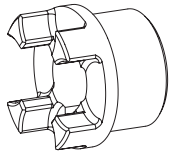


Types of hubs

Since ROTEX® is used on many different applications and mounting conditions, this coupling system is available with various hub types. These types mainly differ in that they provide either positive or frictionally engaged (backlash-free) connections, but mounting situations like, for example, gear shafts with integrated transmission cams or similar applications are covered, too.



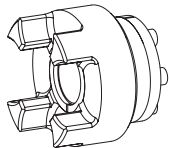
Type 1.0 hub with feather keyway and setscrew

Positive-locking power transmission, permissible torque depending on the permissible surface pressure. Not suitable for backlash-free power transmission with heavily reversing operation.

Type 1.1 hub without feather keyway, with setscrew

Non-positive torque transmission for crimping connections and adhesive bonds. (No ATEX approval)

Type 1.3 hub with spline bore (see page 36)



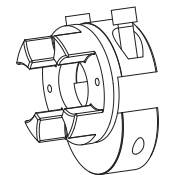
Type 4.2 hub for CLAMPEX® clamping set KTR 250

Frictionally engaged, backlash-free shaft-hub-connection for transmitting average torques.

Type 4.1 for CLAMPEX® clamping set KTR 200

Type 4.3 for CLAMPEX® clamping set KTR 400

Frictionally engaged, backlash-free shaft-hub-connection for the transmission of high torques.

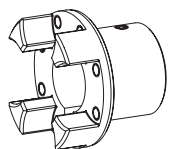


Type 7.5 clamping hub type DH without feather keyway for double-cardanic connection

Frictionally engaged, backlash-free shaft-hub-connection for radial assembly of coupling. Transmittable torques depending on bore diameter. (For ATEX category 3 only)

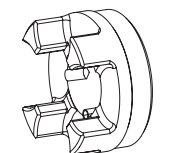
Type 7.6 clamping hub type DH with feather keyway for double-cardanic connection

Positive-locking power transmission with additional friction fit for radial assembly of coupling. The friction fit avoids or reduces reverse backlash. Surface pressure of the keyway connection is reduced.



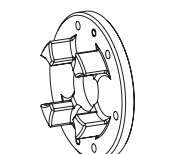
FNN hub

Coupling hub to be connected to an attachment such as brake drum, brake disk and fan.



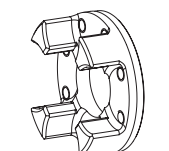
TB1 hub/TB2 hub

Coupling hub for taper clamping sleeves TB1 screwed on cam side. TB2 screwed externally.



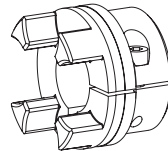
Driving flange type 3b

Driving flange to connect to customer's component. For dimensions see page 52



Driving flange type 3Na

Driving flange to connect to customer's component. For dimensions see page 52



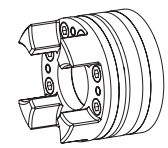
Type 2.0 clamping hub single slot without feather keyway

Frictionally engaged, backlash-free shaft-hub-connection. Transmittable torques depending on bore diameter (see page 44). (For ATEX category 3 only)

Type 2.1 clamping hub single slot with feather keyway

Positive-locking power transmission with additional friction fit. The friction fit avoids or reduces reverse backlash. Surface pressure of the keyway connection is reduced.

Type 2.3 clamping hub with spline bore (see page 36)

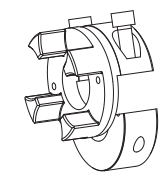


Type 6.0 clamping ring hub (see ROTEX® GS series)

Integrated frictionally engaged shaft-hub-connection for the transmission of higher torques. Screwing on elastomer side. For details about torque and dimensions see page 43. Suitable for high speeds.

Type 6.5 clamping ring hub (see ROTEX® GS series)

Design like 6.0, except for clamping screws externally. As an example for radial disassembly of intermediate pipe (special design).

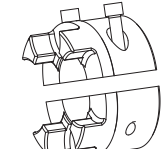


Type 7.8 clamping hub type H without feather keyway

Frictionally engaged, backlash-free shaft-hub-connection for radial assembly of coupling. Transmittable torques depending on bore diameter. (For ATEX category 3 only)

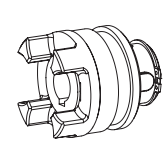
Type 7.9 clamping hub type H with feather keyway

Positive-locking power transmission with additional friction fit for radial assembly of coupling. The friction fit avoids or reduces reverse backlash. Surface pressure of the keyway connection is reduced.



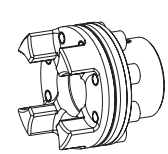
Type 7.1 SPLIT hub with feather keyway

Split hub made of cast iron. Positive-locking power transmission with additional friction fit. The friction fit avoids or reduces reverse backlash. Surface pressure of the keyway connection is reduced.



SD hub shifting hub

Coupling hub for separating or switching on the driving/driven machine with standstill of the machine. Can be combined with slip ring and shiftable linkage.



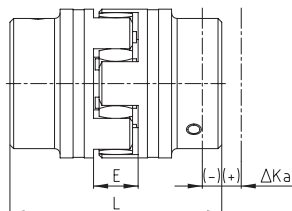
Type 3Na and 4N Driving flange with flange type K

For type AFN and BFN.

With type AFN the spider can be replaced while being assembled without having to disassemble the driving and driven side.

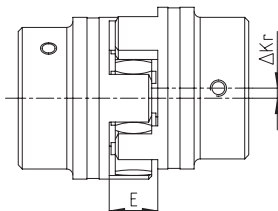
Displacements

Axial displacement ΔK_a

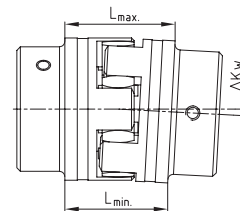


$$L_{\max} = L + \Delta K_a$$

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	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]	0.17	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 for 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 $+30$ °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®

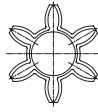
Flexible jaw couplings

Properties of standard spiders

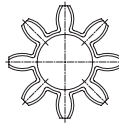
ROTEX® 14



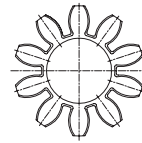
ROTEX® 19



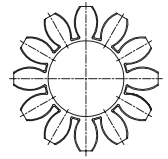
ROTEX® 24 - 65



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	– significantly higher service life expectancy – very good temperature resistance – improved damping of vibrations – good damping, average flexibility – suitable for all hub materials	– 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	– 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	– 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	– 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 PKW [W] ³⁾	Relative damp- ing ψ	Reso- nance factor VR	Torsion spring stiffness C dyn. [Nm/rad]			
	v=35 m/s cast material	v=40 m/s steel	TKN	TK max	DIN 740 ¹⁾			TK max ²⁾				1.0 TKN	0.75 TKN	0.5 TKN	0.25 TKN
					Rated TKN	Max. TK max	Vibratory TKW								
14	22200	25400	6.4°	10°	7.5	15	2.0	22.5	—			0.38x10³	0.31x10³	0.24x10³	0.14x10³
19	16700	19000			10	20	2.6	30	4.8			1.28x10³	1.05x10³	0.8x10³	0.47x10³
24	12100	13800			35	70	9.1	105	6.6			4.86x10³	3.98x10³	3.01x10³	1.79x10³
28	10100	11500			95	190	25	285	8.4			10.9x10³	8.94x10³	6.76x10³	4.01x10³
38	8300	9500			190	380	49	570	10.2			21.05x10³	17.26x10³	13.05x10³	7.74x10³
42	7000	8000			265	530	69	795	12.0			23.74x10³	19.47x10³	14.72x10³	8.73x10³
48	6350	7250			310	620	81	930	13.8			36.7x10³	30.09x10³	22.75x10³	13.49x10³
55	5550	6350			410	820	107	1230	15.6			50.7x10³	41.59x10³	31.45x10³	18.64x10³
65	4950	5650	3.2°	5°	625	1250	163	1875	18.0	0.80	7.90	97.1x10³	79.65x10³	60.2x10³	35.7x10³
75	4150	4750			1280	2560	333	3840	21.6			113.3x10³	92.9x10³	70.3x10³	41.65x10³
90	3300	3800			2400	4800	624	7200	30.0			190.1x10³	155.9x10³	117.9x10³	69.9x10³
100	2950	3350			3300	6600	858	9900	36.0			253.1x10³	207.5x10³	156.9x10³	93x10³
110	2600	2950			4800	9600	1248	14400	42.0			415.5x10³	336.9x10³	257.6x10³	177.4x10³
125	2300	2600			6650	13300	1729	19950	48.0			647.7x10³	537.3x10³	412.2x10³	277.5x10³
140	2050	2350			8550	17100	2223	25650	54.6			813.4x10³	670.2x10³	519.7x10³	351.7x10³
160	1800	2050			12800	25600	3328	38400	75.0			1298x10³	1104x10³	901.9x10³	655.7x10³
180	1550	1800			18650	37300	4849	55950	78.0			2327x10³	1981x10³	1618x10³	1176x10³

98 Shore A spider made of T-PUR® and PUR															
ROTEX® size	Max. speed		Torsion angle φ with		Torque [Nm]				Damping power PKW [W] ³⁾	Relative damp- ing ψ	Reso- nance factor VR	Torsion spring stiffness C dyn. [Nm/rad]			
	v=35 m/s cast material	v=40 m/s steel	TKN	TK max	DIN 740 ¹⁾			TK max ²⁾				1.0 TKN	0.75 TKN	0.5 TKN	0.25 TKN
					Rated TKN	Max. TK max	Vibratory TKW								
14	22200	25400	6.4°	10°	12.5	25	3.3	37.5	—			0.56x10³	0.46x10³	0.35x10³	0.21x10³
19	16700	19000			17	34	4.4	51	4.8			2.92x10³	2.39x10³	1.81x10³	1.07x10³
24	12100	13800			60	120	16	180	6.6			9.93x10³	8.14x10³	6.16x10³	3.65x10³
28	10100	11500			160	320	42	480	8.4			26.77x10³	21.95x10³	16.6x10³	9.84x10³
38	8300	9500			325	650	85	975	10.2			48.57x10³	39.83x10³	30.11x10³	17.85x10³
42	7000	8000			450	900	117	1350	12.0			54.5x10³	44.69x10³	33.79x10³	20.03x10³
48	6350	7250			525	1050	137	1575	13.8			65.3x10³	53.54x10³	40.48x10³	24x10³
55	5550	6350			685	1370	178	2055	15.6			95x10³	77.9x10³	58.88x10³	34.9x10³
65	4950	5650	3.2°	5°	940	1880	244	2820	18.0	0.80	7.90	129.5x10³	106.2x10³	80.3x10³	47.6x10³
75	4150	4750			1920	3840	499	5760	21.6			197.5x10³	162x10³	122.5x10³	72.6x10³
90	3300	3800			3600	7200	936	10800	30.0			312.2x10³	256x10³	193.6x10³	114.7x10³
100	2950	3350			4950	9900	1287	14850	36.0			383.3x10³	314.3x10³	237.6x10³	140.9x10³
110	2600	2950			7200	14400	1872	21600	42.0			805.9x10³	663.1x10³	515.3x10³	360.5x10³
125	2300	2600			10000	20000	2600	30000	48.0			1207x10³	1003x10³	787.6x10³	552.5x10³
140	2050	2350			12800	25600	3328	38400	54.6			1549x10³	1283x10³	979.8x10³	674.1x10³
160	1800	2050			19200	38400	4992	57600	75.0			2481x10³	2137x10³	1781x10³	1275x10³
180	1550	1800			28000	56000	7280	84000	78.0			4220x10³	3635x10³	3031x10³	2170x10³

64 Shore D spider made of T-PUR® and PUR															
ROTEX® size	Max. speed		Torsion angle φ with		Torque [Nm]				Damping power PKW [W] ³⁾	Relative damp- ing ψ	Reso- nance factor VR	Torsion spring stiffness C dyn. [Nm/rad]			
	v=35 m/s cast material	v=40 m/s steel	TKN	TK max	DIN 740 ¹⁾			TK max ²⁾				1.0 TKN	0.75 TKN	0.5 TKN	0.25 TKN
					Rated TKN	Max. TK max	Vibratory TKW								
14	22200	25400	4.5°	7.0°	16	32	4.2	48	9.0			0.76x10³	0.62x10³	0.47x10³	0.28x10³
19	16700	19000			21	42	5.5	63	7.2			5.35x10³	4.39x10³	3.32x10³	1.97x10³
24	12100	13800			75	150	19.5	225	9.9			15.11x10³	12.39x10³	9.37x10³	5.55x10³
28	10100	11500			200	400	52	600	12.6			27.52x10³	22.57x10³	17.06x10³	10.12x10³
38	8300	9500			405	810	105	1215	15.3			70.15x10³	57.52x10³	43.49x10³	25.78x10³
42	7000	8000			560	1120	146	1680	18.0			79.9x10³	65.5x10³	49.52x10³	29.35x10³
48	6350	7250			655	1310	170	1965	20.7			95.5x10³	78.3x10³	59.22x10³	35.1x10³
55	5550	6350			825	1650	215	2475	23.4			107.9x10³	88.5x10³	66.9x10³	39.66x10³
65	4950	5650	2.5°	3.6°	1175	2350	306	3525	27.0	0.75	8.50	151.1x10³	123.9x10³	93.7x10³	55.53x10³
75	4150	4750			2400	4800	624	7200	32.4			248.2x10³	203.5x10³	153.9x10³	91.2x10³
90	3300	3800			4500	9000	1170	13500	45.0			674.5x10³	553.1x10³	418.2x10³	247.9x10³
100	2950	3350			6185	12370	1608	18555	54.0			861.2x10³	706.2x10³	533.9x10³	316.5x10³
110	2600	2950			9000	18000	2340	27000	63.0			1230x10³	1001x10³	773.1x10³	531.4x10³
125	2300	2600			12500	25000	3250	37500	72.0			1749x10³	1436x10³	1149x10³	832.1x10³
140	2050	2350			16000	32000	4160	48000	81.9			2312x10³	1929x10³	1521x10³	1082x10³
160	1800	2050			24000	48000	6240	72000	112.5			3415x10³	2961x10³	2471x10³	1830x10³
180	1550	1800			35000	70000	9100	105000	117.0			5670x10³	4917x10³	4103x10³	3038x10³

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 the Shore hardness of spider is not 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.

Technical data and properties of special spiders

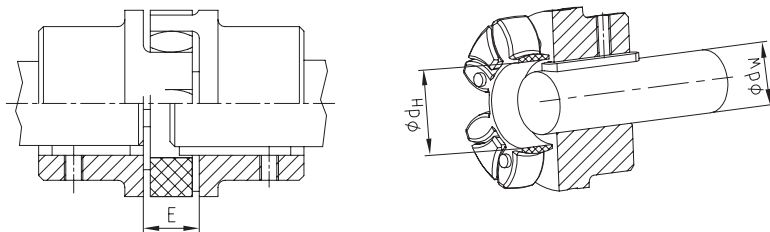
		
Description	PA	PEEK
Material	Polyamide	Polyetheretherketone
Permissible temperature range		
Permanent temperature	-20 °C to +130 °C ¹⁾	up to +180 °C (ATEX up to +160 °C)
Short-term temperature	-30 °C to +150 °C ¹⁾	up to +250 °C
Features	– small twisting angle and high torsion spring stiffness – transmission of very high torques with very low damping – good resistance to chemicals ¹⁾ – recommended hub material: steel – high restoring forces with displacements	– 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

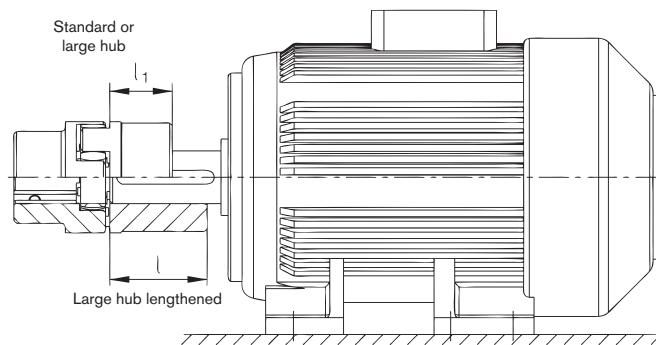


Shaft Ød_W with feather key (acc. to DIN 6885 sheet 1) protruding into the spider Ød_H

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 _W 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)

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
Size	Shaft end d x l [mm]	2 poles	4, 6, 8 poles		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]	
56	9 x 20			9 ¹⁾	0.09	0.32	9 ¹⁾	0.037	0.43	9 ¹⁾			
					0.12	0.41		0.045	0.52				
63	11 x 23			14	0.18	0.62	14	0.06	0.7	14			
					0.25	0.86		0.09	1.1				
71	14 x 30			19	0.37	1.3	19	0.18	2	19	0.09	1.4	14
					0.55	1.9		0.25	2.8		0.12	1.8	
80	19 x 40			24	0.75	2.5	24	0.37	3.9	24	0.18	2.5	19
					1.1	3.7		0.55	5.8		0.25	3.5	
90S	24 x 50			28	1.5	5	28	0.75	8	28	0.37	5.3	24
90L					2.2	7.4		1.1	12		0.55	7.9	
100L	28 x 60			38	3	9.8	38	1.5	15	38	0.75	11	28
112M				42	4	13	42	2.2	22	42	1.5	21	
					5.5	18		3	30		2.2	30	
132S	38 x 80			55	7.5	25	55	4	40	55	3	40	38
								5.5	55				
132M				65			65			65			
160M	42 x 110			75	11	36	75	7.5	75	75	4	54	55
					15	49					5.5	74	
160L				90	18.5	60	90	11	109	90	7.5	100	
180M	48 x 110			100	22	71	100	15	148	100	11	145	90
180L								18.5	181		15	198	
200L	55 x 110			110	30	97	110	22	215	110			
					37	120							
225S	55 x 110	60 x 140		125			125			125	18.5	244	110
225M					45	145		30	293		22	290	
250M	60 x 140	65 x 140		140	55	177	140	37	361	140	30	392	125
280S					75	241		45	438		37	483	
280M		75 x 140		160	90	289	160	55	535	160	45	587	140
315S					110	353		75	727		55	712	
315M	65 x 140	80 x 170		180	132	423	180	90	873	180	75	971	160
					160	513		110	1070		90	1170	
315L				200	200	641	200	132	1280	200	110	1420	
								160	1550		132	1710	
315		85 x 170		225	250	802	225	200	1930	225	160	2070	180
					315	1010		250	2410		200	2580	
355	75 x 140	95 x 170		250	355	1140	250			250			
					400	1280		315	3040		250	3220	
400	80 x 170	110 x 210		280	500	1600	280	400	3850	280	315	4060	200
					560	1790		450	4330		355	4570	
450	90 x 170	120 x 210		315	630	2020	315	500	4810	315	400	5150	225
					710	2270		560	5390		450	5790	
				355	800	2560	355	630	6060	355	500	6420	
					900	2880		710	6830		560	7190	
				400	1000	3200	400	800	7690	400	630	8090	

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 ROTEK® GS series

²⁾ For motor hub made of steel see page 40

Cylindrical bores and spline bores

Stock programme of cylindrical finish bores [mm] H7 feather keyway acc. to DIN 6885 sheet 1 [JS9] and setscrew																																										
ROTEX® size Material		Un- bo- red	Ø6	Ø8	Ø9	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	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 splines											
Spline code	Size	Pitch circle	Pitch	No. of teeth	Angle	Spline code	Size	Pitch circle	Pitch	No. of teeth	Angle
PH-S	$\frac{5}{8}$ "	14.28	16/32	9	30°	PS-S	1 $\frac{1}{2}$ "	35.98	12/24	17	30°
PI-S	$\frac{3}{4}$ "	17.46	16/32	11	30°	PD-S	1 $\frac{1}{2}$ "	36.51	16/32	23	30°
PB-S	$\frac{7}{8}$ "	20.63	16/32	13	30°	PE-S	1 $\frac{3}{4}$ "	42.86	16/32	27	30°
PB-BS	1"	23.81	16/32	15	30°	PK-S	1 $\frac{3}{4}$ "	41.275	8/16	13	30°
PJ	1 $\frac{1}{8}$ "	26.98	16/32	17	30°	PT-C ¹⁾	2"	47.625	8/16	15	30°
PC-S	1 $\frac{1}{4}$ "	29.63	12/24	14	30°	PQ-C ¹⁾	2 $\frac{1}{4}$ "	53.975	8/16	17	30°
PA-S	1 $\frac{3}{8}$ "	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					

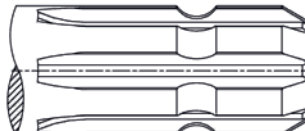
Basic programme of spline bores acc. to DIN 5480							
Spline code	Pitch circle	Module	No. of teeth	Spline code	Pitch circle	Module	No. of teeth
20 x 1 x 18 x 7H	18.0	1	18	40 x 2 x 18 x 8H	36.0	2	18
20 x 1.25 x 14 x 7H	17.5	1.25	14	45 x 2 x 21 x 7H	41.0	2	21
25 x 1.25 x 18 x 7H	22.5	1.25	18	48 x 2 x 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 $\frac{3}{8}$ "	8.69	6	34.93	29.65
1 $\frac{3}{8}$ "	—	21	34.95	34.80 ³⁾
1 $\frac{3}{4}$ "	11.07	6	44.45	37.74
1 $\frac{3}{4}$ "	—	20	45.20	40.20

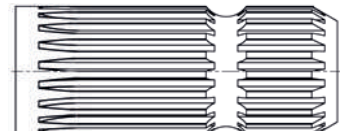
1 $\frac{3}{8}$ ", 6 teeth



1 $\frac{3}{4}$ ", 6 teeth



1 $\frac{3}{4}$ ", 20 teeth



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!

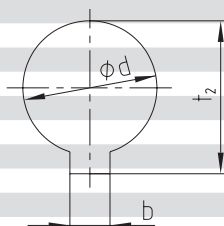
¹⁾ For clamping hubs only, with plug-in hubs use code PT or PQ.

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										

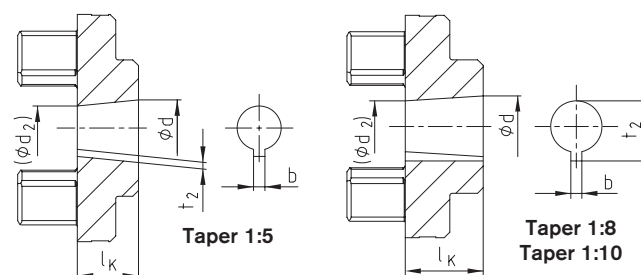


Basic programme taper 1:8					
Code	d ^{+0.05}	(d ₂)	b _{JS9}	t ₂ ^{+0.1}	l _K
N/1	9.7	7.575	2.4 ^{+0.05}	10.85	17.0
N/1c	11.6	9.5375	3 ^{JS9}	12.90	16.5
N/1e	13.0	10.375	2.4 ^{+0.05}	13.80	21.0
N/1d	14.0	11.813	3 ^{JS9}	15.50	17.5
N/1b	14.3	11.8625	3.2 ^{+0.05}	15.65	19.5
N/2	17.287	14.287	3.2 ^{+0.05}	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.

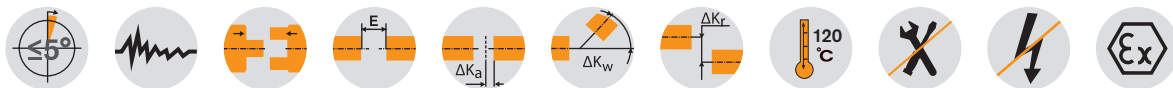
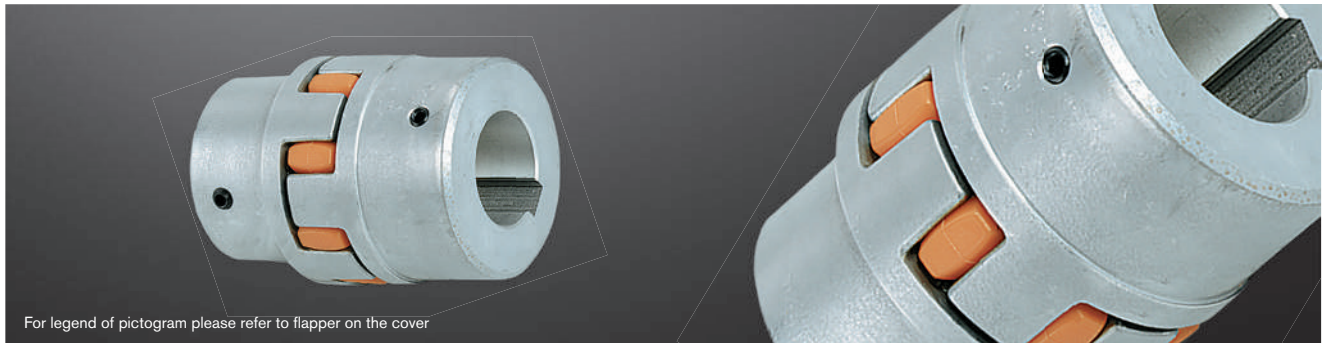
Basic programme of taper 1:10					
Code	d ^{+0.05}	(d ₂)	b _{JS9}	t ₂ ^{+0.1}	l _K
CX	19.95	16.75	5 ^{JS9}	22.08	32
DX	24.95	20.45	6 ^{JS9}	26.68	45
EX	29.75	24.75	8 ^{JS9}	31.88	50

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



ROTEX® Standard Flexible jaw couplings

Material aluminium + cast + powder metal



ROTEX® Powder metal steel (Sint)																	
Size	Compo- nent	Spider ¹⁾ (component 2) Rated torque [Nm]			Dimensions [mm]												
					Finish bore d	General										Setscrew	
		92 ShA	98 ShA	64 ShD		L	l ₁ , l ₂	E	b	s	D _H	d _H	D	N	G	t	T _A [Nm]
14	1a	7.5	12.5	—	0-16	35	11	13	10	1.5	30	10	30	—	M4	5	1.5
19	1a	10	17	—	0-24	66	25	16	12	2.0	40	18	40	—	M5	10	2
24	1a	35	60	—	0-28	78	30	18	14	2.0	56	27	56	—	M5	10	2

ROTEX® Aluminium diecast (Al-D) 																		
19	1 1a	10	17	—	6-19 19-24	66	25	16	12	2	41	18	32 41	20	M5	10	2	
24	1	35	60	—	9-24	78	30	18	14	2	56	27	40	24	M5	10	2	
	1a				22-28								56					
28	1	95	160	—	10-28	90	35	20	15	2.5	66	30	48	28	M8	15	10	
	1a				28-38								66					

ROTEX® Aluminium (Al-H)																	
5	1a	0.5	0.9	-	0-6	15	5	5	4	0.5	10	-	-	-	M2	2.5	-
7	1a	1.2	2.0	2.4	0-7	22	7	8	6	1.0	14	-	-	-	M3	3.5	-
9	1a	3.0	5.0	6.0	0-11	30	10	10	8	1.0	20	7.2	-	-	M4	5	1.5
12	1a	5.0	9.0	12	0-12	34	11	12	10	1.0	25	8.5	-	-	M4	5	1.5
14	1a	7.5	12.5	16	0-16	35	11	13	10	1.5	30	10.5	-	-	M4	5	1.5
19	1a	10	17	26	0-24	66	25	16	12	2.0	40	18	-	-	M5	10	2
24	1a	35	60	75	0-28	78	30	18	14	2.0	55	27	-	-	M5	10	2
28	1a	95	160	200	0-38	90	35	20	15	2.5	65	30	-	-	M8	15	10
38	1a	190	325	405	0-45	114	45	24	18	3.0	80	38	-	-	M8	15	10
42	1a	265	450	560	0-55	126	50	26	20	3.0	95	46	-	-	M8	20	10
48	1a	310	525	655	0-62	140	56	28	21	3.0	105	51	-	-	M8	20	10

The coupling is provided with a ROTEX® GS spider as a standard (ROTEX® standard spider available, if requested).

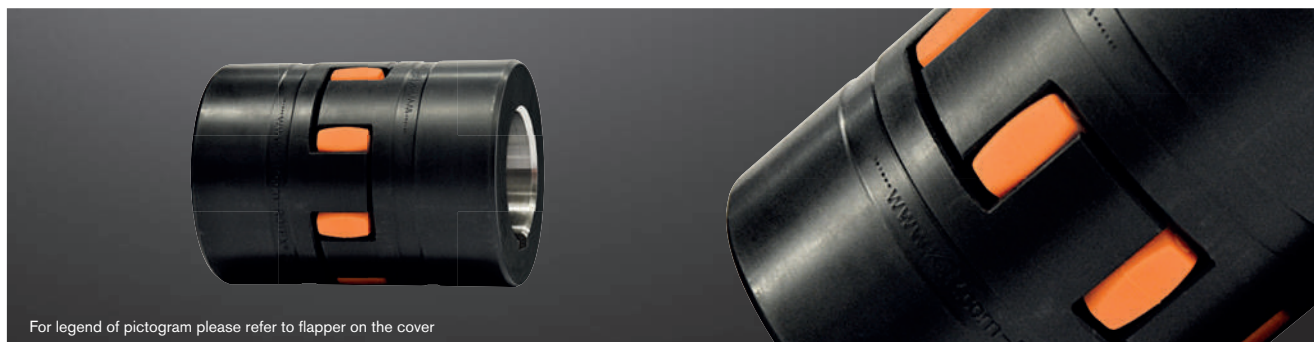
ROTEX® Cast iron (GJL)																	
38	1	190	325	405	12-40	114	45	24	18	3	80	38	66	37	M8	15	10
	1a				38-48								78				
	1b				12-48								62				
42	1	265	450	560	14-45	126	50	26	20	3	95	46	75	40	M8	20	10
	1a				42-55								94				
	1b				14-55								65				
48	1	310	525	655	15-52	140	56	28	21	3.5	105	51	85	45	M8	20	10
	1a				48-62								104				
	1b				15-62								69				
55	1	410	685	825	20-60	160	65	30	22	4	120	60	98	52	M10	20	17
	1a				55-74								118				
	65				1								625	940			
75	1	1280	1920	2400	30-80	210	85	40	30	5	160	80	135	69	M10	25	17
90	1	2400	3600	4500	40-100	245	100	45	34	5.5	200	100	160	81	M12	30	40

ROTEX® Nodular iron (GJS)																	
100	1	3300	4950	6185	50-115	270	110	50	38	6	225	113	180	89	M12	30	40
110	1	4800	7200	9000	60-125	295	120	55	42	6.5	255	127	200	96	M16	35	80
125	1	6650	10000	12500	60-145	340	140	60	46	7	290	147	230	112	M16	40	80
140	1	8550	12800	16000	60-160	375	155	65	50	7.5	320	165	255	124	M20	45	140
160	1	12800	19200	24000	80-185	425	175	75	57	9	370	190	290	140	M20	50	140
180	1	18650	28000	35000	85-200	475	195	85	64	10.5	420	220	325	156	M20	50	140

■ = Unless any material is specified in the order, it is defined with the calculation/order.

¹⁾ Maximum torque of the coupling T_{K max} = rated torque of the coupling T_{K rated} x 2. For selection see page 14 et seqq.

Ordering example:	ROTEX® 38		GJL		92 ShA		1a		Ø 45		1		Ø 25	
	Coupling size		Material		Spider hardness		Component		Finish bore		Component		Finish bore	



For legend of pictogram please refer to flapper on the cover

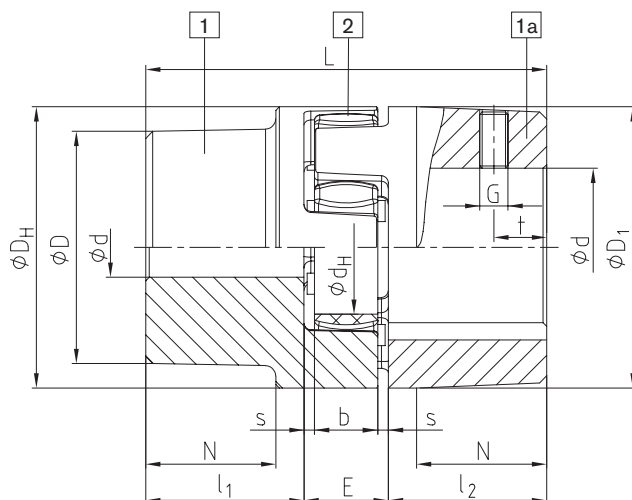


ROTEX® with CDP coating ¹⁾

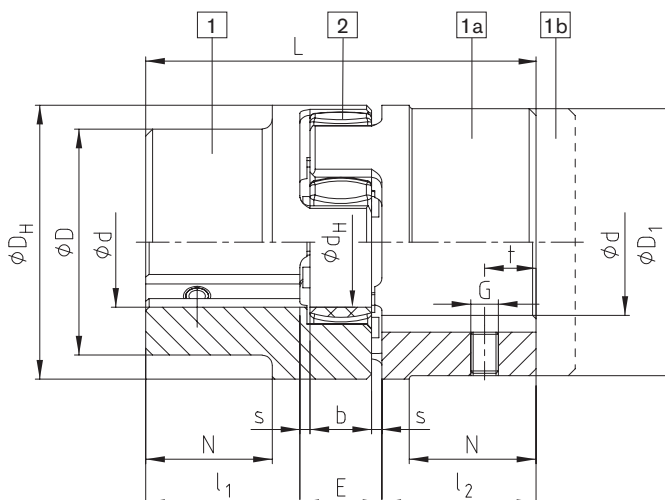
Size	Component	Spider (component 2) Rated torque [Nm]			Finish bore d (min. - max.)	Dimensions [mm]											Setscrew		
		92 ShA	98 ShA	64 ShD		General													
		10	17	21		L	l ₁ , l ₂	E	b	s	D _H	d _H	D	N	G	t	T _A [Nm]		
19	1a	10	17	21	0-25	66	25	16	12	2	40	18	40	—	M5	10	2		
24	1a	35	60	75	0-35	78	30	18	14	2	55	27	55	—	M5	10	2		
28	1a	95	160	200	0-40	90	35	20	15	2.5	65	30	65	—	M8	15	10		
38	1	190	325	405	0-48	114	45	24	18	3	80	38	70	27	M8	15	10		
42	1	265	450	560	0-55	126	50	26	20	3	95	46	85	28	M8	20	10		
48	1	310	525	655	0-62	140	56	28	21	3.5	105	51	95	32	M8	20	10		
55	1	410	685	825	0-74	160	65	30	22	4	120	60	110	37	M10	20	17		
65	1	625	940	1175	0-80	185	75	35	26	4.5	135	68	115	47	M10	20	17		
75	1	1280	1920	2400	0-95	210	85	40	30	5	160	80	135	53	M10	25	17		
90	1	2400	3600	4500	0-110	245	100	45	34	5.5	200	100	160	62	M12	25	40		
100	1	3300	4950	6185	0-115	270	110	50	38	6	225	113	180	89	M12	30	40		
110	1	4800	7200	9000	0-125	295	120	55	42	6.5	255	127	200	96	M16	35	80		
125	1	6650	10000	12500	60-145	340	140	60	46	7	290	147	230	112	M16	40	80		

¹⁾ Corrosion protection class acc. to DIN EN ISO 12944: Min. C4, heavy-long

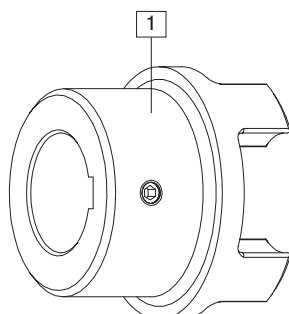
Components



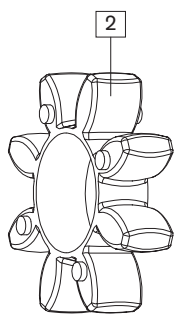
AI-D (thread opposite the keyway)



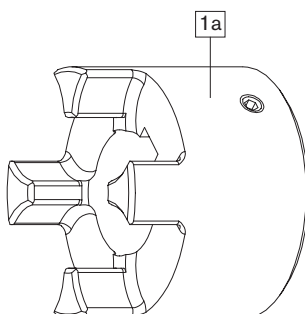
GJL / GJS (thread on the keyway)



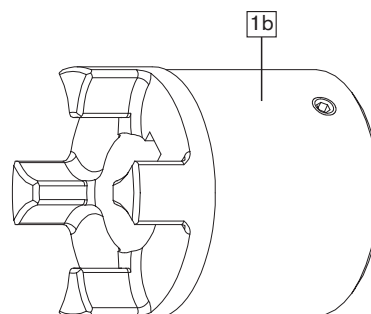
Standard hub



Spider



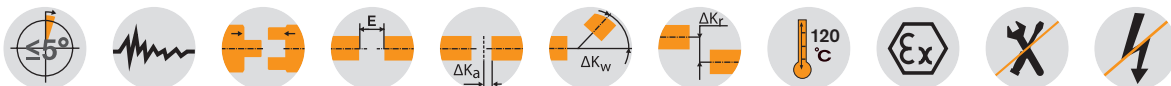
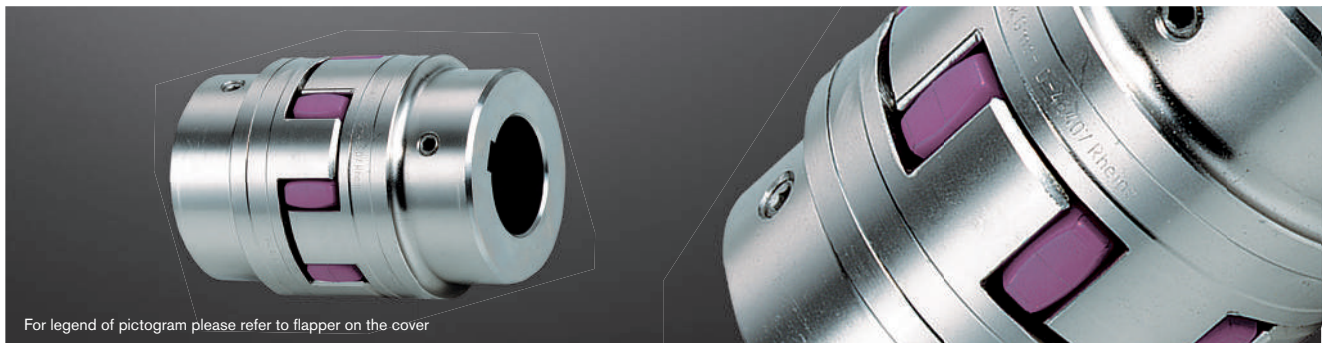
Large hub



Large hub lengthened

ROTEX® Standard Flexible jaw couplings

Material steel/stainless steel



ROTEX® Steel (St)																			
Size	Component	Spider ¹⁾ (component 2) Rated torque [Nm]			Finish bore d (min. - max.)	Dimensions [mm]											Setscrew		
		92 ShA	98 ShA	64 ShD		General													
						L	l ₁ , l ₂	E	b	s	D _H	d _H	D	N	G	t	T _A [Nm]		
14	1a	7.5	12.5	16	0-16	35	11	13	10	1.5	30	10	30	—	M4	5	1.5		
	50					18.5													
19	1a	10	17	21	0-25	66	25	16	12	2	40	18	40	—	M5	10	2		
	90					37													
24	1a	35	60	75	0-35	78	30	18	14	2	55	27	55	—	M5	10	2		
	1b					118	50												
28	1a	95	160	200	0-40	90	35	20	15	2.5	65	30	65	—	M8	15	10		
	1b					140	60												
38	1	190	325	405	0-48	114	45	24	18	3	80	38	70	27	M8	15	10		
	1b					164	70						80	—					
42	1	265	450	560	0-55	126	50	26	20	3	95	46	85	28	M8	20	10		
	1b					176	75						95	—					
48	1	310	525	655	0-62	140	56	28	21	3.5	105	51	95	32	M8	20	10		
	1b					188	80						105	—					
55	1	410	685	825	0-75	160	65	30	22	4	120	60	110	37	M10	20	17		
	1b					210	90						120	—					
65	1	625	940	1175	0-80	185	75	35	26	4.5	135	68	115	47	M10	20	17		
	1b					235	100						135	—					
75	1	1280	1920	2400	0-95	210	85	40	30	5	160	80	135	53	M10	25	17		
	1b					260	110						160	—					
90	1	2400	3600	4500	0-110	245	100	45	34	5.5	200	100	160	62	M12	30	40		
	1b					295	125						200	—					
100	1	3300	4950	6185	0-115	270	110	50	38	6	225	113	180	89	M12	30	40		
110	1	4800	7200	9000	0-125	295	120	55	42	6.5	255	127	200	96	M16	35	80		
125	1	6650	10000	12500	60-145	340	140	60	46	7	290	147	230	112	M16	40	80		
140	1	8550	12800	16000	60-160	375	155	65	50	7.5	320	165	255	124	M20	45	140		
160	1	12800	19200	24000	80-185	425	175	75	57	9	370	190	290	140	M20	50	140		
180	1	18650	28000	35000	85-200	475	195	85	64	10.5	420	220	325	156	M20	50	140		

■ = Unless any material is specified in the order, it is defined with the calculation/order.

¹⁾ Maximum torque of the coupling T_{K max} = rated torque of the coupling T_K rated x 2. For selection see page 14 et seqq.

ROTEX® Stainless steel																	
Size	Material	Spider (component 2) Rated torque [Nm]			Finish bore d (min. - max.)	Dimensions [mm]											
						General										Setscrew	
		92 ShA	98 ShA	64 ShD		L	l ₁ , l ₂	E	b	s	D _H	d _H	D	N	G	t	T _A [Nm]
19	1.4305	10	17	21	0-25	66	25	16	12	2	40	18	40	-	M5	10	2
24	1.4571	35	60	75	0-35	78	30	18	14	2	55	27	55	-	M5	10	2
28	1.4305	95	160	200	0-40	90	35	20	15	2.5	65	30	65	-	M8	15	10
38	1.4571	190	325	405	0-48	114	45	24	18	3	80	38	80	27	M8	15	10
42	1.4305	265	450	560	0-55	126	50	26	20	3	95	46	95	28	M8	20	10
48	1.4571	310	525	655	0-62	140	56	28	21	3.5	105	51	105	32	M8	20	10

Ordering
example:

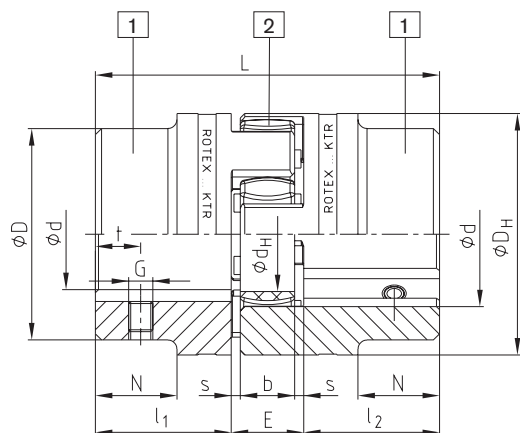
ROTEX® 38	St	92 ShA	1 - Ø45	1 - Ø25
Coupling size	Material	Spider hardness	Component Finish bore	Component Finish bore

ROTEX®

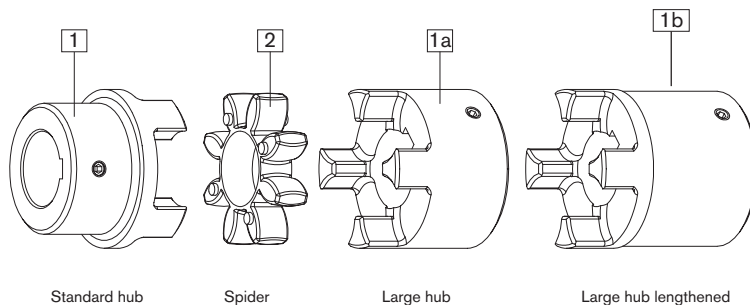
Flexible jaw couplings

DIN EN 10204 - 3.1 and 3.2 material test certificate

Components



Steel (thread on the keyway)



ROTEX® Coupling hubs with test certificate ¹⁾				
Size	Component	Material ²⁾	Inspection certificate acc. to DIN EN 10204	Notch impact strength
19	1a	S355 ²⁾	3.1	>=27 J
24	1a	S355 ²⁾	3.1	>=27 J
28	1a	S355 ²⁾	3.1	>=27 J
38	1a	S355 ²⁾	3.1	>=27 J
42	1	S355 ²⁾	3.1	>=27 J
48	1	S355 ²⁾	3.1	>=27 J
55	1	S355 ²⁾	3.1	>=27 J
65	1	S355 ²⁾	3.1	>=27 J
75	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
90	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
100	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
110	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
120	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
140	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
160	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		
180	1	S355 ²⁾	3.1/3.2	>=27 J
		42CrMoS4+QT ³⁾		

¹⁾ S355 suitable for feather key connections, 42CrMoS4+QT for oil press-fits

²⁾ Notch impact strength with -40 °C

³⁾ Notch impact strength with -20 °C

Marine programme:

Hub materials S355J2+N and 42CrMo4+QT acc. to DIN EN 10204 - 3.1+3.2, size 75 - 180 available from stock.



ClassNK

UL



Use in fire pumps

ROTEX® couplings comply with the specifications of NFPA 20 standard for the installation of stationary pumps for fire protection and due to completion of the endurance tests required they also comply with the specifications of UL 448A, flexible couplings and connection shafts for stationary fire pumps.

Sizes available:



ROTEX® UL Listed									
Size	Component	Material	Spider (component 2) Rated torque [Nm]	Dimensions [mm]					
				Finish bore d (min. - max.)	L	l ₁ , l ₂	E	D _H	
42	1	St	265	18-55	126	50	26	95	
55	1	St	410	24-74	160	65	30	120	
65	1	St	625	24-80	185	75	35	135	
75	1	St	1280	24-95	210	85	40	160	
90	1	St	2400	30-110	245	100	45	200	

* for complete dimensions see table on page 40

ROTEX®

Flexible jaw couplings

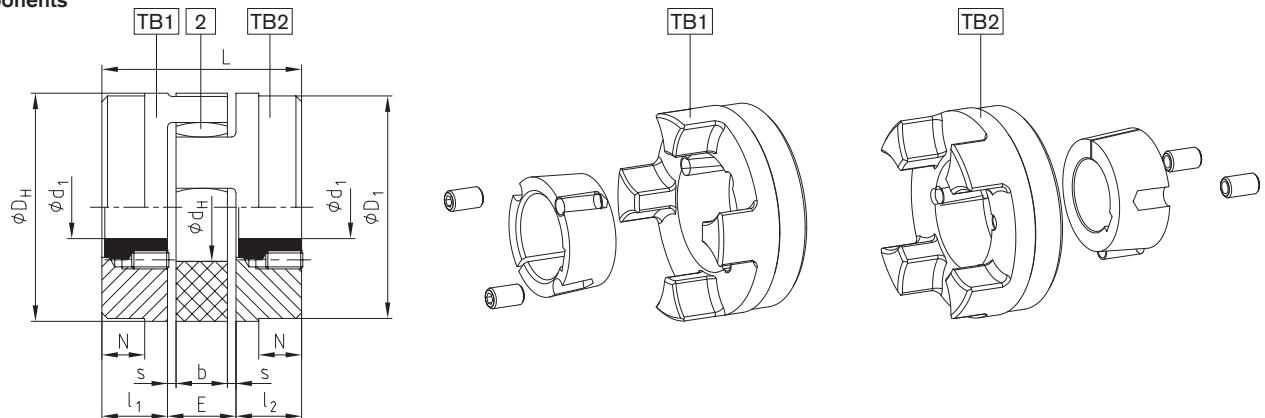
Taper clamping sleeve



For legend of pictogram please refer to flapper on the cover



Components



ROTEX® Shaft coupling for taper clamping sleeve

Size	Taper clamping sleeve	Dimensions [mm]									Fastening screws for taper clamping sleeves			
		l ₁ , l ₂	E	s	b	L	N	D _H	D ₁	d _H	Size [Inch] ¹⁾	Length [mm]	Number	T _A [Nm]
24	1008	22	18	2.0	14	62	–	55	55	27	1/4"	13	2	5.7
28	1108	23	20	2.5	15	66	–	65	65	30	1/4"	13	2	5.7
38	1108	23	24	3.0	18	70	15	80	78	38	1/4"	13	2	5.7
42	1610	26	26	3.0	20	78	16	95	94	46	3/8"	16	2	20
48	1615	39	28	3.5	21	106	28	105	104	51	3/8"	16	2	20
55	2012	33	30	4.0	22	96	20	120	118	60	7/16"	22	2	31
65	2012	33	35	4.5	26	101	19	135	115	68	7/16"	22	2	31
75	2517	52	40	5.0	30	144	36	160	158	80	1/2"	25	2	49
	• 3020										5/8"	32		92
90	3020	52	45	5.5	34	149	33	200	160	100	5/8"	32	2	92
100	3535	90	50	6	38	230	69	225	180	113	1/2"	49	3	113
125	4545	114	60	7.0	46	288	86	290	230	147	3/4"	49	3	192

Taper clamping sleeve

Size	Summary of bore dimensions d ₁ [mm], H7 fit- feather keyway acc. to DIN 6885 sheet 1																		
1008	Ø10	Ø11	Ø12	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25								
1108	Ø10	Ø11	Ø12	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28 ²⁾							
1610	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42 ²⁾				
1615	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42 ²⁾				
2012	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	
2517	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60
3020	Ø25	Ø28	Ø30	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75				
3535	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90				
4545	Ø55	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90	Ø95	Ø100	Ø105	Ø110							

• Available for type TB2 only

¹⁾ 1. BSW thread

Coupling type TB1/TB2, TB1/TB1 and TB2/TB2 possible.

Please order our separate dimension sheet (M373054).

²⁾ Bores with feather keyway (flat design) acc. to DIN 6885 sheet 3

Ordering example:

ROTEX® 38	92 ShA	1108	TB1 - Ø 24		TB2 - Ø 22	
Coupling size	Spider hardness	Taper clamping sleeve	Hub type	Finish bore	Hub type	Finish bore

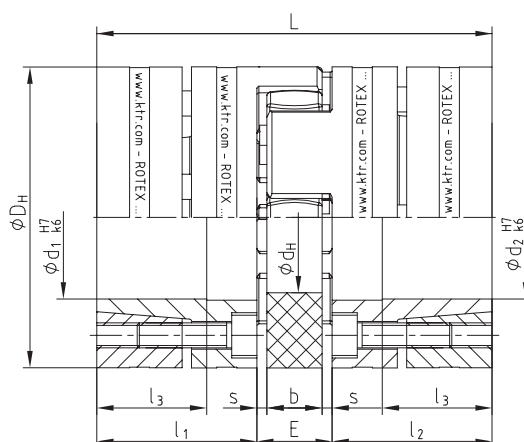
Clamping ring hubs



For legend of pictogram please refer to flapper on the cover



Components



Extraction thread M₁ between clamping screws.

Clamping ring hubs steel

Size	Torques [Nm] ¹⁾				Dimensions [mm]									Clamping screws				Weight per hub with max. bore [kg]	Mass moment of inertia per hub with max. bore [kgm²]
	92 ShA		98 ShA		D _H ²⁾	d _H	L	l ₁ , l ₂	l ₃	E	b	s	M	z = number	T _A [Nm]	M ₁			
	T _{KN}	T _K max	T _{KN}	T _K max															
19	10.0	20	17	34	40	18	66	25	18	16	12	2.0	M4	6	4.1	M4	0.179	0.44 x 10 ⁻⁴	
24	35.0	70	60	120	55	27	78	30	22	18	14	2.0	M5	4	8.5	M5	0.399	1.91 x 10 ⁻⁴	
28	95.0	190	160	320	65	30	90	35	27	20	15	2.5	M5	8	8.5	M5	0.592	4.18 x 10 ⁻⁴	
38	190.0	380	325	650	80	38	114	45	35	24	18	3.0	M6	8	14	M6	1.225	12.9 x 10 ⁻⁴	
42	265	530	450	900	95	46	126	50	35	26	20	3.0	M8	4	35	M8	2.30	31.7 x 10 ⁻⁴	
48	310	620	525	1050	105	51	140	56	41	28	21	3.5	M10	4	69	M10	3.08	52.0 x 10 ⁻⁴	
55	375	750	685	1370	120	60	160	65	45	30	22	4.0	M10	4	69	M10	4.67	103.0 x 10 ⁻⁴	
65	—	—	940	1880	135	68	185	75	55	35	26	4.5	M12	4	120	M12	6.70	191.0 x 10 ⁻⁴	
75	—	—	1920	3840	160	80	210	85	63	40	30	5.0	M12	5	120	M12	9.90	396.8 x 10 ⁻⁴	
90	—	—	3600	4500	200	104	245	100	75	45	34	5.5	M16	5	295	M16	17.70	1136 x 10 ⁻⁴	

Bore d₁/d₂ and the respective transmittable friction torques T_R of clamping ring hub in [Nm] ¹⁾

Size	Ø10	Ø11	Ø14	Ø15	Ø16	Ø19	Ø20	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55*	Ø60*	Ø65*	Ø70*	Ø80*	Ø90*	Ø95*	Ø100*	Ø105*
19	27	32	69	84	57	94	110																					
24			70	87	56	97	114	116	133	192																		
28				108	131	207	148	253	285	315	382	330	433	503														
38							208	353	395	439	531	463	603	593	689	793	776											
42											445	495	595	526	678	671	775	718	872	1043	1061							
48													616	704	899	896	1030	962	1160	1379	1222	1543						
55														863	856	991	918	1119	1110	1247	1277	1665	1605	2008				
65															1446	1355	1637	1635	1827	1887	2429	2368	2930					
75																1710	2053	2059	2294	2384	3040	2983	3664	4293				
90																			3845	4249	4794	5858	5900	7036	8047	9247	9575	10845

¹⁾ For selection see page 14 et seqq.

²⁾ ØDH + 2 mm with high speeds for expansion of spider

The transmittable torques of the clamping connection include the max. fitting tolerance with shaft clearance k6/bore H7, from Ø55 G7/m6. The torque is reduced with bigger fitting tolerance. For the strength calculation of shaft/hollow shaft see KTR standard 45510 at our homepage www.ktr.com.

Ordering example:

ROTEX® GS 24	98 ShA	6.0 steel	Ø24	6.0 steel	Ø20
Coupling size	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

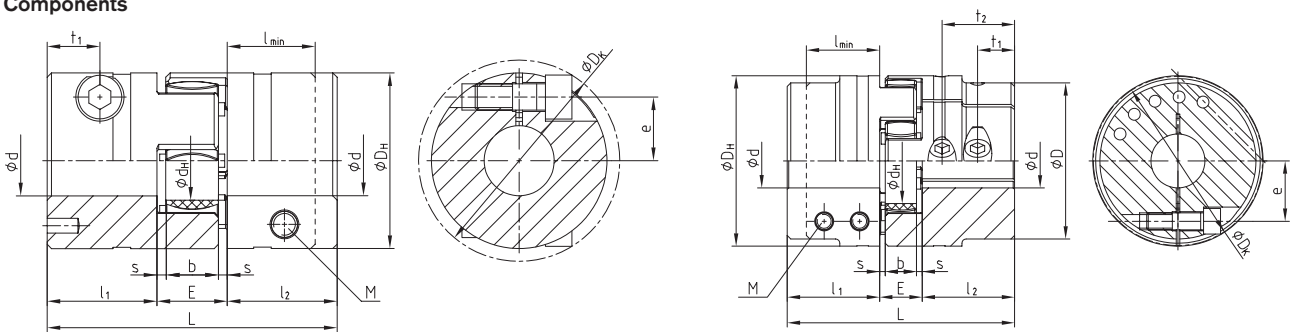
ROTEX®

Flexible jaw couplings

Clamping hubs



Components



ROTEX® 19 - 28

ROTEX® 38 - 90

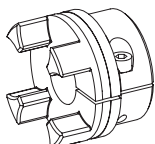
ROTEX® as clamping hubs																
Size	Dimensions [mm]														Screw DIN EN ISO 4762	
	Max. d	L	l ₁ , l ₂	l _{min}	E	b	s	D _H	D	d _H	D _K	t ₁	t ₂	e	M	T _A [Nm]
19	20 ¹⁾	66	25	20	16	12	2.0	40	-	18	46.0	12	—	14.5	M6	14
24	28	78	30	25	18	14	2.0	55	-	27	57.5	12	—	20.0	M6	14
28	38	90	35	30	20	15	2.5	65	-	30	73.0	14 ²⁾	—	25.0	M8	35
38	42	114	45	35	24	18	3.0	80	70	38	77.5	19	—	26.5	M8	35
42	50	126	50	42	26	20	3.0	95	85	46	93.5	18 ²⁾	—	32.0	M10	69
48	55	140	56	46	28	21	3.5	105	95	51	105.0	21 ²⁾	—	36.0	M12	120
55	68	160	65	50	30	22	4.0	120	110	60	119.5	26	51 ²⁾	42.5 ³⁾	M12	120
65	70	185	75	55	35	26	4.5	135	115	68	132.5	33	61 ²⁾	50.0 ³⁾	M12	120
75	80	210	85	65	40	30	5.0	160	135	80	158.0	36	68 ²⁾	57.0 ³⁾	M16	295
90	90	245	100	80	45	34	5.5	200	160	100	197.0	40	80 ²⁾	72.0 ³⁾	M20	580

Bore d ₁ /d ₂ and the respective transmittable friction torques T _R [Nm] of ROTEX® clamping hubs design 2.0																															
Size	Ø8	Ø10	Ø11	Ø14	Ø15	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90	
19	44	46	47	51	52	53	55	57	58																						
24		59	60	64	65	66	68	70	71	73	76	77	80																		
28				139	141	144	148	150	152	157	161	163	170	174	178	185	191														
38					163	165	170	172	174	178	183	185	192	196	200	207	213	217	222												
42									291	297	304	308	318	325	332	342	353	360	367	377	387	394									
48									466	476	486	491	506	516	526	542	557	567	577	592	607	618	643								
55															1185	1215	1245	1266	1286	1316	1347	1367	1417	1468	1519						
65																1316	1347	1367	1387	1417	1448	1468	1519	1569	1620	1671					
75																		2869	2926	2983	3022	3117	3213	3309	3404	3500	3595				
90																			5220	5310	5400	5460	5610	5760	5910	6060	6210	6360	6510	6660	

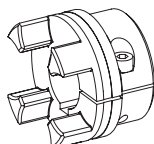
¹⁾ With type 2.1 d_{max} Ø17 mm

²⁾ With reduced hubs dimension t₁ varies or the number of screws changes from 2-off to 1-off

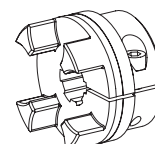
³⁾ t₁ and t₂ have a different dimension e



Type 2.0
Clamping hub single slot
without feather keyway



Type 2.1
Clamping hub single slot with
feather keyway



Type 2.3
Clamping hub with spline
bore (For a selection of our
programme of spline bores see
page 36)

**Ordering
example:**

ROTEX® 24	98 ShA	2.1	Ø24	2.0	Ø20
Coupling size	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

ROTEX® AFN and BFN Flexible jaw couplings

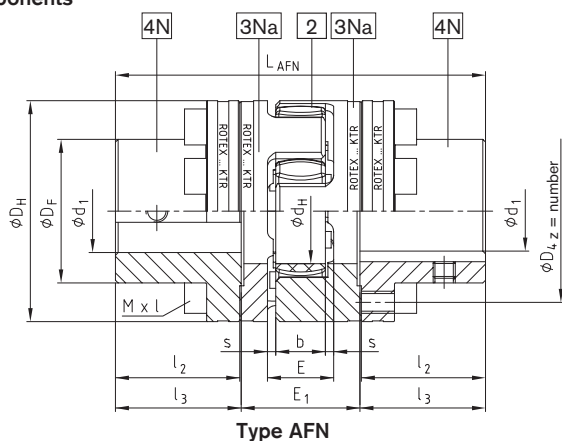
Flange programme



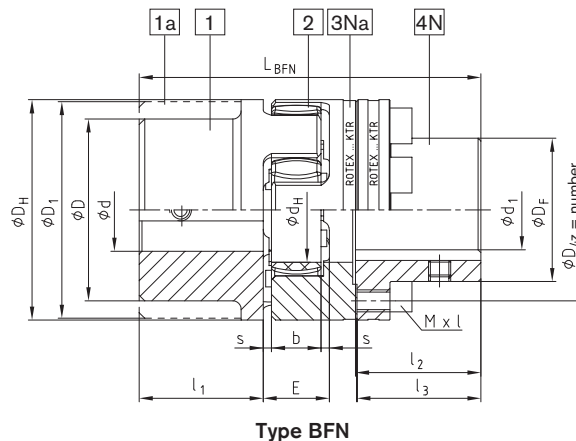
For legend of pictogram please refer to flapper on the cover



Components



Type AFN



Type BFN

ROTEX® Type AFN and BFN																		
Size	Pilot bore d, D, D ₁	Component 4N max. finish bore d ₁	Dimensions [mm]												Cap screws ³⁾ DIN EN ISO 4762 - 12.9			
			D _H	D _F	D ₄	d _H	l ₁ , l ₂	E	E ₁	s	b	l ₃ , l ₄	L _{AFN}	L _{BFN}	Mxl	z	pitch ²⁾	T _A ¹⁾ [Nm]
24	See jaw couplings on page 34 to 36 For stock programme / basic programme see page 32 and 33	27	55	36	45	27	30	18	33	2.0	14	30.5	94	86	M5x16	8		10
28		30	65	42	54	30	35	20	39	2.5	15	35.5	110	100	M6x20	8	8x45°	17
38		38	80	52	66	38	45	24	43	3.0	18	45.5	134	124	M8x22	8		41
42		45	95	62	80	46	50	26	48	3.0	20	51.0	150	138	M8x25	12		41
48		50	105	70	90	51	56	28	50	3.5	21	57.0	164	152	M8x25	12	16x22.5°	41
55		60	120	80	102	60	65	30	60	4.0	22	66.0	192	176	M10x30	8	8x45°	83
65		70	135	94	116	68	75	35	65	4.5	26	76.0	217	201	M10x30	12	16x22.5°	83
75		80	160	108	136	80	85	40	75	5.0	30	86.5	248	229	M12x40	15		120
90		105	200	142	172	100	100	45	82	5.5	34	101.5	285	265	M16x40	15		295
100		115	225	158	195	113	110	50	97	6.0	38	111.5	320	295	M16x50	15		295
110		130	255	178	218	127	120	55	103	6.5	42	122.0	347	321	M20x50	15	20x18°	580
125		150	290	206	252	147	140	60	116	7.0	46	142.0	400	370	M20x60	15		580
140		170	320	235	282	165	155	65	128	7.5	50	157.5	443	409	M20x60	15		580
160		200	370	270	325	190	175	75	146	9.0	57	177.5	501	463	M24x70	15		1000
180		230	420	315	375	220	195	85	159	10.5	64	198.0	555	515	M24x80	18	24x15°	1000

¹⁾ Screw tightening torque T_A [Nm].

²⁾ Thread in the driving flange between the cams.

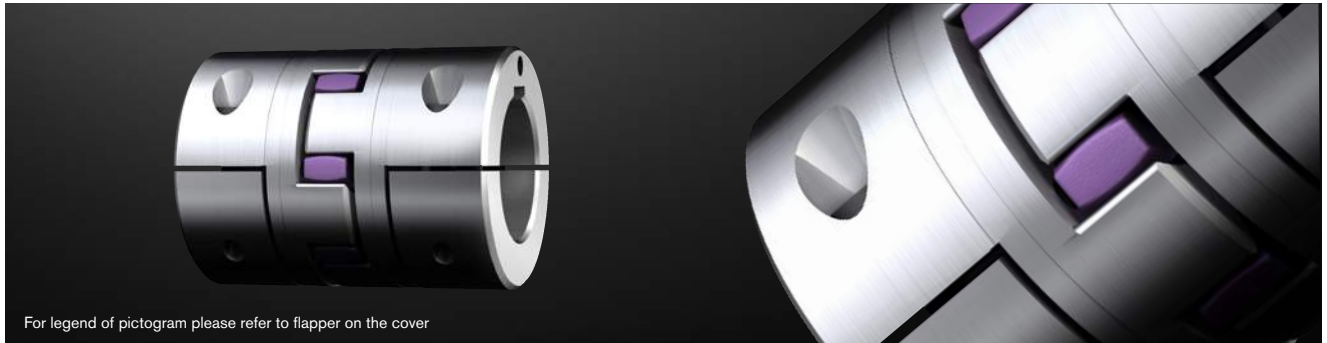
³⁾ Coupling is delivered not assembled.

Ordering example:	ROTEX® 24	AFN	92 ShA	4N	Ø38	4N	Ø35
	Coupling size	Type	Spider hardness	Component	Finish bore	Component	Finish bore

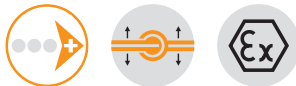
ROTEX® AH

Flexible jaw couplings

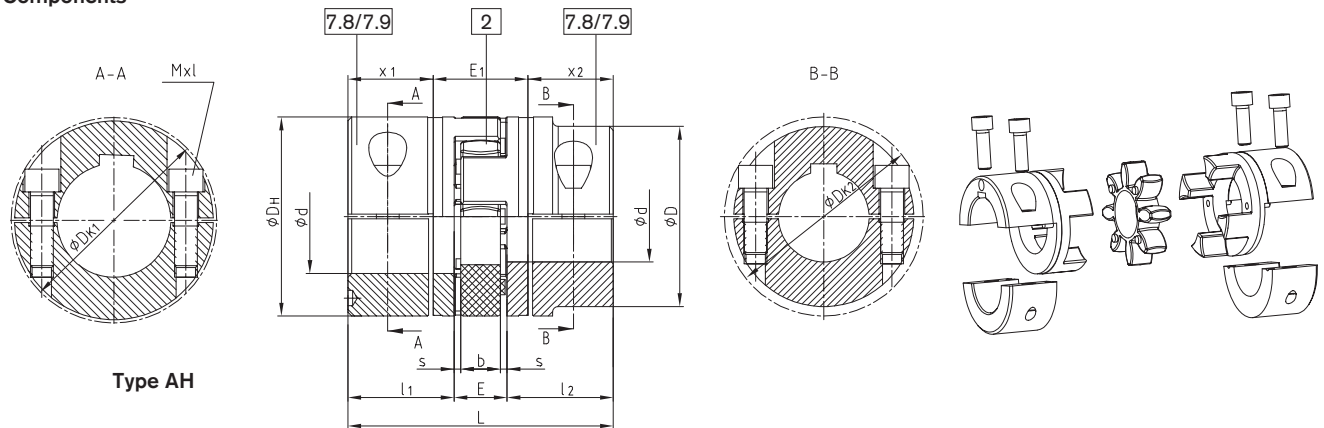
Drop-out center design coupling



For legend of pictogram please refer to flapper on the cover



Components



ROTEX® Type AH														
Size	Max. finish bore d	Dimensions [mm]										Cap screws DIN EN ISO 4762		
		L	l_1, l_2	E	b	s	D_H	D	D_{K1}	D_{K2}	x_1, x_2	E_1	Mxl	Tightening torque T_A [Nm]
19	20	66	25	16	12	2.0	40	—	46	—	17.5	31	M6x16	14
24	28	78	30	18	14	2.0	55	—	57.5	—	22.5	33	M6x20	14
28	38	90	35	20	15	2.5	65	—	73	—	25.5	39	M8x25	35
38	45	114	45	24	18	3.0	80	—	83.5	—	35.5	43	M8x30	35
42	50	126	50	26	20	3.0	95	85	—	93.5	—	39	M10x30	69
	55							—	97	—		48	M10x35	
48	55	140	56	28	21	3.5	105	95	—	105	—	45	M12x35	120
	60							—	108.5	—		50	M12x40	
55	65	160	65	30	22	4.0	120	110	—	119.5	—	50	M12x40	120
	70							—	122	—		60	M12x45	
65	70	185	75	35	26	4.5	135	115	—	123.5	—	60	M12x40	120
	80							—	132.5	—		65	M12x45	
75	80	210	85	40	30	5.0	160	135	—	147.5	—	67.5	M16x50	295
	90							—	158	—		75	M16x50	
90	90	245	100	45	34	5.5	200	160	—	176	—	81.5	M20x60	580
	110							—	197	—		82	M20x60	
100 ¹⁾	110	270	110	50	38	6.0	225	180	—	185.5	84	102	M16x50	295
110 ¹⁾	120	295	120	55	42	6.5	255	200	—	208	90	115	M20x60	580
125 ¹⁾	140	340	140	60	46	7.0	290	230	—	242.5	105	130	M24x70	1000

CAUTION:

With maximum bore the feather keyways are offset to each other by approx. 5°!
Hub material up to size 90: steel, from size 100: GJS

7.8 = Half shell clamping hub without feather keyway max. circumferential speed of $v = 35$ m/s.

From a circumferential speed of $v = 25$ m/s the frictional torque of shaft/hub has to be reviewed. Please consult with KTR.

7.9 = Half shell clamping hub with feather keyway max. circumferential speed of $v = 35$ m/s. From a circumferential speed of $v = 25$ m/s dynamic balancing is required.

Speed: max. circumferential speed of 25 m/s on the outside diameter D_H of the coupling

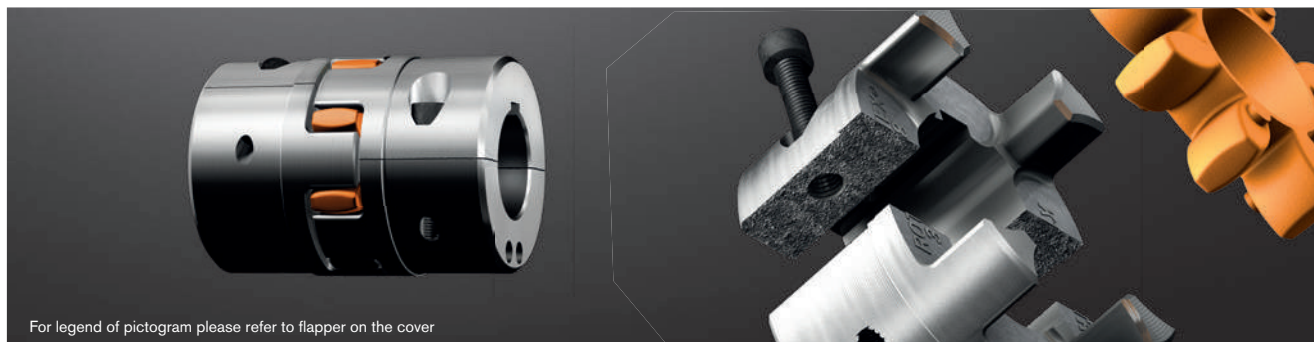
¹⁾ From size 100: 4 clamping screws for each clamping hub

Ordering example:

ROTEX® 38	AH	98 ShA	7.8	Ø38	7.8	Ø30
Coupling size	Type	Spider hardness	Hub type	Finish bore	Hub type	Finish bore



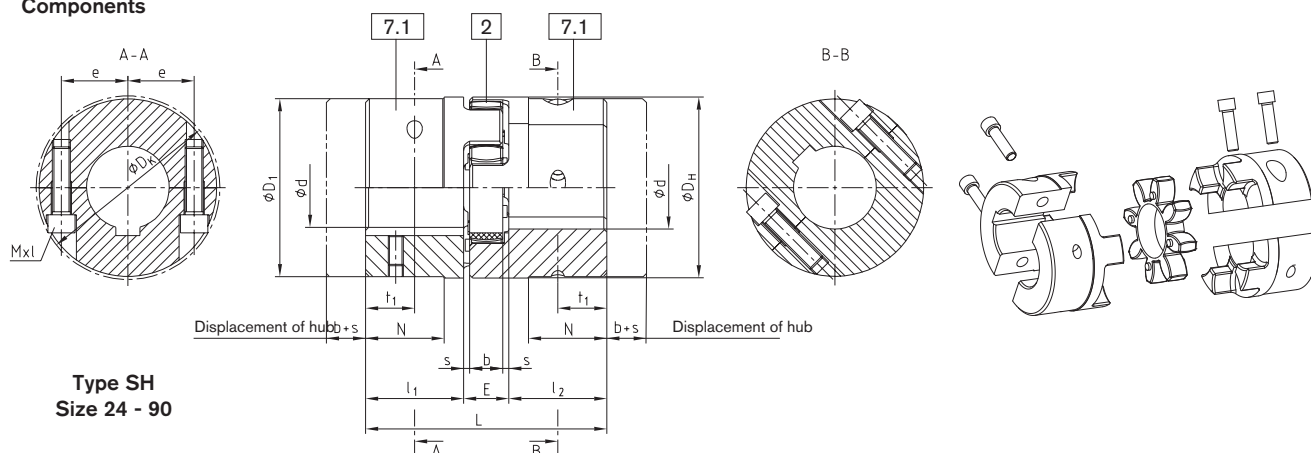
Drop-out center design coupling with SPLIT hubs



For legend of pictogram please refer to flapper on the cover



Components



ROTEX® Type SH Powder metal steel (Sint)

Size	Finish bore d		Dimensions [mm]													Cap screws DIN EN ISO 4762	
	Min.	Max.	L	l_1, l_2	E	b	s	D_H	D_1	D_K	N	e	t_1	t_2	G	Mxl	Tightening torque T_A [Nm]
24	0	24	78	30	18	14	2	55	-	57.5	-	20	15	10	M5	M6x20	14
28	0	38	90	35	20	15	2.5	65	-	73	-	25	17.5	15	M8	M8x25	34

ROTEX® Type SH Cast iron (GJL)

Size	Finish bore d		Dimensions [mm]													Cap screws DIN EN ISO 4762	
	Min.	Max.	L	l_1, l_2	E	b	s	D_H	D_1	D_K	N	e	t_1	t_2	G	Mxl	Tightening torque T_A [Nm]
38	24	45	114	45	24	18	3	80	78	83.5	37	30	22.5	15		M8x30	34
42	24	55	126	50	26	20	3	95	94	97	40	30	25		M8	M10x35	67
48	24	60	140	56	28	21	3.5	105	104	108.5	45	35	28			M12x40	115
55	24	70	160	65	30	22	4	120	118	122	52	40	32.5	20		M12x45	115
65	24	70	185	75	35	26	4.5	135	115	123.5	61	45	37.5		M10	M12x40	115
	70	80							135	132.5		50				M12x45	
75	40	80	210	85	40	30	5	160	135	147	69	51	42.5	25		M16x50	290
	80	90							160	158		57					
90	40	90	245	100	45	34	5.5	200	160	176	81	60	50	30	M12	M20x60	560
	90	110							200	197		72					

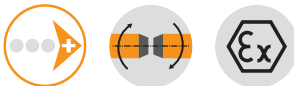
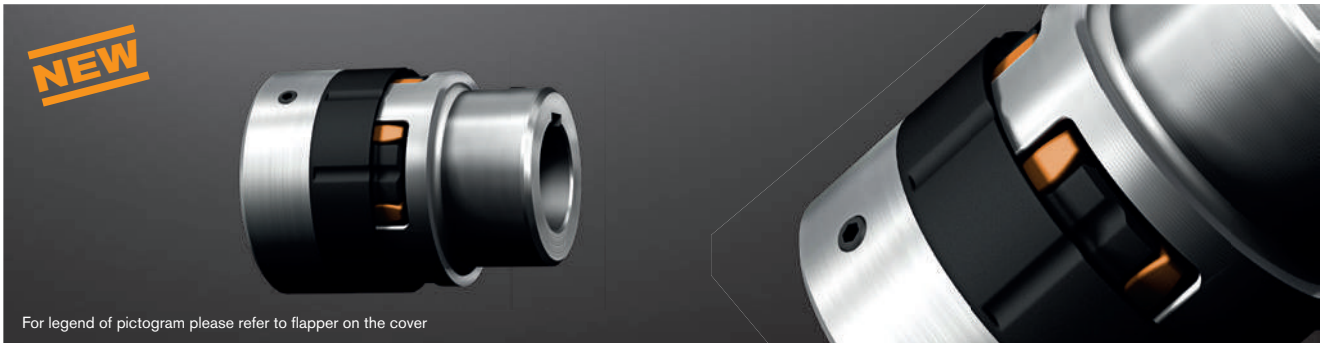
7.1 = SPLIT hub with feather keyway

Ordering example:

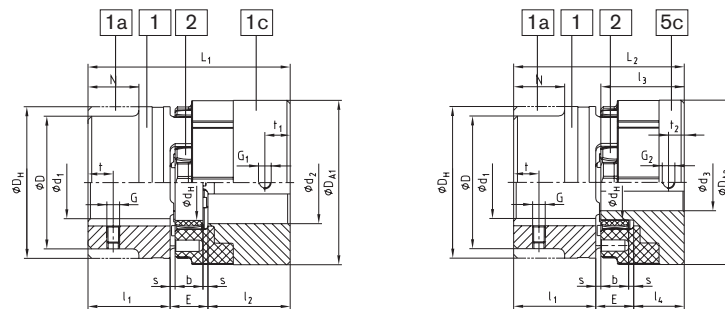
ROTEX® 38	SH	98 ShA	7.1	Ø38	7.1	Ø30
Coupling size	Type	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

ROTEX® SP GN and EN Flexible jaw couplings

Single-cardanic shaft coupling (Non Sparking)



Components



ROTEX® Standard (St) ³⁾			ROTEX® SP Type GN							ROTEX® SP Type EN							
Size	Spider ¹⁾ (component 2) Rated torque [Nm]	Component steel (St)	Component SP	Dimensions [mm] ROTEX® SP component 1c						Component SP	Dimensions [mm] ROTEX® SP component 5c						
				max. d ₂ ²⁾	l ₂	DA ₁	G ₁	t ₁	L ₁		max. d ₂ ²⁾	l ₃	l ₄	DA ₂	G ₂	t ₂	L ₂
24	35	1a	1c	28	30	61	M5	10	78	5c	19	36	22	61	M5	6	70
		98							90								
28	95	1a	1c	32	35	72	M8	15	90	5c	22	42	26	72	M8	7	81
		115							106								
38	190	1	1c	42	45	87	M8	15	114	5c	28	50	30	87	M8	7	99
		139							124								
42	265	1	1c	48	50	103	M8	20	126	5c	35	56	34	103	M8	10	110
		151							135								
48	310	1	1c	55	56	114	M8	20	140	5c	40	60	36	114	M8	10	120
		164							124								
55	410	1	1c	65	65	130	M10	20	160	5c	45	66	40	130	M10	17	135
		185							160								
65	625	1	1c	75	75	146	M10	20	185	5c	55	75	44	146	M10	17	154
		210							179								

ROTEX® Standard (GJL) ⁴⁾			ROTEX® SP Type GN							ROTEX® SP Type EN											
Size	Spider ¹⁾ (component 2) Rated torque [Nm]	Component cast iron (GJL)	Component SP	Dimensions [mm] ROTEX® SP component 1c						Component SP	Dimensions [mm] ROTEX® SP component 5c										
				max. d ₂ ²⁾	l ₂	D _A	G	t	L		max. d ₂ ²⁾	l ₂	l ₃	D _A	G	t ₁	L ₁				
38	190	1	1c	42	45	87	M8	15	114	5c	28	50	30	87	M8	7	99				
		1a																			
		1b																139			124
42	265	1	1c	48	50	103	M8	20	126	5c	35	56	34	103	M8	10	110				
		1a																			135
		1b																151			
48	310	1	1c	55	56	114	M8	20	140	5c	40	60	36	114	M8	10	120				
		1a																			144
		1b																164			
55	410	1	1c	65	65	130	M10	20	160	5c	45	66	40	130	M10	17	135				
		1a																			
65	625	1	1c	75	75	146	M10	20	185	5c	55	75	44	146	M10	17	154				

¹⁾ Maximum torque of the coupling $T_{K \max}$ = rated torque of the coupling $T_{K \text{ rated}} \times 2$. Transmittable torque according to 92 ShA.

²⁾ Bores H7 with keyway to DIN 6885 sheet 1 [JS9] and setscrew

³⁾ For dimensions of standard ROTEK® hubs (St) 1, 1a, 1b see catalogue on page 40.

⁴⁾ For dimensions of standard ROTEK® hubs (GJL) 1, 1a, 1b see catalogue on page 38.

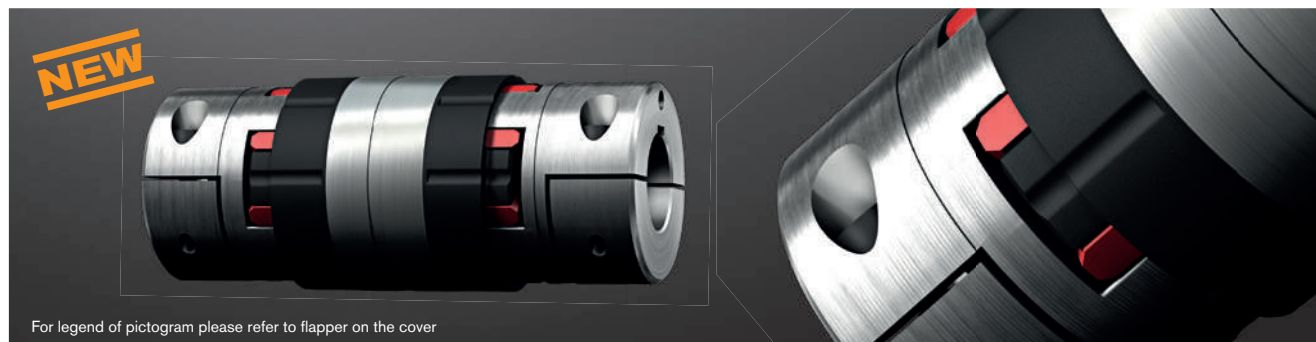
■ = Available from stock

Ordering example:	ROTEX® SP 38	GJL	92 ShA	1a	Ø45	1c	Ø42
	Coupling size	Material Components 1, 1a, 1b	Spider hardness	Component	Finish bore	Component	Finish bore

ROTEX® SP ZS-DKM-C

Flexible jaw couplings

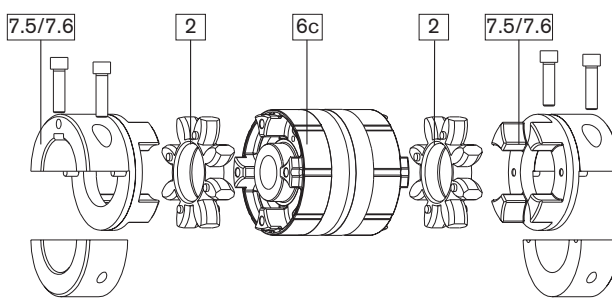
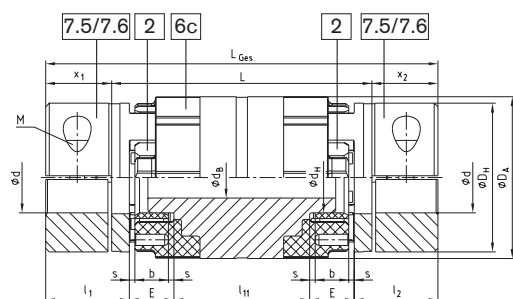
Double-cardanic shaft coupling (Non Sparking)



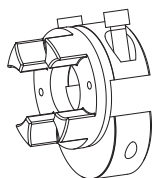
For legend of pictogram please refer to flapper on the cover



Components



ROTEX® SP Type ZS-DKM-C																
Size	Drop-out center length L	Spider ¹⁾ (component 2) Rated torque [Nm]	Dimensions [mm]												Dimensions [mm]	
			General component 7.5/7.6 steel												ROTEX® SP Type 6c Al-H ³⁾	
			Max. finish bore d ²⁾	L _{total}	l ₁ , l ₂	x ₁ , x ₂	E	b	s	D _H	D _A	d _H	M	T _A [Nm]	d _B	l ₁₁
24	100	35	28	145	30	22.5	18	14	2.0	55	61	27	M6	14	14	49
	140			185												89
28	100	95	38	151	35	25.5	20	15	2.5	65	72	30	M8	35	16	41
	140			191												81
38	100	190	45	171	45	35.5	24	18	3.0	80	87	38	M8	35	22	33
	140			211												73
42	100	265	55	178	50	39	26	20	3.0	95	103	46	M10	69	30	26
	140			218												66
48	140	310	60	230	56	45	28	21	3.5	105	114	51	M12	120	35	62
	140			240												50
55	180	410	70	280	65	50	30	22	4.0	120	130	60	M12	120	35	90
	200			300												110
	140			260												40
65	140	625	80	260	75	60	35	26	4.5	135	146	68	M12	120	48	40
	180			300												50



Type 7.5 clamping hub type DH
without feather keyway for double-cardanic connection

Type 7.6 clamping hub type DH
with feather keyway for double-cardanic connection

¹⁾ Maximum torque of the coupling $T_K \max$ = rated torque of the coupling $T_K \text{ rated} \times 2$. Transmittable torque according to 92 ShA-GS.

²⁾ Hub type 7.5 = without keyway; hub type 7.6 = with keyway acc. to DIN 6685 sheet 1 [JS9]

³⁾ Size 42 with drop-out center length $L=100$ mm made of steel

■ = Available from stock

Ordering example:	ROTEX® SP 38	ZS-DKM-C	140	98 ShA-GS	7.5	Ø38	7.5	Ø30
	Coupling size	Type	Drop-out center length L	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

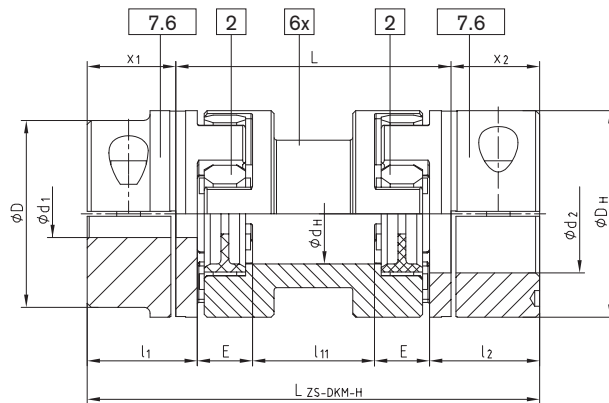
ROTEX® ZS-DKM-H

Flexible jaw couplings

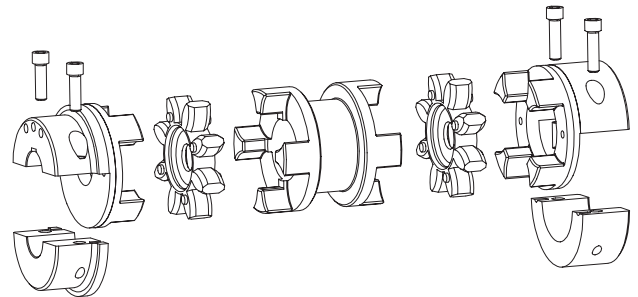
Double-cardanic shaft coupling



For legend of pictogram please refer to flapper on the cover



Type ZS-DKM-H



ROTEX® Type ZS-DKM-H																			
Size	Drop-out center length L [mm]	Max. finish bore d ₁ , d ₂	Spider ¹⁾ (component 2) T _{KN} [Nm]	Dimensions [mm]								Screws DIN EN ISO 4762 - 12.9		Max. displacements					Weight ²⁾ [kg]
				D _H	d _H	l ₁ , l ₂	x ₁ , x ₂	l ₁₁	E	LZS-DKM-H	M	T _A [Nm]	Axial [mm]	with n = 1500 rpm		with n = 3000 rpm			
														Radial [mm]	Angular [°]	Radial [mm]	Angular [°]		
24	100	28	35	55	27	30	22.5	49	18	145	M6	14	1.4	1.17		0.87		1.40	
	89							185		1.87				1.40					
28	100	38	95	65	30	35	25.5	41	20	151	M8	35	1.5	1.06		0.80		1.90	
	81							191		1.76				1.32		2.20			
38	100	45	190	80	38	45	35.5	33	24	171	M8	35	1.8	0.99		0.74		3.90	
	73							211		1.69				1.27		4.10			
42	100	55	265	95	46	50	39.0	26	26	178	M10	69	2.0	0.91		0.68		5.10	
	66							218		1.60				1.20		5.70			
48	100	60	310	105	51	56	45.0	22	28	190	M12	120	2.1	0.87		0.65		7.10	
	62							230		1.57				1.18		7.90			
55	100	70	410	120	60	65	50.0	10	30	200	M12	120	2.2	0.70	1.0	0.52	0.75	9.50	
	50							240		1.40				1.05		11.20			
	180							280		2.09				1.57		12.30			
	200							300		2.44				1.83		12.80			
65	140	80	625	135	68	75	60.0	40	35	260	M12	120	2.6	1.31		0.98		16.10	
	80							300		2.00				1.50		16.80			
75	140	90	1280	160	80	85	67.5	25	40	275	M16	295	3.0	1.13		0.85		23.60	
	65							315		1.83				1.37		26.00			
	200							335		2.19				1.64		27.00			
	250							385		3.05				2.29		29.50			
90	180	110	2400	200	100	100	81.5	53	45	343	M20	580	3.4	1.71		1.28		48.90	
	123							413		2.93				2.19		52.60			
100	250	110	3300	225	105	110	84	98	50	418	M16	295	3.4	2.6		-	-	60	
110	250	120	4800	255	115	120	88	76	55	426	M20	580	3.4	2.3		-	-	90	
125	250	140	6650	290	133	140	105	60	60	460	M24	1000	3.4	1.6		-	-	120	

¹⁾ Maximum torque of the coupling T_{K max} = rated torque of the coupling T_{K rated} x 2.
Size 24 to 90 spider type 98 ShA-GS / transmittable torque acc. to 92 ShA-GS.

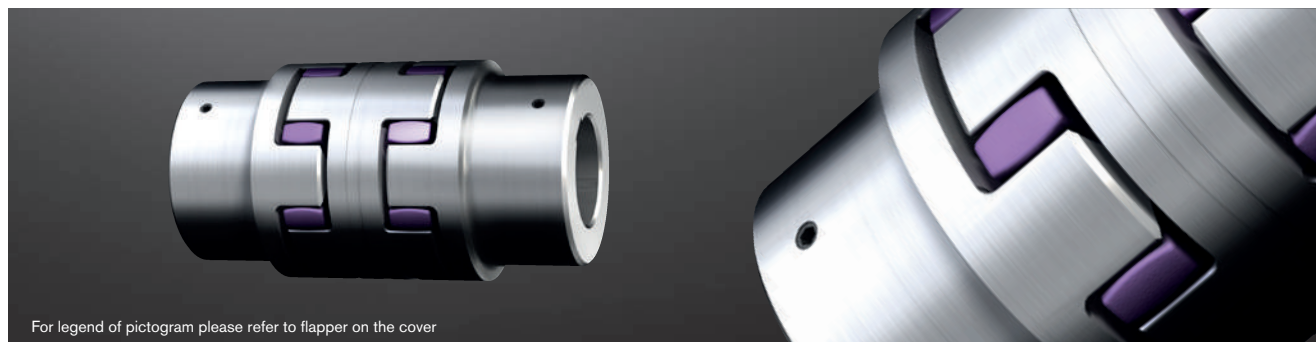
7.6 = Half shell clamping hub with feather keyway for a double-cardanic connection
ATTENTION: The standard series can be used with horizontal mounting only. Vertical assembly on request.

Ordering example:	ROTEX® 38	ZS-DKM-H	140	98 ShA-GS	7.6	Ø 38	7.6	Ø30
	Coupling size	Type	Shaft distance dimension L	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

ROTEX® DKM

Flexible jaw couplings

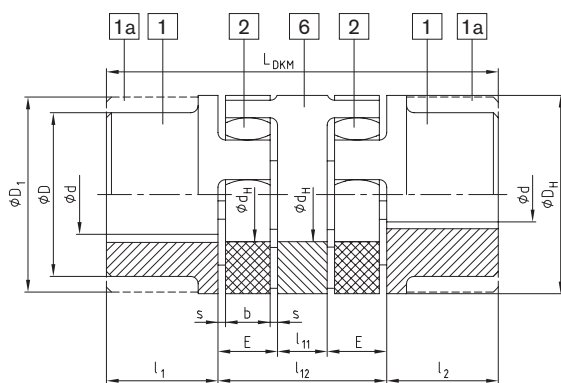
Double-cardanic shaft coupling



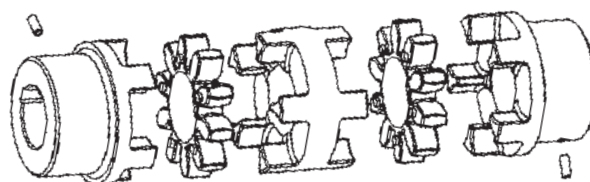
For legend of pictogram please refer to flapper on the cover



Components



Type DKM



ROTEX® Type DKM																
Size	d, D, D ₁	Spider ¹⁾ (component 2) Rated torque [Nm]		Dimensions [mm]									Max. displacements with n = 1500 rpm			
		92 ShA	98 ShA	D _H	d _H	l ₁ , l ₂	l ₁₁	l ₁₂	E	s	b	LDKM	Radial [mm]	Angular [°]	Axial [mm]	
19	See jaw couplings on page 34 to 36 For stock programme / basic pro- gramme see page 32 and 33	10	17	40	18	25	10	42	16	2.0	12	92	0.45	1.0	+1.2/-1.0	
24		35	60	55	27	30	16	52	18	2.0	14	112	0.59	1.0	+1.4/-1.0	
28		95	160	65	30	35	18	58	20	2.5	15	128	0.66	1.0	+1.5/-1.4	
38		190	325	80	38	45	20	68	24	3.0	18	158	0.77	1.0	+1.8/-1.4	
42		265	450	95	46	50	22	74	26	3.0	20	174	0.84	1.0	+2.0/-2.0	
48		310	525	105	51	56	24	80	28	3.5	21	192	0.91	1.0	+2.1/-2.0	
55		410	685	120	60	65	28	88	30	4.0	22	218	1.01	1.0	+2.2/-2.0	
65		625	940	135	68	75	32	102	35	4.5	26	252	1.17	1.0	+2.6/-2.0	
75		1280	1920	160	80	85	36	116	40	5.0	30	286	1.33	1.0	+3.0/-3.0	
90	2400	3600	200	100	100	40	130	45	5.5	34	330	1.48	1.0	+3.4/-3.0		

¹⁾ For selection see page 14 et seqq.

Finish bore according to ISO fit H7, feather keyway according to DIN 6885, sheet 1 [JS9].

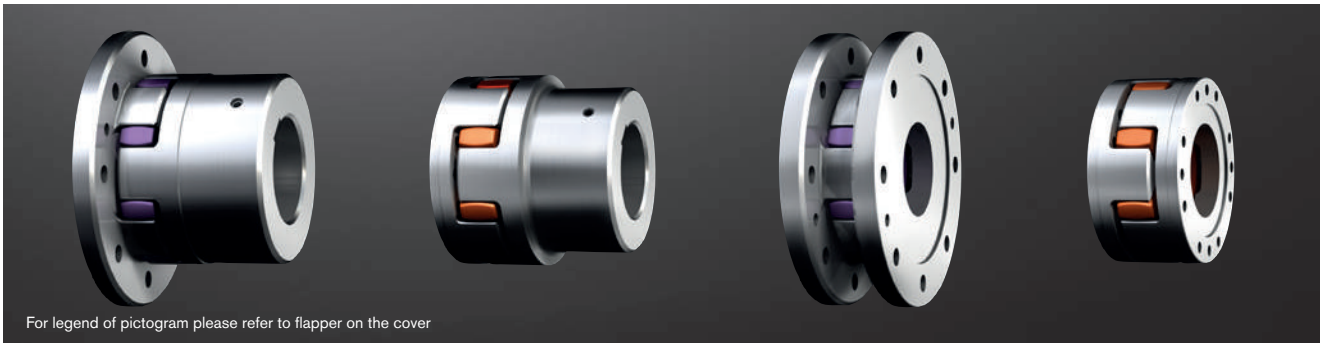
Ordering example:

ROTEX® 38	DKM	GJL	98 ShA	1	Ø38	1	Ø30
Coupling size	Type	Material	Spider hardness	Component	Finish bore	Component	Finish bore

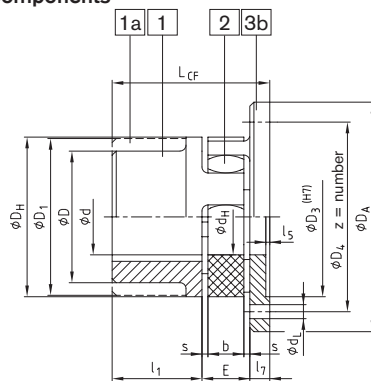
ROTEX® CF, CFN, DF and DFN

Flexible jaw couplings

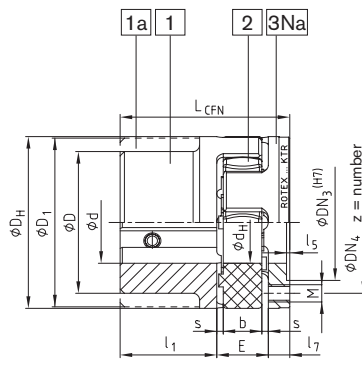
Flange programme



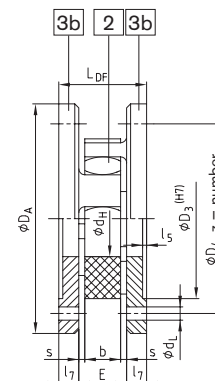
Components



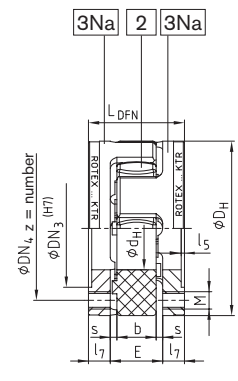
Type CF



Type CFN



Type DF



Type DFN

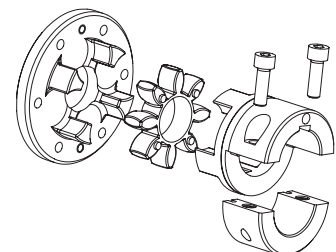
ROTEX® Type CF, CFN and DF, DFN																									
Size	d, D, D1	Dimensions general [mm]								Dimensions CF and DF [mm]								Dimensions CFN and DFN [mm]							
		DH	dH	l1	E	s	b	l5	l7	DA	D3	D4	z	dL	LCF	LDF	DN3	DN4	M	z	Pitch	LCFN	LDFN		
24	See jaw couplings on page 38 to 40 For stock programme / basic programme see page 36	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

ROTEX® ZR

Flexible jaw couplings

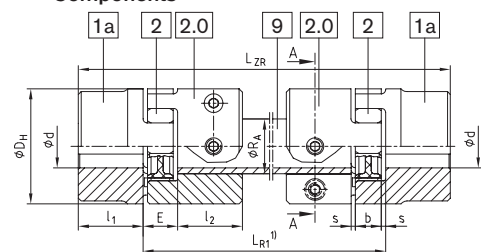
Intermediate shaft programme



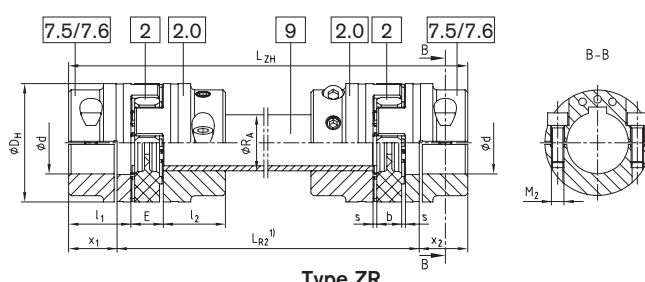
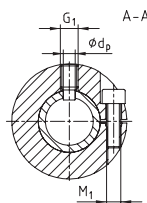
For legend of pictogram please refer to flapper on the cover



Components



Type ZR
(with GS spider)



Type ZR
(with GS spider and clamping hubs type DH for a double-cardanic connection 7.5 or 7.6)

ROTEX® Type ZR																					
Size	Max. finish bore d		Dimensions [mm]						Intermediate pipe Torsional stiffness/m		Clamping screw component 2.0		Clamping screw component 7.5/7.6		LZR, LZH	min. LR1	min. LR2	Locking screw G1	Cone bore d _p [mm]	Axial displacement [mm]	Angular displacement [degree]
	Component 1a	Component 7.5/7.6	DH	l ₁ , l ₂	x ₁ , x ₂	E	s	b	R _A	C ²⁾ [Nm ² /rad]	M ₁	T _A [Nm]	M ₂	T _A [Nm]							
19	25	20	40	25	17.5	16	2.0	12	Ø20x3	954.9	M6	14	M6	10	LR1 + 2 • l ₁ LR2 + 2 • x ₁ /2	110	97	M6	4.0	1.2	0.9
24	35	28	55	30	22.5	18	2.0	14	Ø30x4	4522	M6	14	M6	14		128	111	M8	5.5	1.4	0.9
28	40	38	65	35	25.5	20	2.5	15	Ø35x4	7611	M8	35	M8	35		145	129	M10	7.0	1.5	0.9
38	48	45	80	45	35.5	24	3.0	18	Ø40x4	11870	M8	25	M8	35		180	157	M12	8.5	1.8	1.0
42	55	55	95	50	39.0	26	3.0	20	Ø45x4	17487	M10	49	M10	69		198	174	M12	8.5	2.0	1.0
48	62	60	105	56	45.0	28	3.5	21	Ø50x4	24648	M12	86	M12	120		217	190	M16	12	2.1	1.1
55	74	70	120	65	50.0	30	4.0	22	Ø55x4	33544	M12	120	M12	120		242	220	M16	12	2.2	1.1
65	80	80	135	75	60.0	35	4.5	26	Ø65x5	68329	M12	120	M12	120		281	250	M16	12	2.6	1.2
75	95	90	160	85	67.5	40	4.0	30	Ø75x5	108000	M16	295	M16	295		318	285	M16	12	3.0	1.2

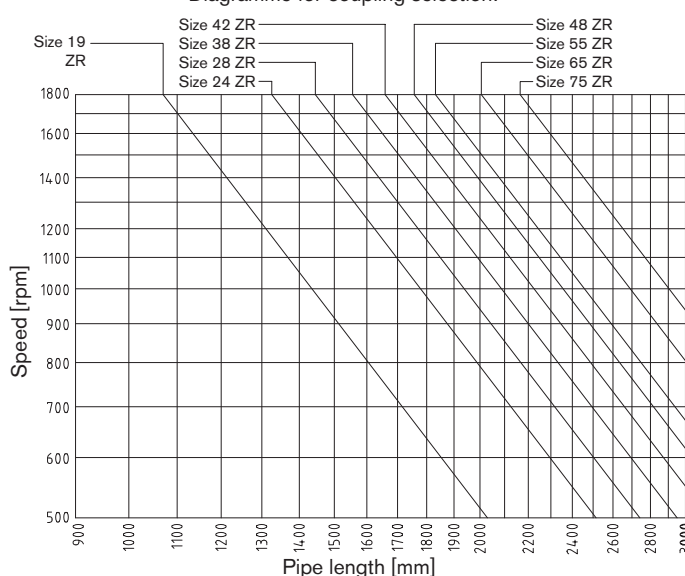
¹⁾ With inquiries and orders please specify the shaft distance dimension L_R1/L_R2 along with the maximum speed to review the critical bending speed.

²⁾ Torsion spring stiffness with an intermediate pipe having a length of 1 m. Finish bore according to ISO fit H7, feather keyway according to DIN 6885, sheet 1 [JS9].

Friction torques of clamping hubs have to be considered. Please order dimension sheet M 583613.

Not permissible for crane and hoist drives

Diagramme for coupling selection:



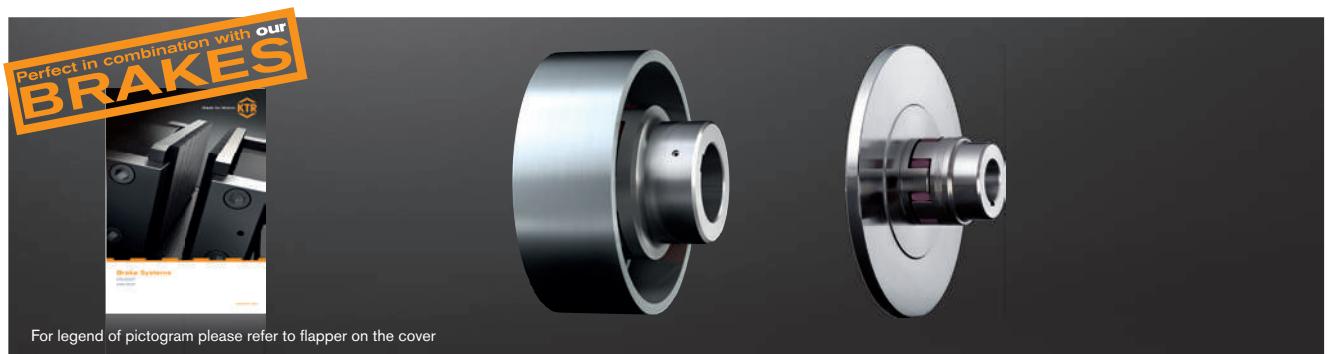
Ordering example:

ROTEX® 38	ZR	1200	98 ShA-GS	7.5	Ø38	7.5	Ø30
Coupling size	Type	Shaft distance dimension L_R1/L_R2	Spider hardness	Hub type	Finish bore	Hub type	Finish bore

ROTEX® BTAN and SBAN

Flexible jaw couplings

With brake drum/with brake disk



ROTEX® Type BTAN and SBAN														
Size	Pilot bore, d ₁ D, D ₁	Max. finish bore d ₁		Dimensions [mm]										
		GJS	Steel	D _H	D ₂	D ₄	d _H	z	pitch ¹⁾	M	T _A [Nm]	l ₁ , l ₂	E	L
38	See jaw couplings on page 34 to 36 For stock programme / basic programme see page 32 and 33	—	35	80	50	66	38	8	8 x 45°	M8	35	45	24	114
42		—	45	95	60	80	46	12	16 x 22.5°	M8	41	50	26	126
48		—	50	105	68	90	51	12	8 x 45°	M8	41	56	28	140
55		—	58	120	78	102	60	8	16 x 22.5°	M10	83	65	30	160
65		—	68	135	92	116	68	12	8 x 45°	M10	83	75	35	185
75		—	78	160	106	136	80	15	20 x 18°	M12	120	85	40	210
90		—	100	200	140	172	100	15		M16	295	100	45	245
100		100	—	225	156	195	113	15		M16	295	110	50	270
110		110	—	255	176	218	127	15		M20	580	120	55	295
125		130	—	290	204	252	147	15		M20	580	140	60	340

Type BTAN												Type SBAN												
Brake drum	ROTEX® BTAN dimension „C“										Speed rpm [V] (30 m/s)	Brake disk	ROTEX® SBAN dimension “N”											Speed rpm [V] (30 m/s)
	38	42	48	55	65	75	90	100	110	125			38	42	48	55	65	75	90	100	110	125		
160x60	14										3550	200x12.5	31.25											2800
200x75	9	12	17	24							2800	250x12.5	31.25	34.25	39.25									2240
250x95	1	4	9	16	25	33					2240	315x16		32.5	37.5	44.5	53.5	61.5						1800
315x118		-5	0	7	16	24	36				1800	400x16			37.5	44.5	53.5	61.5	73.5	81.5	88.5			1400
400x150		-18	-13	-6	3	11	23	31	38		1400	500x16				44.5	53.5	61.5	73.5	81.5	88.5	104.5	1120	
500x190					-12	-4	8	16	23	39	1120	630x20					51.5	59.5	71.5	79.5	86.5	102.5	900	
630x236						-22	-10	-2	5	21	900	710x20					51.5	59.5	71.5	79.5	86.5	102.5	800	
710x265								-13	-6	10	800	800x25							69	77	84	100	710	
800x300										-4	710	900x25									84	100	630	

¹⁾ Thread in the hub between the cams.

Other sizes on request according to dimension sheet:

BTAN: M380821

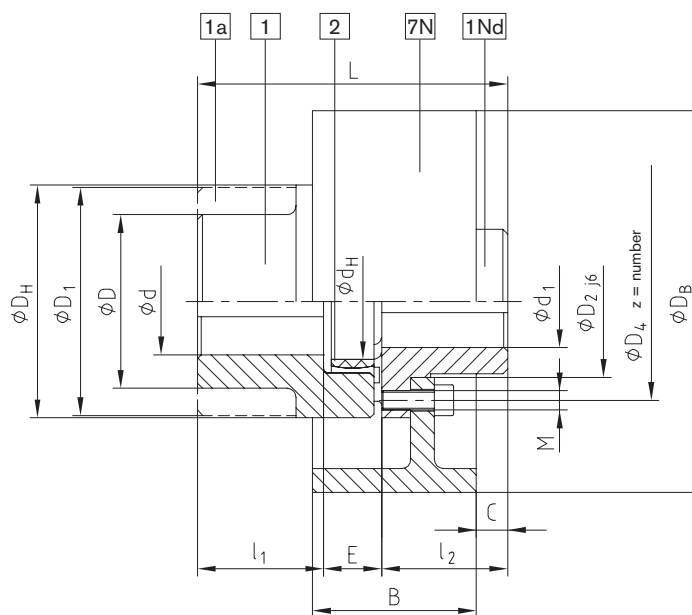
SBAN straight: M380822; cranked: M 370065

FNN hub: M 380823

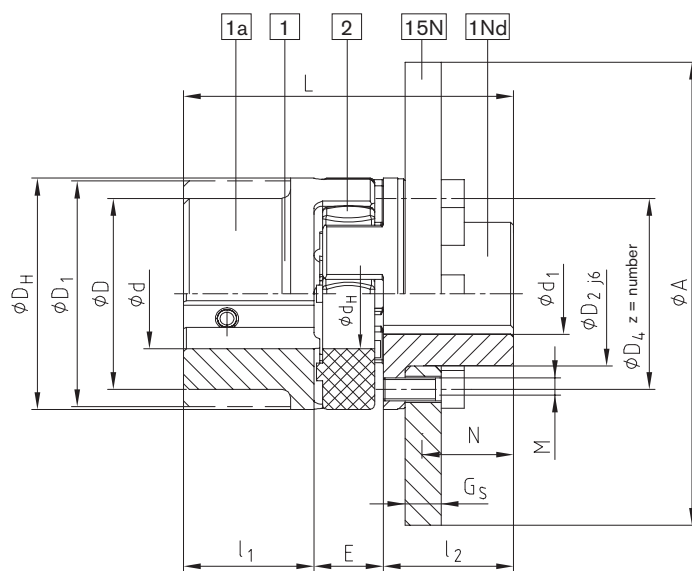
Finish bore according to ISO fit H7, feather keyway according to DIN 6885, sheet 1 [JS9].

Ordering example:	ROTEX® 38	BTAN	Ø200x75	98 ShA	1Nd	Ø34	1	Ø30
	Coupling size	Type	Brake drum Ø x width	Spider hardness	Component	Finish bore	Component	Finish bore

Components



**Brake drum
Type BTAN**



**Brake disk
Type SBAN**

ROTEX®

POLY-NORM®

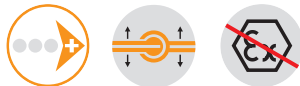
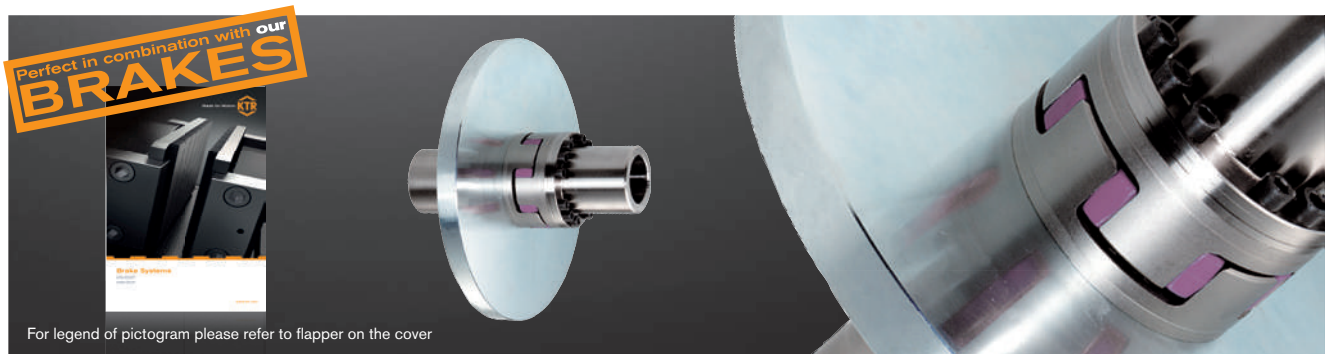
POLY

REVOLEX®

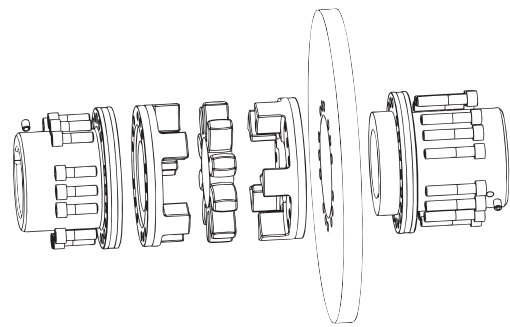
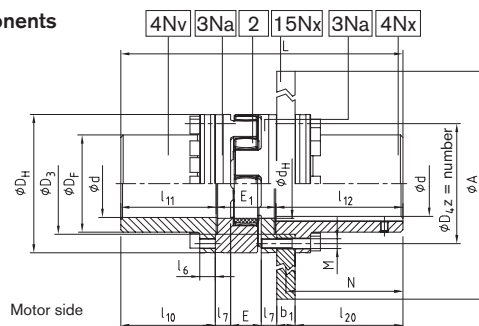
Flexible jaw and
pin & bush couplings

ROTEX® AFN-SB special Flexible jaw couplings

Drop-out center design coupling with brake disk



Components



ROTEX® Type AFN-SB special

Size	Finish bore d		Dimensions [mm]										
	Min.	Max.	D _H	D _F	D ₃ H7/h7	D ₄	d _H	E	E ₁	M	z	Pitch	T _A [Nm]
65	22	70	135	94	96	116	68	35	65	M10	12	16x22.5°	83
75	30	80	160	108	112	136	80	40	75	M12	15		120
90	40	105	200	142	145	172	100	45	82	M16	15		295
100	46	115	225	158	165	195	113	50	97	M16	15		295
110	60	130	255	178	180	218	127	55	103	M20	15	20x18°	580
125	60	150	290	206	215	252	147	60	116	M20	15		580
140	60	170	320	235	245	282	165	65	128	M20	15		580
160	80	200	370	270	280	325	190	75	146	M24	15		1000
180	85	230	420	315	330	375	220	85	159	M24	18	24x15°	1000

ROTEX® Type AFN-SB special

Size	Torque with 98 ShA ¹⁾		Max. speed [rpm]	Max. braking torque ²⁾ [Nm]	Dimensions [mm]						
	T _{KN}	T _{K max}			l ₇	l ₁₀	l ₁₁	l ₁₂	l ₂₀	N	L
65	940	1880	3450	1880	16	112.5	113.5	166.0	135	150	344.5
75	1920	3840	3250	3840	19	131.5	133.0	166.5	135	150	374.5
90	3600	7200	3000	7200	20	164.0	165.5	206.5	175	190	454.0
100	4950	9900	2800	9900	25	153.5	155.0	206.5	175	190	458.5
110	7200	14400	2600	14400	26	201.5	203.5	212.0	180	195	518.5
125	10000	20000	2250	20000	30	198.5	200.5	212.0	180	195	528.5
140	12800	25600	1800	25600	34	244.5	247.0	252.5	220	235	627.5
									210 ³⁾	230 ³⁾	
160	19200	38400	1500	38400	38	226.5	229.0	252.5	220	235	627.5
									210 ³⁾	230 ³⁾	
180	28000	56000	1350	56000	40	195.0	198.0	252.5	220	235	609.5

ROTEX® Selection of coupling/brake disk

Size	Brake disk ØA x b ₁									
	355x30	400x30	450x30	500x30	560x30	630x30	710x30	800x30	900x30	1000x40
65	x	x	x							
75		x	x	x						
90			x	x	x	x				
100				x	x	x				
110				x	x	x	x			
125						x	x	x		
140							x	x	x	x
160							x	x	x	x
180							x	x	x	x

¹⁾ For selection see page 14 et seqq. ²⁾ The maximum braking torque must not exceed the maximum torque of the coupling. ³⁾ Dimensions with a width of brake disk b₁ of 40 mm.

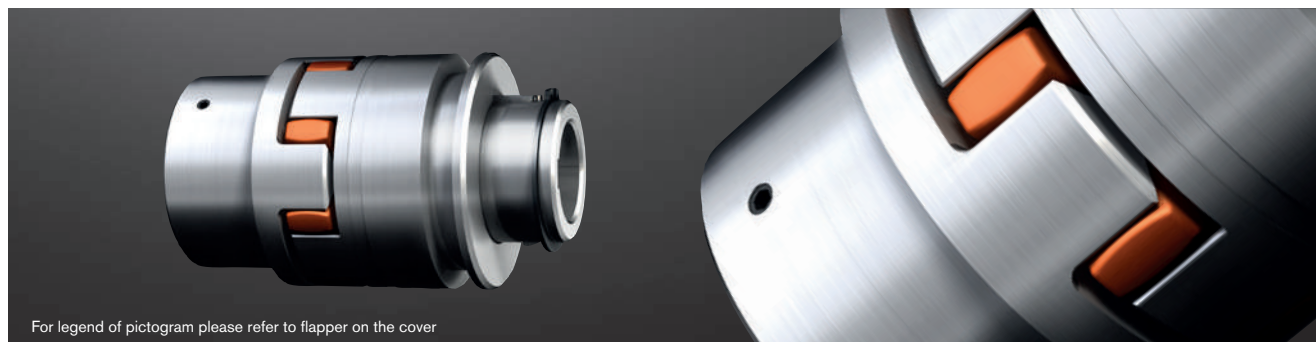
Ordering example:

ROTEX® 90	AFN-SB special	Ø450x30	98 ShA	4Nv	Ø90	4Nx	Ø90
Coupling size	Type	Brake disk Ø x width	Spider hardness	Component	Finish bore	Component	Finish bore

ROTEX® SD

Flexible jaw couplings

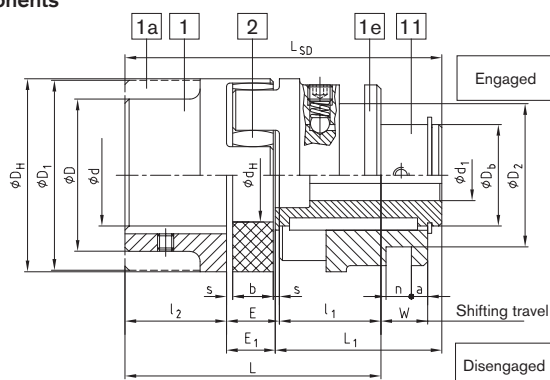
Shiftable coupling shiftable at standstill



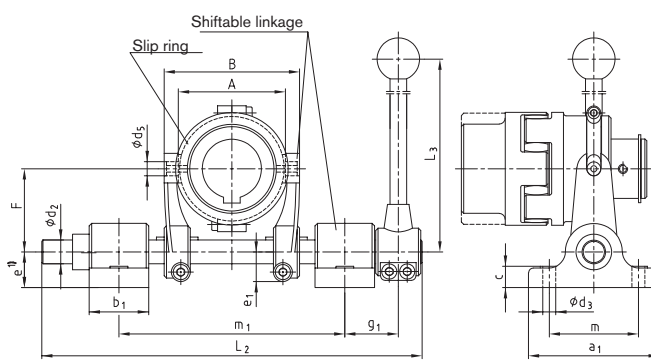
For legend of pictogram please refer to flapper on the cover



Components



Type SD



Type SD with slip ring and shiftable linkage

Upon request: Shiftable linkage available with locking pin, locking device and retrieval of shift position.

ROTEX® Type SD																					
Size	d, D, D ₁	Finish bore d ₁		Dimensions [mm]														Shifting force set in [N]	Slip ring size	Shift-able linkage size	
		Min.	Max.	D _H	D ₂ ±0,1	D _b	d _H	l ₁ , l ₂	E	s	b	E ₁	L	L ₁	W	a	n ±0,1				LSD
24	See jaw couplings on page 34 to 36 For stock programme / basic programme see page 32 and 33	8	20	55	41	30	27	30	18	2.0	14	16.5	78	51.5	16.0	6	6.0	98	110	—	—
28		10	24	65	58	36	30	35	20	2.5	15	18.0	90	60.0	17.5	8	8.0	113	130	—	—
38		12	30	80	70.5	45	38	45	24	3.0	18	22.0	114	73.0	21.0	8	12.5	140	150	1.1	1
42		14	35	95	70.5	50	46	50	26	3.0	20	24.0	126	82.0	23.0	8	12.5	156	180	1.1	1
48		15	42	105	89.5	60	51	56	28	3.5	21	25.5	140	90.5	24.5	6	17.5	172	200	2.2	2
55		18	50	120	112.5	70	60	65	30	4.0	22	27.0	160	103.0	26.0	6	18.0	195	250	3.3	3
65		20	55	135	112.5	80	68	75	35	4.5	26	32.0	185	120.0	30.5	7	18.0	227	280	3.3	3
75		25	65	160	130.5	95	80	85	40	5.0	30	37.0	210	135.0	35.0	6	20.5	257	350	4.4	3
90		28	75	200	164.5	110	100	100	45	5.5	34	41.0	245	152.0	39.5	8	25.5	293	350	5.5	4
100		30	80	225	164.5	115	113	110	50	6.0	38	46.0	270	169.0	44.0	14	25.5	325	380	5.5	4
110		35	85	255	164.5	125	127	120	55	6.5	42	51.5	295	184.0	48.5	18.5	25.5	355	450	5.5	4
125		40	100	290	210.5	145	147	140	60	7.0	46	55.5	340	208.5	53.0	18.5	30.5	404	500	6.6	5

Slip ring and shiftable linkage																																				
Size	Size of shiftable linkage	Dimensions [mm]																	Max. speed [rpm] for slip ring																	
		a ₁	b ₁	c	d ₂	d ₃	d ₅	e ¹⁾	e ₁	F	g ₁	L ₂	L ₃	m	m ₁ min.	m ₁ max.	A	B																		
38	1	110	50	18	20	11	12	30	25	70	55	320	400	75	180	190	90	114	3280																	
42	1										27	97.5	60	430	450		240	270	111	151	2550															
48	2	140			25		17	40	32.5	120	70	490	600	100	280	310	140	180	2120																	
55	3																																			
65	3																	30												170	210	1710				
75	3																60	25		13.5																
90	4	160																																		
100	4																					35		21	50	37.5	147.5	70	565	750	120	321	365	200	244	1360
110	4																																			
125	5																						40		25		46	190	80	630	1085		365	410	250	300

¹⁾ With a through base plate dimension „e“ of the shiftable linkage size 5 to be increased by at least 10 mm.
Finish bore according to ISO fit H7, feather keyway according to DIN 6885, sheet 1 [JS9].

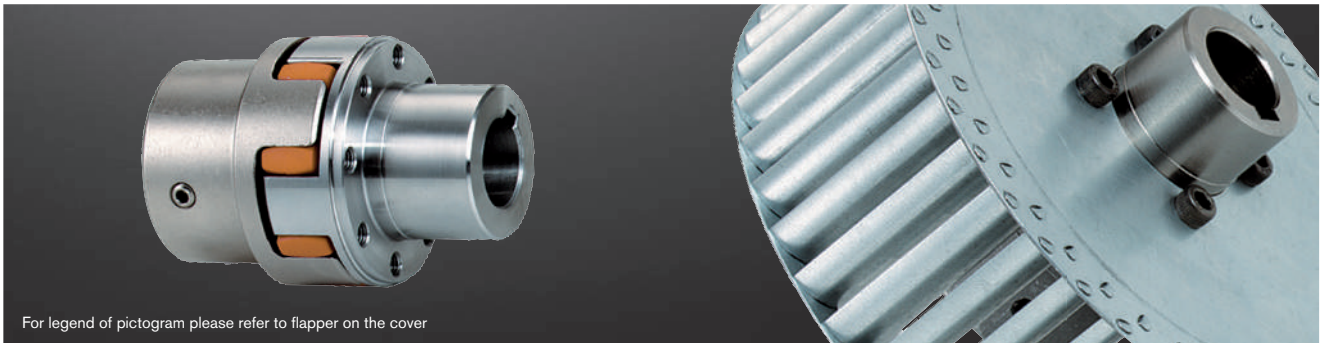
Ordering example:

ROTEX® 38	SD	With 1.1 and 1	98 ShA	1	Ø38	11	Ø28
Coupling size	Type	With slip ring 1.1 and shiftable linkage 1	Spider hardness	Component	Finish bore	Component	Finish bore

ROTEX® FNN

Flexible jaw couplings

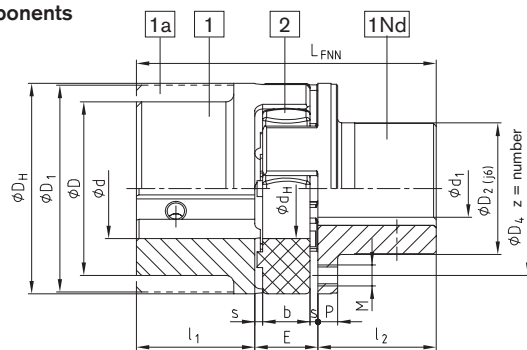
For mounting of fan



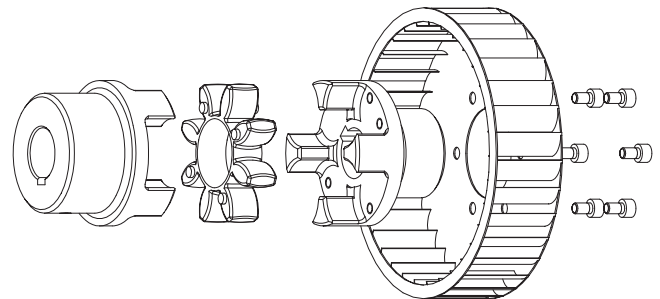
For legend of pictogram please refer to flapper on the cover



Components



Type FNN



Type FNN with fan (type 1)

ROTEX® Type FNN															
Size	d, D, D ₁	Max. finish bore d ₁	Dimensions [mm]												
			D _H	D ₂	D ₄	d _H	E	s	b	l ₁ , l ₂	P	M	z	Pitch	LFNN
28	See jaw couplings on page 34 to 36 For stock programme / basic programme see page 32 and 33	28	65	40	54	30	20	2.5	15	35	6.5	M6	8	8x45°	90
38		35	80	50	66	38	24	3.0	18	45	7.5	M8	8	8x45°	114
42		42	95	60	80	46	26	3.0	20	50	9.5	M8	12	16x22.5°	126
48		50	105	68	90	51	28	3.5	21	56	10.5	M8	12	16x22.5°	140
55		55	120	78	102	60	30	4.0	22	65	12.5	M10	8	8x45°	160
65		65	135	92	116	68	35	4.5	26	75	13.5	M10	12	16x22.5°	185
75		75	160	106	136	80	40	5.0	30	85	15.5	M12	15	20x18°	210
90		100	200	140	172	100	45	5.5	34	100	18.5	M16	15	20x18°	245

Other sizes on request.

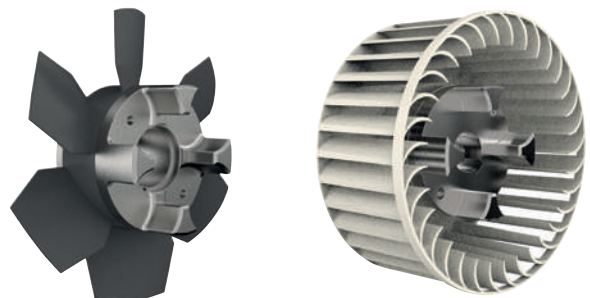
Type 1: Fan screwed on

The ROTEX® hub can be supplied with the fan screwed on. Customised connection dimensions such as pitch circle of threads, size of threads and number or centering of fans must be specified in your inquiry.



Type 2: Fan injection-moulded

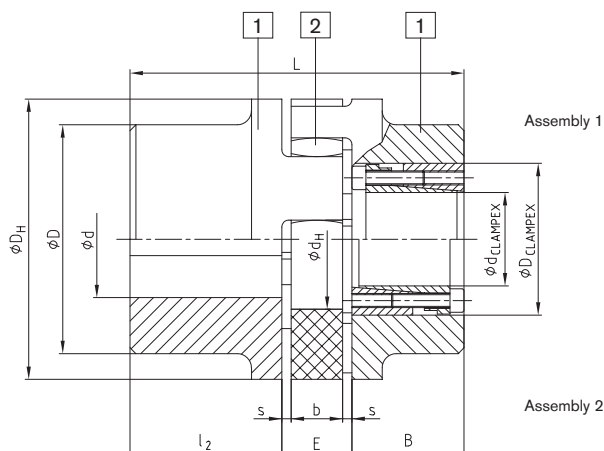
Low prices due to optimisation of production with bigger volumes.



Ordering example:

ROTEX® 38	FNN	92 ShA	1	Ø38	1Nd	Ø30
Coupling size	Type	Spider hardness	Component	Finish bore	Component	Finish bore

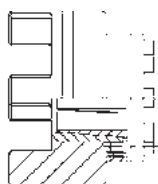
Other types with clamping sets



Components

ROTEX® with clamping set CLAMPEX® KTR 200														
Size	d, D, D ₁	Hub material	CLAMPEX® KTR 200		B	Dimensions [mm]								
			Max. size of KTR clamping set dxD	Transmittable torque and axial force		l ₂	E	s	b	D _H	D	d _H	L	
42	See jaw couplings on page 34 to 36 For stock programme / basic programme see page 32 and 33	Steel	30x55	790	53	48	50	26	3.0	20	95	—	46	(clamping set)
48			35x60	1300	74	48	56	28	3.5	21	105	—	51	
55			45x75	2200	98	59	65	30	4.0	22	120	—	60	
65			45x75	2200	98	59	75	35	4.5	26	135	115	68	
75			50x80	3330	132	59	85	40	5.0	30	160	135	80	
90		GIS	65x95	4300	132	59	100	45	5.5	34	200	160	100	Length = l ₂ + E + B
100			65x95	4300	132	59	110	50	6.0	38	225	180	113	
110			70x110	7500	214	70	120	55	6.5	42	255	200	127	
125			80x120	8500	213	70	140	60	7.0	46	290	230	147	
140			95x135	12600	265	70	155	65	7.5	50	320	255	165	
160		Steel	110x155	16500	300	80	175	75	9.0	57	370	290	190	Length = l ₂ + E + B
180			120x165	22500	375	80	195	85	10.5	64	420	325	220	

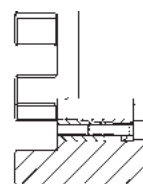
Type 4.2 with CLAMPEX® clamping set KTR 250



Frictionally engaged, backlash-free shaft-hub-connection for transmitting average torques.

Type 4.3 with CLAMPEX® clamping set KTR 400

Frictionally engaged, backlash-free shaft-hub-connection for transmitting bigger torques. Maximum size of clamping set depends on the hub collar diameter. Clamping set screw fitting possible both internally and externally. For details of calculation see CLAMPEX® catalogue.



For CLAMPEX® programme see page 280 to 315 .

Other types with torque limiters



ROTEX® BKN - Overload coupling, type BKN

- Torsionally flexible coupling ROTEX® with shear pin
- Load-separating with blockage/overload
- Easy replacement of shear pin
- Fracture torque to be defined individually depending on the application

Customer variant from the stock programme.
Please specify the fracture torques with your order!
For further details see dimension sheet No. 5020/000/009-760313



ROTEX® - RUFLEX® - Overload coupling

- High power density
- Large wear volume with long service life
- Easy assembly and torque setting

For further details see catalogue page 250



ROTEX® - KTR-SI - Overload coupling

- Available in a ratchet, synchronous, idle rotation and fail-safe design
- High response accuracy, even after a long operating period
- Maintenance-free

For further details see catalogue page 257

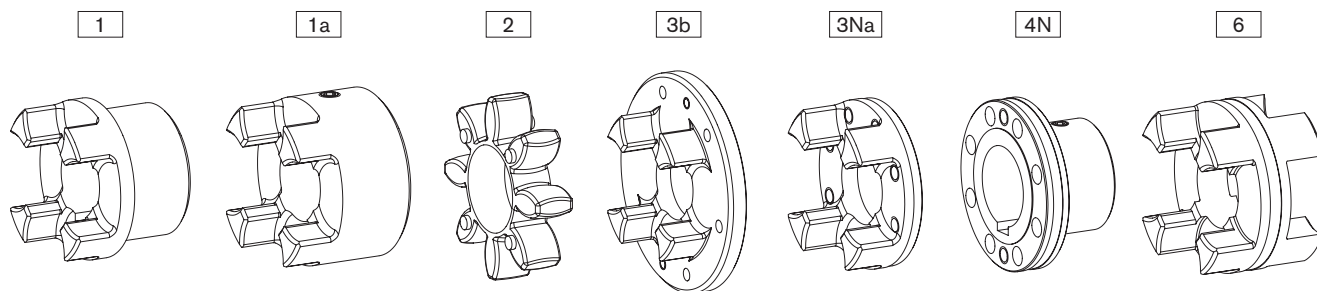


ROTEX® - KTR-SI FRE - idle rotation overload coupling

- Idle rotation overload system for high torques
- High repeatability
- Intelligent further development towards the shear pin coupling and hydraulic clamping sets

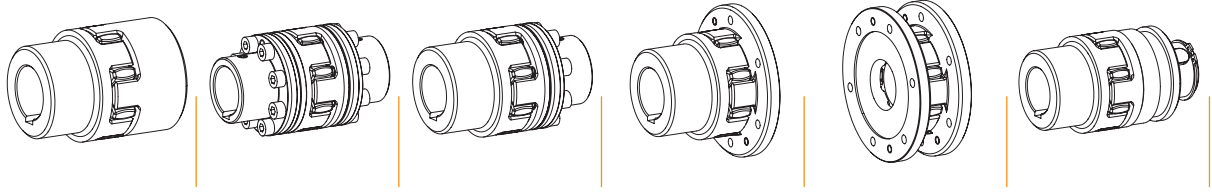
For further details see catalogue page 259

Weights and mass moments of inertia

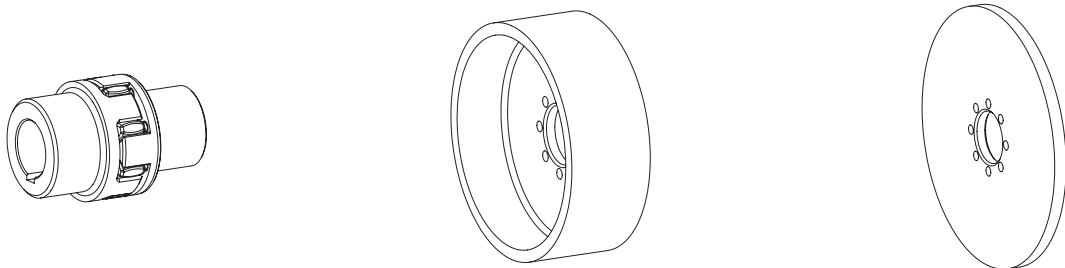


ROTEX® individual components														
Size	Standard hub				Large hub			Spider	Driving flange				Coupling flange	DKM spacer
	Component 1				Component 1a			Component 2	Component 3b	Component 3Na		Component 4N	Component 6	
	Aluminium [kg] [kgm²]	GJL [kg] [kgm²]	GJS [kg] [kgm²]	St [kg] [kgm²]	Aluminium [kg] [kgm²]	GJL [kg] [kgm²]	St [kg] [kgm²]	Polyurethane (Vulkollan) [kg] [kgm²]	GJS [kg] [kgm²]	St [kg] [kgm²]	GJS [kg] [kgm²]	St [kg] [kgm²]	Aluminium [kg] [kgm²]	
14	—	—	—	—	0.020	—	—	0.0044	—	—	—	—	—	—
	—	—	—	—	0.000003	—	—	0.0000005	—	—	—	—	—	—
19	0.064	—	—	—	0.074	—	0.25	0.0057	—	—	—	—	—	—
	0.00001	—	—	—	0.00002	—	0.00006	0.000001	—	—	—	—	—	—
24	0.123	—	—	—	0.174	—	0.55	0.014	0.028	0.145	—	0.30	0.14	—
	0.00004	—	—	—	0.00008	—	0.00023	0.000006	0.00023	0.00007	—	0.00009	0.00006	—
28	0.200	—	—	—	0.264	—	0.89	0.024	0.54	0.232	—	0.49	0.22	—
	0.00010	—	—	—	0.00019	—	0.00053	0.00001	0.0007	0.00017	—	0.0002	0.00013	—
38	0.44	1.16	—	1.6	0.470	1.32	1.74	0.042	0.73	—	0.313	0.87	0.35	—
	0.00033	0.00086	—	0.00151	0.00046	0.00135	0.00155	0.00004	0.001	—	0.00038	0.0005	0.00035	—
42	0.69	1.75	—	2.44	0.772	2.05	2.74	0.065	1.26	—	0.608	1.4	0.47	—
	0.00067	0.00178	—	0.00281	0.00111	0.00291	0.00343	0.00008	0.0032	—	0.00089	0.0011	0.00068	—
48	0.80	2.44	—	3.34	1.01	2.78	3.72	0.086	1.45	—	0.755	1.92	0.62	—
	0.0012	0.00308	—	0.00473	0.00174	0.00484	0.00570	0.00013	0.0043	—	0.001358	0.0018	0.0011	—
55	—	3.68	—	5.05	—	4.08	5.57	0.11	2.58	—	1.243	2.93	0.90	—
	—	0.00615	—	0.00948	—	0.00926	0.01193	0.00023	0.0105	—	0.002920	0.0037	0.0021	—
65	—	5.67	—	6.79	—	6.04	8.22	0.17	3.10	—	1.635	4.36	1.31	—
	—	0.01240	—	0.01516	—	0.01789	0.02079	0.00043	0.0149	—	0.004891	0.0069	0.0039	—
75	—	8.72	—	10.5	—	9.53	14.3	0.32	4.46	—	2.511	6.80	1.97	—
	—	0.02644	—	0.03269	—	0.03946	0.05069	0.001166	0.0281	—	0.01050	0.0151	0.0082	—
90	—	14.8	—	18.7	—	18.2	24.0	0.57	6.94	—	4.151	12.84	3.45	—
	—	0.06730	—	0.08742	—	0.15086	0.13151	0.00326	0.0651	—	0.02723	0.0448	0.0224	—
100	—	—	19.7	—	—	—	—	0.82	10.2	—	6.350	16.16	—	—
	—	—	0.11694	—	—	—	—	0.00592	0.1165	—	0.05273	0.0798	—	—
110	—	—	27.4	—	—	—	—	1.14	—	—	8.578	21.35	—	—
	—	—	0.20465	—	—	—	—	0.01048	—	—	0.09121	0.2824	—	—
125	—	—	42.3	—	—	—	—	1.56	—	—	12.598	34.33	—	—
	—	—	0.40727	—	—	—	—	0.01878	—	—	0.17469	0.3229	—	—
140	—	—	58.1	—	—	—	—	2.02	—	—	17.271	48.69	—	—
	—	—	0.67739	—	—	—	—	0.02989	—	—	0.29247	0.4917	—	—
160	—	—	84.2	—	—	—	—	3.08	—	—	26.305	71.08	—	—
	—	—	1.31729	—	—	—	—	0.06049	—	—	0.59436	0.9693	—	—
180	—	—	118.5	—	—	—	—	5.04	—	—	33.076	109.43	—	—
	—	—	2.30835	—	—	—	—	0.13295	—	—	0.97394	1.9650	—	—

Weights and mass moments of inertia



ROTEX® Complete coupling types												
Size	Standard		AFN		BFN		CF		DF		SD	
	Weight [kg]	Mass moment of inertia J [kgm²]	Weight [kg]	Mass moment of inertia J [kgm²]	Weight [kg]	Mass moment of inertia J [kgm²]	Weight [kg]	Mass moment of inertia J [kgm²]	Weight [kg]	Mass moment of inertia J [kgm²]	Weight [kg]	Mass moment of inertia J [kgm²]
19	0.51	0.000121	—	—	—	—	0.44	0.00016	0.38	0.00020	0.42	0.00008
24	1.1	0.000466	0.98	0.00036	1.1	0.00041	0.84	0.00047	0.57	0.00047	1.1	0.00046
28	1.8	0.00107	1.6	0.00083	1.7	0.00095	1.5	0.00124	1.1	0.00141	1.9	0.00106
38	2.5	0.00171	2.8	0.00209	2.6	0.00193	1.9	0.00217	1.5	0.00259	3.0	0.00435
42	3.9	0.00476	4.5	0.00472	4.1	0.00419	3.1	0.00513	2.6	0.00662	4.4	0.00804
48	5.3	0.00805	5.9	0.00736	5.5	0.00684	3.9	0.00755	3.0	0.00881	6.2	0.00223
55	7.9	0.01564	8.9	0.01480	8.3	0.01369	6.4	0.01692	5.3	0.02131	9.8	0.0166
65	11.9	0.03071	12.9	0.0266	12.3	0.0259	8.9	0.02780	6.4	0.03037	14.9	0.0326
75	18.6	0.06706	20.6	0.0601	19.3	0.0572	13.5	0.0557	9.2	0.05741	23.2	0.0706
90	33.6	0.22139	37.8	0.1718	34.2	0.1551	22.3	0.1356	14.5	0.1333	40.5	0.1891
100	40.2	0.23976	49.6	0.3068	45.2	0.2737	30.9	0.2401	21.2	0.2394	46.7	0.2467
110	56.0	0.42027	67.5	0.5385	61.7	0.4793	42.9	0.4324	29.8	0.4446	61.5	0.4186
125	86.2	0.83426	102.6	1.0485	94.4	0.9413	64.4	0.8187	42.2	0.8031	96.8	0.8497
140	118.3	1.38607	141.2	1.743	129.7	1.564	90.4	1.4221	62.5	1.4580	127.8	1.368
160	171.6	2.69781	210.3	3.517	190.9	3.107	127.6	2.589	83.6	2.4805	190.3	2.723
180	242.25	4.75449	306.6	6.582	274.4	5.668	175.1	4.448	107.9	4.141	262.2	4.810



BTAN/SBAN without drum/disk		
Size	Weight [kg]	Mass moment of inertia J [kgm²]
28	0.90	0.0004
38	2.10	0.0014
42	3.24	0.0031
48	4.41	0.0053
55	6.60	0.0105
65	10.1	0.0209
75	15.4	0.0442
90	27.6	0.1224
100	36.9	0.2074
110	50.9	0.3665
125	79.1	0.7349
140	109.0	1.2292
160	161.9	2.4569
180	232.9	4.4967

Brake drum for BTAN ¹⁾		
Brake drum ØD _B x B	Weight [kg]	Mass moment of inertia J [kgm²]
160 x 60	2.12	0.01
200 x 75	3.45	0.03
250 x 95	6.87	0.08
315 x 118	14.95	0.28
400 x 150	31.20	0.89
500 x 190	60.00	2.70
630 x 236	112.00	8.01
710 x 265	161.00	14.9
800 x 300	202.00	27.2

Brake disk for SBAN ¹⁾		
Brake disk ØA x G _S	Weight [kg]	Mass moment of inertia J [kgm²]
200 x 12.5	2.928	0.015367
250 x 12.5	4.662	0.037584
315 x 16	8.618	0.111829
400 x 16	15.230	0.315206
500 x 16	23.964	0.769963
630 x 20	47.716	2.426359
710 x 20	60.934	3.915100
800 x 25	94.913	7.878998
900 x 25	118.954	12.609089
1000 x 25	148.240	19.234941

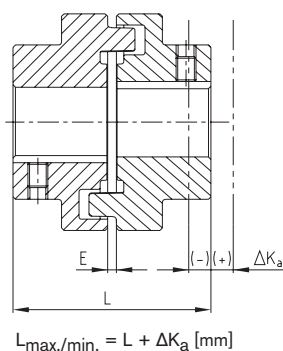
Technical data

POLY-NORM® Technical data														
Size	Torque [Nm]			Max. speed [rpm] with v = 35 m/s	Torsion angle with		Torsion spring stiffness C dyn. [Nm/rad]					Max. perm. displacement [mm] ¹⁾		
	Rated torque T _{KN}	Maximum torque T _K max	Vibratory torque T _{KW}		T _{KN}	T _K max	1.0 T _{KN}	0.75 T _{KN}	0.5 T _{KN}	0.25 T _{KN}	Axial ΔK _a	Radial ΔK _r	Angular ΔK _w	
28	40	80	16	9650	4.5	6.0	0.52x10 ⁴	0.332x10 ⁴	0.187x10 ⁴	0.09x10 ⁴	± 1.0	0.20	1.2	
32	60	120	24	8550			0.782x10 ⁴	0.499x10 ⁴	0.282x10 ⁴	0.135x10 ⁴	± 1.0	0.25	1.4	
38	90	180	36	7650			1.35x10 ⁴	0.864x10 ⁴	0.489x10 ⁴	0.234x10 ⁴	± 1.0	0.25	1.5	
42	150	300	60	6950			2.63x10 ⁴	1.68x10 ⁴	0.947x10 ⁴	0.453x10 ⁴	± 1.0	0.25	1.7	
48	220	440	88	6300	4.0	5.5	2.99x10 ⁴	1.91x10 ⁴	1.08x10 ⁴	0.516x10 ⁴	± 1.5	0.30	1.8	
55	300	600	120	5650			3.85x10 ⁴	2.46x10 ⁴	1.39x10 ⁴	0.664x10 ⁴	± 1.5	0.30	2.0	
60	410	820	164	5150			6.76x10 ⁴	4.31x10 ⁴	2.32x10 ⁴	1.17x10 ⁴	± 1.5	0.30	2.2	
65	550	1100	220	4750			8.18x10 ⁴	5.22x10 ⁴	2.7x10 ⁴	1.41x10 ⁴	± 1.5	0.35	2.4	
75	850	1700	340	4200			12.29x10 ⁴	7.84x10 ⁴	4.06x10 ⁴	2.12x10 ⁴	± 1.5	0.40	2.7	
85	1350	2700	540	3650			24.31x10 ⁴	15.51x10 ⁴	7.49x10 ⁴	4.19x10 ⁴	± 1.5	0.40	3.0	
90	2000	4000	800	3300	2.5	3.5	36.16x10 ⁴	23.07x10 ⁴	11.14x10 ⁴	6.24x10 ⁴	± 1.5	0.45	3.4	
100	2900	5800	1160	2950			54.82x10 ⁴	34.98x10 ⁴	16.89x10 ⁴	9.46x10 ⁴	± 3.0	0.50	3.9	
110	3900	7800	1560	2650			79.23x10 ⁴	50.55x10 ⁴	24.4x10 ⁴	13.67x10 ⁴	± 3.0	0.60	4.3	
125	5500	11000	2200	2350			102.3x10 ⁴	65.28x10 ⁴	31.52x10 ⁴	17.65x10 ⁴	± 3.0	0.60	4.8	
140	7200	14400	2880	2100			164x10 ⁴	104.7x10 ⁴	50.85x10 ⁴	28.3x10 ⁴	± 3.0	0.60	5.5	
160	10000	20000	4000	1900			209.1x10 ⁴	133.4x10 ⁴	64.82x10 ⁴	36.07x10 ⁴	± 3.0	0.65	6.1	
180	13400	26800	5360	1650	1.5	2.1	267.1x10 ⁴	170.4x10 ⁴	82.79x10 ⁴	46.07x10 ⁴	± 3.0	0.65	6.0	
200	19000	38000	7600	1450			159.5x10 ⁴	126.2x10 ⁴	96.24x10 ⁴	60.2x10 ⁴	± 4.0	0.65	7.8	
220	30000	60000	12000	1300			218.8x10 ⁴	174x10 ⁴	128.7x10 ⁴	77.84x10 ⁴	± 4.0	0.70	8.7	
240	43000	86000	17200	1200			567.9x10 ⁴	438.3x10 ⁴	301.6x10 ⁴	161.9x10 ⁴	± 4.0	0.70	9.6	
260	55000	110000	22000	1000			663.8x10 ⁴	539.4x10 ⁴	382.2x10 ⁴	195.5x10 ⁴	± 4.0	0.85	11.3	
280	67000	134000	26800	950			773.1x10 ⁴	628.1x10 ⁴	467.9x10 ⁴	266.2x10 ⁴	± 4.0	0.95	12.2	

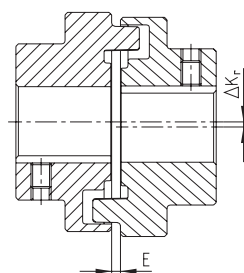
¹⁾ Displacement with n = 1500 rpm

Radial and angular displacements may occur simultaneously. The combined sum of displacements must not exceed the values listed in the table. If requested, coupling is dynamically balanced (semi-key balancing G 6.3 with 1500 rpm). For circumferential speeds exceeding v = 20 m/s dyn. balancing is recommended.

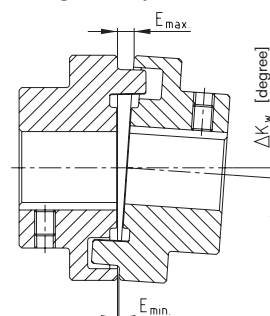
Axial displacement ΔK_a



Radial displacement ΔK_r



Angular displacement ΔK_w



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

Advice for assembly

With assembly the coupling halves must be mounted in that coupling and shaft are flush. Alignment must be made in that radial and angular displacement is as small as possible. The service life of coupling and bearings is extended by accurate alignment. Steps must be taken to ensure that the alignment does not change during any operating condition. Shaft displacement which cannot be avoided must not exceed the figures specified in the table. Angular and radial displacement may occur simultaneously. The combined sum of displacements must not exceed the values listed in the table above. See KTR assembly instructions, KTR standard 49510 at our homepage www.ktr.com.

General information about the elastomer

Material/hardness	Perbunan [NBR]/78 Shore A
Permanent temperature range [°C]	-30 to +80
Max. temperature (short time) [°C]	-50 to +120
Operating range	General engineering Pump industry ATEX applications Chemical industry Standard applications with average elasticity
Resistant to	Gasoline, diesel Acids, bases Tropics (Salt) water (hot/cold) Oils, greases Propane, butane Natural gas, city gas



Elastomer ring NBR 78 Shore A

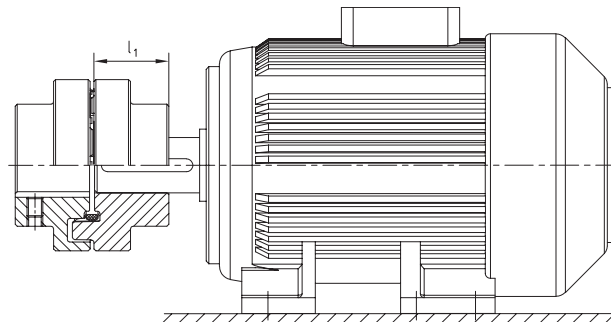
Elastomer ring Viton [FKM] 60 Shore A for the high-temperature range on request.

For continuously updated data please refer to our online catalogue at www.ktr.com

POLY-NORM®

Flexible couplings

Selection of standard IEC motors



POLY-NORM® couplings for standard IEC motors, protection class IP 54/IP 55 (elastomer ring 78 Shore A)														
A. C. motor 50 Hz			Motor power n= 3000 rpm 2 poles		POLY-NORM® coupling size	Motor power n= 1500 rpm 4 poles		POLY-NORM® coupling size	Motor power n= 1000 rpm 6 poles		POLY-NORM® coupling size	Motor power n= 750 rpm 8 poles		POLY-NORM® coupling size
Size	Shaft end dsl [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]	
56	9 x 20		0.09	0.32		0.06	0.43		0.037	0.43				
			0.12	0.41		0.09	0.64		0.045	0.52				
63	11 x 23		0.18	0.62		0.12	0.88		0.06	0.7				
			0.25	0.86		0.18	1.3		0.09	1.1				
71	14 x 30		0.37	1.3		0.25	1.8		0.18	2		0.09	1.4	
			0.55	1.9		0.37	2.5		0.25	2.8		0.12	1.8	
80	19 x 40		0.75	2.5	28/32	0.55	3.7	28/32	0.37	3.9	28/32	0.18	2.5	28/32
			1.1	3.7		0.75	5.1		0.55	5.8		0.25	3.5	
90S	24 x 50		1.5	5		1.1	7.5		0.75	8		0.37	5.3	
90L			2.2	7.4		1.5	10		1.1	12		0.55	7.9	
100L	28 x 60		3	9.8		2.2	15		1.5	15		0.75	11	
						3	20					1.1	16	
112M			4	13		4	27		2.2	22		1.5	21	
			5.5	18										
132S	38 x 80		7.5	25	38	5.5	36	38	3	30	38	2.2	30	38
132M						7.5	49		4	40		3	40	
									5.5	55				
160M	42 x 110		11	36		11	72	42	7.5	75	42	4	54	42
			15	49	42							5.5	74	
160L			18.5	60		15	98		11	109		7.5	100	
180M	48 x 110		22	71	48	18.5	121	48			48			48
180L						22	144		15	148		11	145	
200L	55 x 110		30	97		30	196	55	18.5	181	55	15	198	55
			37	120	55				22	215				
225S	55 x 110	60 x 140				37	240				60	18.5	244	60
225M			45	145		45	292	60	30	293		22	290	
250M	60 x 140	65 x 140	55	177	60	55	356	65	37	361	65	30	392	65
280S		75 x 140	75	241		75	484		45	438		37	483	
280M			90	289	65	90	581	75	55	535	75	45	587	75
315S			110	353		110	707		75	727		55	712	85
315M			132	423		132	849	85	90	873	85	75	971	
	65 x 140	80 x 170	160	513	75	160	1030		110	1070		90	1170	90
315L			200	641		200	1290	90	132	1280	90	110	1420	
					85				160	1550		132	1710	100
315		85 x 170	250	802		250	1600		200	1930	100	160	2070	100
			315	1010		315	2020	100	250	2410	110	200	2580	110
355	75 x 140	95 x 170	355	1140	90	355	2280	110	315	3040	125	250	3220	125
			400	1280		400	2570		400	3850		315	4060	
			500	1600		500	3210							
			560	1790	100	560	3580	125	450	4330	140	355	4570	140
400	80 x 170	110 x 210	630	2020		630	4030		500	4810		400	5150	
			710	2270	110	710	4540	140	560	5390	160	450	5790	160
			800	2560		800	5120		630	6060		500	6420	
450	90 x 170	120 x 200	900	2880	125	900	5760	160	710	6830	180	560	7190	180
			1000	3200		1000	6400		800	7690		630	8090	180

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 15 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.