	

The coupling selection is based on an ambient temperature up to +30 °C. The selection is based on a minimum safety factor of 2 versus the max. coupling torque ($T_{K \max}$). A detailed selection is possible according to catalogue, page 14 et seqq. Drives with periodical torque curves must be selected according to DIN 740 part 2. If requested, KTR will perform the selection. Torque T = rated torque according to Siemens catalogue M 11 · 1994/95.

¹⁾ For dimensions see ROTEX® GS series

²⁾ For motor hub made of steel see page 40

Cylindrical bores and spline bores

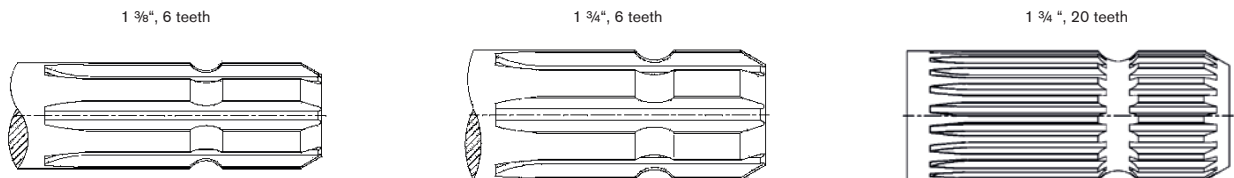
ROTEX® size		Stock programme of cylindrical finish bores [mm] H7 feather keyway acc. to DIN 6885 sheet 1 [JS9] and thread for setscrews																																				
Material	Un-bored	Ø6	Ø8	Ø9	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø26	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90	Ø100		
14	Sint	•	•	•	•	•	•	•	•	•																												
	Al-H	•	•	•	•	•	•	•	•	•																												
19	Sint	•																																				
	Al-D	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	St	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
24	Sint	•																																				
	Al-D	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	St	•			•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
28	Al-D	•																																				
	St	•																																				
38	GJL	•																																				
	St	•																																				
42	GJL	•																																				
	St	•																																				
48	GJL	•																																				
	St	•																																				
55	GJL	•																																				
	St	•																																				
65	GJL	•																																				
	St	•																																				
75	GJL	•																																				
	St	•																																				
90	GJL	•																																				
	St	•																																				

Basic programme of SAE involute spline												
Spline code	Size	Pitch circle	Pitch	No. of teeth	Angle	Spline code	Size	Pitch circle	Pitch	No. of teeth	Angle	
PH-S	5/8"	14.28	16/32	9	30°	PS-S	1 1/2"	35.98	12/24	17	30°	
PI-S	3/4"	17.46	16/32	11	30°	PD-S	1 1/2"	36.51	16/32	23	30°	
PB-S	7/8"	20.63	16/32	13	30°	PE-S	1 3/4"	42.86	16/32	27	30°	
PB-BS	1"	23.81	16/32	15	30°	PK-S	1 3/4"	41.275	8/16	13	30°	
PJ	1 1/8"	26.98	16/32	17	30°	PT-C ¹⁾	2"	47.625	8/16	15	30°	
PC-S	1 1/4"	29.63	12/24	14	30°	PQ-C ¹⁾	2 1/4"	53.975	8/16	17	30°	
PA-S	1 3/8"	33.33	16/32	21	30°							

Basic programme of spline bores acc. to DIN 5482										
Size	Pitch circle	Module	No. of teeth	Profile correction	Size	Pitch circle	Module	No. of teeth	Profile correction	
A 17 x 14	14.40	1.6	9	+0.600 ²⁾	A 35 x 31	31.50	1.75	18	+0.676	
A 20 x 17	19.20	1.6	12	-0.2	A 40 x 36	38.00	1.9	20	+0.049	
A 25 x 22	22.40	1.6	14	+0.550	A 45 x 41	44.00	2	22	+0.181	
A 28 x 25	26.25	1.75	15	+0.302	A 50 x 45	48.00	2	24	+0.181	
A 30 x 27	28.00	1.75	16	+0.327						

Basic programme of spline bores acc. to DIN 5480								
Spline code	Pitch circle	Module	No. of teeth	Spline code	Pitch circle	Module	No. of teeth	
20 x 1 x 18 x 7H	18.0	1	18	40 x 2 x 18 x 8H	36.0	2	18	
20 x 1.25 x 14 x 7H	17.5	1.25	14	45 x 2 x 21 x 7H	41.0	2	21	
25 x 1.25 x 18 x 7H	22.5	1.25	18	48 x 2 x 22 x 9H	44.0	2	22	
28 x 1.25 x 21 x 7H	26.25	1.25	21	50 x 2 x 24 x 8H	48.0	2	24	
30 x 2 x 14 x 7H	26.0	2	14	60 x 2 x 28 x 8H	56.0	2	28	
32 x 2 x 14 x 8H	28.0	2	14	75 x 3 x 24 x 7H	72.0	3	24	
35 x 2 x 16 x 8H	32.0	2	16	80 x 3 x 25 x 8H	75.0	3	25	

Basic programme of spline bores acc. to DIN 9611 - ISO 500 (p.t.o. shaft connection)				
Size	Width of keyway	No. of teeth	Tip circle	Root circle
1 3/8"	8.69	6	34.93	29.65
1 3/8"	-	21	34.95	34.80 ³⁾
1 3/4"	11.07	6	44.45	37.74
1 3/4"	-	20	45.20	40.20



Spline clamping hubs are often adapted to the shafts of hydraulic pumps/hydraulic motor shafts. Please contact us for the respective hub length of the spline code!

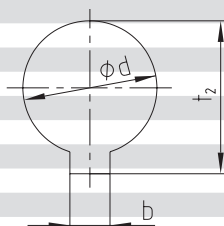
¹⁾ For clamping hubs only, with plug-in hubs use code PT or PQ.

²⁾ Profile correction different from DIN

³⁾ Similar to code PA-S

Inch bores and taper bores

Stock programme of inch bores						Size									
Bore and keyway acc. to ANSI/AGMA 9002-C14 Bore (clearance fit) Keyway (commercial class fit)						19	24	28	38	42	48	55	65	75	90
KTR code	Ø bore ["]	Width of keyway ["]	Ø bore [mm]	Width of keyway [mm]	Keyway depth/ Tolerance +0.381 [mm]	Steel				Cast iron (GJL)					
Tb	3/8	1/8	9.525 ^{+0.0254}	3.175 ^{+0.051}	10.972										
DNB	7/16	3/32	11.112 ^{+0.0254}	2.382 ^{+0.051}	12.293										
T	1/2	3/16	12.7 ^{+0.0254}	4.762 ^{+0.051}	14.757										
Ta	1/2	1/8	12.7 ^{+0.0254}	3.175 ^{+0.051}	14.224	●	●								
DNC	17/32	1/8	13.495 ^{+0.0254}	3.175 ^{+0.051}	15.011										
Do	9/16	1/8	14.287 ^{+0.0254}	3.175 ^{+0.051}	15.824										
E	5/8	1/8	15.875 ^{+0.0254}	3.175 ^{+0.051}	17.424										
Es	5/8	5/32	15.875 ^{+0.0254}	3.968 ^{+0.051}	17.729	●	●	●							
Ed	5/8	3/16	15.875 ^{+0.0254}	4.762 ^{+0.051}	18.008	●	●								
DNH	11/16	3/16	17.462 ^{+0.0254}	4.762 ^{+0.051}	19.634										
Ad	3/4	1/8	19.05 ^{+0.0254}	3.175 ^{+0.051}	20.624										
A	3/4	3/16	19.05 ^{+0.0254}	4.762 ^{+0.051}	21.259	●	●	●	●						
G	7/8	3/16	22.225 ^{+0.0254}	4.762 ^{+0.051}	24.485	●	●	●	●	●					
F	7/8	1/4	22.225 ^{+0.0254}	6.35 ^{+0.051}	25.069		●	●	●	●					
Gf	15/16	1/4	23.812 ^{+0.0254}	6.35 ^{+0.051}	26.695										
H	1	3/16	25.4 ^{+0.0254}	4.762 ^{+0.051}	27.686										
Hs	1	1/4	25.4 ^{+0.0254}	6.35 ^{+0.051}	28.295		●	●	●	●					
R	1 1/16	3/16	26.987 ^{+0.0254}	4.762 ^{+0.051}	29.286										
Sb	1 1/8	1/4	28.575 ^{+0.0254}	6.35 ^{+0.051}	31.521		●	●	●	●					
Sd	1 1/8	5/16	28.575 ^{+0.0254}	7.937 ^{+0.051}	32.105										
Js	1 1/4	1/4	31.75 ^{+0.0254}	6.35 ^{+0.051}	34.721				●						
K	1 1/4	5/16	31.75 ^{+0.0254}	7.937 ^{+0.051}	35.331			●	●	●	●	●			
Ma	1 3/8	5/16	34.925 ^{+0.0254}	7.937 ^{+0.051}	38.557			●	●						
RH1	1 3/8	3/8	34.925 ^{+0.0254}	9.525 ^{+0.063}	39.141										
Cb	1 7/16	3/8	36.512 ^{+0.0254}	9.525 ^{+0.063}	40.767										
Ca	1 1/2	5/16	38.1 ^{+0.0254}	7.937 ^{+0.051}	41.783										
C	1 1/2	3/8	38.1 ^{+0.0254}	9.525 ^{+0.0635}	42.392				●	●	●	●	●	●	
Nb	1 5/8	3/8	41.275 ^{+0.0254}	9.525 ^{+0.0635}	45.618				●	●					
Ls	1 3/4	3/8	44.45 ^{+0.0254}	9.525 ^{+0.0635}	48.818										
L	1 3/4	7/16	44.45 ^{+0.0254}	11.112 ^{+0.0635}	49.428										
Lu	1 7/8	1/2	47.625 ^{+0.0254}	12.7 ^{+0.0635}	53.238					●					
Da	1 15/16	1/2	49.212 ^{+0.0254}	12.7 ^{+0.0635}	54.864										
Ds	2	1/2	50.8 ^{+0.0254}	12.7 ^{+0.0635}	56.464										
Pa	2 1/8	1/2	53.975 ^{+0.0381}	12.7 ^{+0.063}	59.69										
U	2 1/4	1/2	57.15 ^{+0.0381}	12.7 ^{+0.063}	62.915										
Ub	2 3/8	5/8	60.325 ^{+0.0381}	15.875 ^{+0.076}	67.335										
Wd	3 3/8	7/8	85.725 ^{+0.0381}	22.225 ^{+0.076}	95.504										
Wf	3 5/8	7/8	92.075 ^{+0.0381}	22.225 ^{+0.076}	101.955										

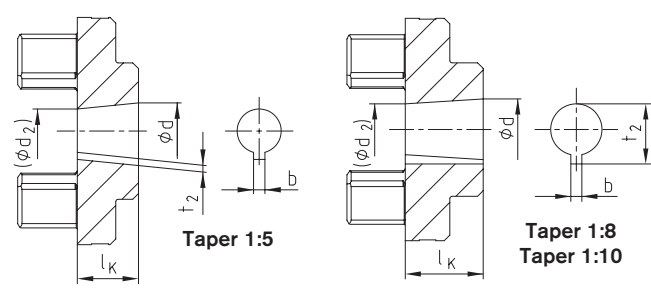


Basic programme taper 1:8					
Code	d ^{+0.05}	(d ₂)	b ^{JS9}	t ₂ ^{+0.1}	l _K
N/1	9.7	7.575	2.4 ^{+0.05}	10.85	17.0
N/1c	11.6	9.5375	3 ^{JS9}	12.90	16.5
N/1e	13.0	10.375	2.4 ^{+0.05}	13.80	21.0
N/1d	14.0	11.813	3 ^{JS9}	15.50	17.5
N/1b	14.3	11.8625	3.2 ^{+0.05}	15.65	19.5
N/2	17.287	14.287	3.2 ^{+0.05}	18.24	24.0
N/2a	17.287	14.287	4 ^{JS9}	18.94	24.0
N/2b	17.287	14.287	3 ^{JS9}	18.34	24.0
N/3	22.002	18.502	4 ^{JS9}	23.40	28.0
N/4	25.463	20.963	4.78 ^{+0.05}	27.83	36.0
N/4b	25.463	20.963	5 ^{JS9}	28.23	36.0
N/4a	27.0	22.9375	4.78 ^{+0.05}	28.80	32.5
N/4g	28.45	23.6375	6 ^{JS9}	29.32	38.5
N/5	33.176	27.676	6.38 ^{+0.05}	35.39	44.0
N/5a	33.176	27.676	7 ^{JS9}	35.39	44.0

With code N/6 and N/6a keyway in parallel with taper.

Basic programme taper 1:10					
Code	d ^{+0.05}	(d ₂)	b ^{JS9}	t ₂ ^{+0.1}	l _K
CX	19.95	16.75	5 ^{JS9}	22.08	32
DX	24.95	20.45	6 ^{JS9}	26.68	45
EX	29.75	24.75	8 ^{JS9}	31.88	50

Basic programme taper 1:5					
Code	d ^{+0.05}	(d ₂)	b ^{JS9}	t ₂ ^{+0.1}	l _K
A-10	9.85	7.55	2 ^{JS9}	1.0	11.5
B-17	16.85	13.15	3 ^{JS9}	1.8	18.5
C-20	19.85	15.55	4 ^{JS9}	2.2	21.5
Cs-22	21.95	17.65	3 ^{JS9}	1.8	21.5
D-25	24.85	19.55	5 ^{JS9}	2.9	26.5
E-30	29.85	23.55	6 ^{JS9}	2.6	31.5
F-35	34.85	27.55	6 ^{JS9}	2.6	36.5
G-40	39.85	32.85	6 ^{JS9}	2.6	35.0



Morskate®



Any questions? Please contact us.

Morskate Aandrijvingen BV

Oosterveldsingel 47A
7558 PJ Hengelo (Ov)
The Netherlands

NL

T +31 (0)74 - 760 11 11
info@morskateaandrijvingen.nl
www.morskateaandrijvingen.nl

DE

T +49 692 - 222 34 95
info@morskateantriebstechnik.de
www.morskateantriebstechnik.de

EN

T +31 (0)74 - 760 11 11
info@morskatedrivetechnology.com
www.morskatedrivetechnology.com