



Torsionally flexible couplings:

ROTEX®

Torsionally flexible couplings



POLY-NORM®

Short torsionally flexible shaft couplings



POLY

Torsionally flexible couplings,
not failsafe

REVOLEX® KX

Torsionally flexible pin & bush
coupling



Tyre couplings

Flexible, torsionally flexible
couplings



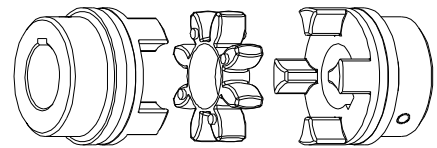
ROTEX® Torsionally flexible couplings



Description of coupling

ROTEX® - couplings are characterized by small dimensions, low weight and low mass moments of inertia yet transmit high torques. Running quality and service life of the coupling are improved by accurate all-over machining.

Their application is ideal for transmitting torque while damping torsional vibrations and absorbing shocks produced by the uneven operation of certain prime movers.

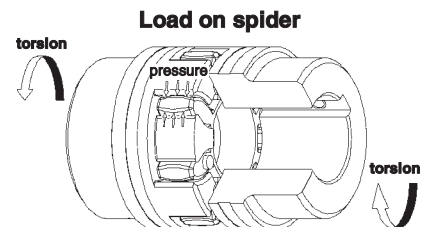


General description

ROTEX® - couplings are torsionally flexible and designed for positive torque transmission. They are fail-safe. Operational vibrations and shocks are efficiently dampened and reduced. The two congruent coupling halves with concave claws on the inside are periphally offset in relation to one another by half a pitch. In addition, they are designed in such a way as to enable an involute spider to be located between them.

The teeth of the spider are crowned to avoid edge pressure if the shafts are misaligned.

ROTEX® couplings are capable of compensating for axial, radial and angular displacements of the shafts to be connected.

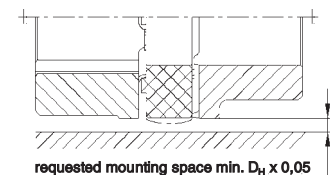


Performance

In contrast to other flexible couplings, the intermediate members of which are subject to bending stress and are therefore prone to earlier wear, the flexible teeth of ROTEX couplings are subject to pressure only. This gives the additional advantage of the individual teeth being able to accept considerably higher loads. The elastomer parts show deformation with load and excessive speeds. Sufficient space for expansion should be ensured (see drawing – deformation with load).

The maximum torsion angle with ROTEX couplings of any size amounts to 5°. They can be fitted both horizontally and vertically.

Deformation with load



Explosion-proof use

ROTEX® couplings are excellently suitable for power transmission in drives in hazardous areas. The couplings are certified according to EC Standard 94/9/EC (ATEX 95) as units of category 2G and thus suitable for the use in hazardous areas of zone 1 and 2. Please read our information in the respective Type Examination Certificate and the operating and mounting instructions under www.ktr.com.

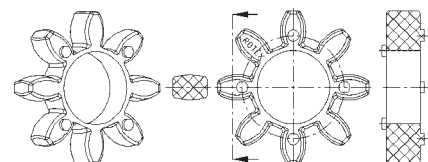


Spiders

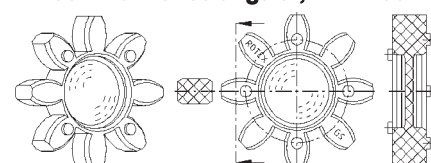
An operating temperature range of - 40° to + 100° C ensures perfect operation. Transient temperature peaks up to + 120° C do not cause any damage on the coupling. Continuous improvement of materials has resulted in a standard spider of 92 Shore A which offers various advantages over usual polyurethane materials. For higher torques it is also possible to make use of a spider 95/98 Shore A or 64 Shore D-F.

The spiders are extremely resistant to wear, oil, ozone and ageing. In addition, they are resistant to hydrolysis (ideal for tropical climates). The high internal damping protects the drive against dynamic overload.

Standard spider tooth flanks crowned



GS spiders tooth flanks rectangular, with web

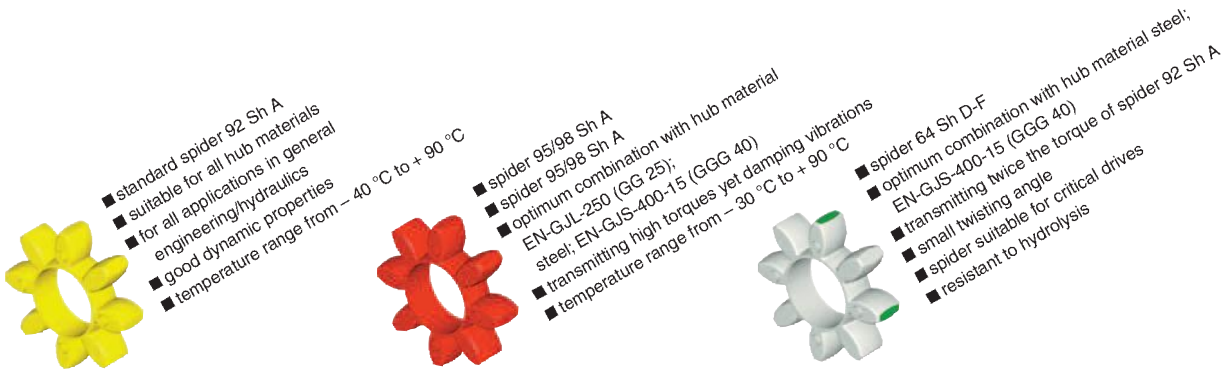


ROTEX® Torsionally flexible couplings



ROTEX
POLY-NORM
POLY-
REVOLUX IXX
Tyre couplings

Spider types



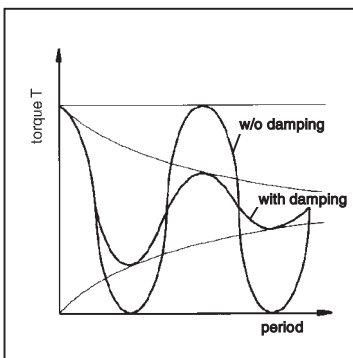
Spider types – Materials, physics, properties

Standard spiders						
Spider type hardness- (Shore)	Identification colour	Material	Perm. temperature range (°C)		Available for coupling size	Typical applications
			Continuous temperature	Max. temperature short time		
92 Sh A	yellow	polyurethane	-40 to +90	-50 to +120	size 14 – 180	- for all applications in general engineering and hydraulics - Standard applications with average elasticity
95/98 Sh A	red	polyurethane	-30 to +90	-40 to +120	size 14 – 180	- good torque transmission with good damping properties
64 Sh D-F	natural white with green tooth flanks	polyurethane	-30 to +110	-30 to +130	size 14 – 180	- I.C. - engines - high air moisture, resistant to hydrolysis - displacement of critical speeds

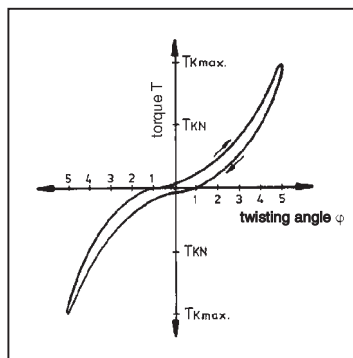
Spiders for special applications on request for:					
Typical applications	Spider type hardness (Shore)	Identification colour	Material	Perm. temperature range (°C)	
				Continuous temperature	Max. temperature short time
I.C.-engines, for high dynamic load, high air moisture/resistant to hydrolysis	94 Sh A-T	blue with yellow tooth flanks	polyurethane	-50 to +110	-60 to +130
Drives with higher loads, small twisting angles - torsionally rigid, high ambient temperatures	64 Sh D-H	green	hytel	-50 to +110	-60 to +150
Small twisting angles and high torsion spring stiffness, high ambient temperature, good resistance to chemicals	polyamide	-	PA	-20 to +130	-30 to +150
Small twisting angles and high torsion spring stiffness, very high ambient temperature, good resistance to chemicals, resistant to hydrolysis	PEEK	light grey	PEEK	up to +180 (ATEX release up to a max. +160)	to +250

1) Different properties depending on compound

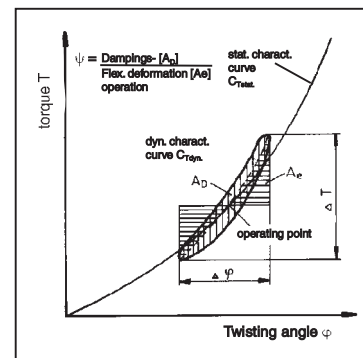
Comparison of loads



Twisting angle



Damping



Coupling selection

The ROTEX® coupling is selected in accordance with DIN 740 part 2. The coupling has to be dimensioned in a way that the permissible coupling load is not exceeded in any operating condition. For this purpose the actual loads have to be compared to the permissible parameters of the coupling.

1 Drives without periodical torsional vibrations

e. g. centrifugal pumps, fans, screw compressors, etc.

The coupling is selected taking into account the rated torques T_{KN} and maximum torque T_{Kmax} .

1.1 Load produced by rated torque

$$T_{KN} \geq T_N \cdot S_t$$

Taking into consideration the ambient temperature, the permissible rated torque T_{KN} of the coupling has to correspond at least to the rated torque T_N of the machine.

$$T_N \text{ [Nm]} = 9550 \cdot \frac{P_{AN/LN} \text{ [kW]}}{n \text{ [1/min]}}$$

1.2 Load produced by torque shocks

The permissible maximum torque of the coupling has to correspond at least to the total of peak torque T_S and the rated torque T_N of the machine, taking into account the shock frequency Z and the ambient temperature.

$$T_{Kmax} \geq T_S \cdot S_z \cdot S_t + T_N \cdot S_t$$

$$\text{Drive-sided shock} \\ T_S = T_{AS} \cdot M_A \cdot S_A$$

$$\text{Load-sided shock} \\ T_S = T_{LS} \cdot M_L \cdot S_L$$

$$M_A = \frac{J_L}{J_A + J_L} \quad M_L = \frac{J_A}{J_A + J_L}$$

This applies in case if the rated torque T_N of the machine is at the same time subject to shocks.

Knowing the mass distribution, shock direction and shock mode, the peak torque T_S can be calculated.

For drives with A. C.-motors with high masses on the load side we would recommend to calculate the peak driving torque with the help of our simulation programme.

2. Drives with periodical torsional vibrations.

For drives subject to high torsional vibrations, e. g. diesel engines, piston compressors, piston pumps, generators, etc., it is necessary to perform a torsional vibration calculation to ensure a safe operation. If requested, we perform the torsional vibration calculation and the coupling selection in our company. For necessary details please see KTR standard 20004.

2.1 Load produced by rated torque

$$T_{KN} \geq T_N \cdot S_t$$

Taking into account the ambient temperature, the permissible rated torque T_{KN} of the coupling has to correspond at least to the rated torque T_N of the machine.

2.2 Passing through the resonance range

$$T_{Kmax} \geq T_S \cdot S_t$$

Taking into account the temperature, the peak torque T_S arising when the resonance range is run through must not exceed the maximum torque T_{Kmax} of the coupling.

2.3 Load produced by vibratory torque shocks

$$T_{KW} \geq T_W \cdot S_t$$

Taking into account the ambient temperature, the permissible vibratory torque T_{KW} of the coupling must not be exceeded by the highest periodical vibratory torque T_W with operating speed.

$$P_{KW} \geq P_W$$

For higher operating frequencies $f > 10$, the heat produced by damping in the elastomer part is considered as damping power P_W .

The permissible damping power P_{KW} of the coupling depends on the ambient temperature and must not be exceeded by the damping power produced.

Description	Symbol	Definition or explanation
Rated torque of coupling	T_{KN}	Torque that can continuously be transmitted over the entire permissible speed range
Maximum torque of coupling	T_{Kmax}	Torque that can be transmitted as dynamic load $\geq 10^5$ times or 5×10^4 as vibratory load, respectively, during the entire operating life of the coupling
Vibratory torque of coupling	T_{KW}	Torque amplitude of the permissible periodical torque fluctuation with a frequency of 10 Hz and a basic load of T_{KN} or dynamic load up to T_{KN} , respectively
Damping power of coupling	P_{KW}	Permissible damping power with an ambient temperature of + 30 °C.
Rated torque of machine	T_N	Stationary rated torque on the coupling
Peak torque of the machine	T_S	Peak torque on the coupling
Peak torque on the driving side	T_{AS}	Peak torque with torque shock on the driving side, e. g. breakdown torque of the electric motor

Description	Symbol	Definition or explanation
Peak torque of load side	T_{LS}	Peak torque with torque shock on load side, e. g. braking
Vibratory torque of machine	T_W	Amplitude of the vibratory torque effective on the coupling
Damping power of the machine	P_W	Damping power which is effective on the coupling due to the load produced by the vibratory torque
Moment of inertia of driving side	J_A	Total of moments of inertia existing on the driving or load side referring to the coupling speed
Moment of inertia of load side	J_L	
Rotational inertia coefficient of driving side	M_A	Factor taking into account the mass distribution with shocks and vibrations produced on the driving or load side
Rotational inertia coefficient of load side	M_L	$M_A = \frac{J_L}{J_A + J_L} \quad M_L = \frac{J_A}{J_A + J_L}$

Coupling selection

Service factor S_t for temperature

	-30 °C +30 °C	+40 °C	+60 °C	+80 °C
S_t	1,0	1,2	1,4	1,8

Service factor S_z for starting frequency

starting frequency/h	100	200	400	800
S_z	1,0	1,2	1,4	1,6

Service factor S_A/S_L for shocks

	S_A/S_L
gentle shocks	1,5
average shocks	1,8
heavy shocks	2,5

Permissible load on feather key of the coupling hub

In addition to the selection of the suitable material, the permissible load on the feather key has to be considered for the coupling selection.

Unless otherwise specified in your order, we will deliver the coupling in the material cast iron, quality EN-GJL-250 (GG 25).

In general engineering the following values are specified as permissible surface pressure in the feather key, each taking into account the material:

material cast iron EN-GJL-250 (GG 25) 120 N/mm²
 material nodular iron EN-GJS-400-15 (GGG 40) 180 N/mm²
 material steel S355J2G3 (St 52.3) 210 N/mm²

For steel 30 % less than the apparent yield point is supposed.

Example of calculation of standard IEC motors shown on page 23:

Details of driving side:

A. C. motor type 315 M
 Motor output $P = 132 \text{ kW}$
 Speed $n = 1485 \text{ 1/min}$
 Moment of inertia of driving side $J_A = 2,9 \text{ kgm}^2$
 Rated torque of driving side $T_{AN} = 9550 \cdot \frac{132 \text{ kW}}{1485 \text{ 1/min}} = 849 \text{ Nm}$
 Driving torque $T_{AS} = 2,5 \cdot T_{AN}$
 $T_{AS} = 2,5 \cdot 849 = 2122,5 \text{ Nm}$
 Start-up frequency $z = 6^{1/h}$
 Ambient temperature $= + 60 \text{ °C}$

Details of load side:

Screw compressor
 Rated torque of load side $T_{LN} = 800 \text{ Nm}$
 Moment of inertia of load side $J_L = 6,8 \text{ kgm}^2$

Coupling selection:

Load produced by rated torque:

$$T_{KN} \geq T_N \cdot S_t$$

$$T_L = T_{LN}$$

$$T_{KN} \geq T_{LN} \cdot S_t = 800 \text{ Nm} \cdot 1,4 = 1120 \text{ Nm}$$

Selected: ROTEX® size 90 - spider 92 Shore A with:

$$T_{KN} = 2400 \text{ Nm}$$

$$T_{Kmax} = 4800 \text{ Nm}$$

Load produced by torque shocks:

$$T_{Kmax} \geq T_S \cdot S_z \cdot S_t$$

$$T_S = T_{AS} \cdot M_A \cdot S_A$$

$$T_S = 2122,5 \cdot 0,7 \cdot 1,8$$

$$T_S = 2674,4 \text{ Nm}$$

factors:

$$M_A = \frac{J_L}{J_A + J_L} = 0,7$$

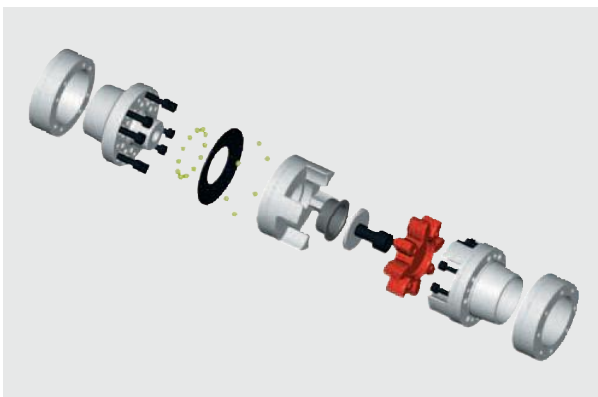
$$T_{Kmax} \geq 2674,4 \cdot 1 \cdot 1,4$$

$$T_{Kmax} \geq 3744 \text{ Nm}$$

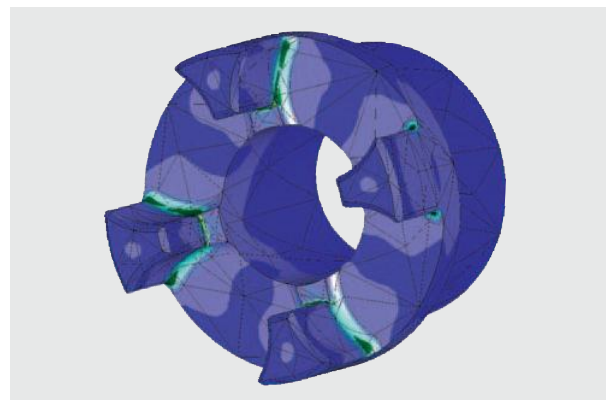
$$S_A = 1,8; S_z = 1; S_t = 1,4$$

KTR products developed by . . .

3D-CAD-System



FEM calculation



ROTEX® Torsionally flexible couplings



Technical data

ROTEX® sizes for all designs and materials	Max. speed [1/min]		Twisting angle with		Torque [Nm]			Damping power [W] with +30 °C P _{KW}	Torsion spring stiffness C _{dyn} [Nm / rad]			
	with V = 30 m/s	40 m/s	T _{KN} φ	T _{Kmax} φ	Rated T _{KN}	Max T _{Kmax}	Vibratory T _{KW}		1,00 T _{KN}	0,75 T _{KN}	0,50 T _{KN}	0,25 T _{KN}
Spider from polyurethane 92 Shore A; colour yellow												
14	19000	–	6,4°	10°	7,5	15	2,0	–	0,38x10 ⁹	0,31x10 ⁹	0,24x10 ⁹	0,14x10 ⁹
19	14000	19000			10	20	2,6	4,8	1,28x10 ⁹	1,05x10 ⁹	0,80x10 ⁹	0,47x10 ⁹
24	10600	14000			35	70	9,1	6,6	4,86x10 ⁹	3,98x10 ⁹	3,01x10 ⁹	1,79x10 ⁹
28	8500	11800			95	190	25	8,4	10,90x10 ⁹	8,94x10 ⁹	6,76x10 ⁹	4,01x10 ⁹
38	7100	9500			190	380	49	10,2	21,05x10 ⁹	17,26x10 ⁹	13,05x10 ⁹	7,74x10 ⁹
42	6000	8000			265	530	69	12,0	23,74x10 ⁹	19,47x10 ⁹	14,72x10 ⁹	8,73x10 ⁹
48	5600	7100			310	620	81	13,8	36,70x10 ⁹	30,09x10 ⁹	22,75x10 ⁹	13,49x10 ⁹
55	4750	6300			410	820	107	15,6	50,72x10 ⁹	41,59x10 ⁹	31,45x10 ⁹	18,64x10 ⁹
65	4250	5600	3,2°	5°	625	1250	163	18,0	97,13x10 ⁹	79,65x10 ⁹	60,22x10 ⁹	35,70x10 ⁹
75	3550	4750			1280	2560	333	21,6	113,32x10 ⁹	92,92x10 ⁹	70,26x10 ⁹	41,65x10 ⁹
90	2800	3750			2400	4800	624	30,0	190,09x10 ⁹	155,87x10 ⁹	117,86x10 ⁹	69,86x10 ⁹
100	2500	3350			3300	6600	858	36,0	253,08x10 ⁹	207,53x10 ⁹	156,91x10 ⁹	93,01x10 ⁹
110	2240	3000			4800	9600	1248	42,0	311,61x10 ⁹	255,52x10 ⁹	193,20x10 ⁹	114,52x10 ⁹
125	2000	2650			6650	13300	1729	48,0	474,86x10 ⁹	389,39x10 ⁹	294,41x10 ⁹	174,51x10 ⁹
140	1800	2360			8550	17100	2223	54,6	660,49x10 ⁹	541,60x10 ⁹	409,50x10 ⁹	242,73x10 ⁹
160	1500	2000			12800	25600	3328	75,0	890,36x10 ⁹	730,10x10 ⁹	552,03x10 ⁹	327,21x10 ⁹
180	1400	1800			18650	37300	4849	78,0	2568,56x10 ⁹	2106,22x10 ⁹	1592,51x10 ⁹	943,95x10 ⁹
Spider from polyurethane 98 Shore A; from size 65 95 Shore A; colour red												
14	19000	–	6,4°	10°	12,5	25	3,3	–	0,56x10 ⁹	0,46x10 ⁹	0,35x10 ⁹	0,21x10 ⁹
19	14000	19000			17	34	4,4	4,8	2,92x10 ⁹	2,39x10 ⁹	1,81x10 ⁹	1,07x10 ⁹
24	10600	14000			60	120	16	6,6	9,93x10 ⁹	8,14x10 ⁹	6,16x10 ⁹	3,65x10 ⁹
28	8500	11800			160	320	42	8,4	26,77x10 ⁹	21,95x10 ⁹	16,60x10 ⁹	9,84x10 ⁹
38	7100	9500			325	650	85	10,2	48,57x10 ⁹	39,83x10 ⁹	30,11x10 ⁹	17,85x10 ⁹
42	6000	8000			450	900	117	12,0	54,50x10 ⁹	44,69x10 ⁹	33,79x10 ⁹	20,03x10 ⁹
48	5600	7100			525	1050	137	13,8	65,29x10 ⁹	53,54x10 ⁹	40,48x10 ⁹	24,00x10 ⁹
55	4750	6300			685	1370	178	15,6	94,97x10 ⁹	77,88x10 ⁹	58,88x10 ⁹	34,90x10 ⁹
65	4250	5600	3,2°	5°	940	1880	244	18,0	129,51x10 ⁹	106,20x10 ⁹	80,30x10 ⁹	47,60x10 ⁹
75	3550	4750			1920	3840	499	21,6	197,50x10 ⁹	161,95x10 ⁹	122,45x10 ⁹	72,58x10 ⁹
90	2800	3750			3600	7200	936	30,0	312,20x10 ⁹	256,00x10 ⁹	193,56x10 ⁹	114,73x10 ⁹
100	2500	3350			4950	9900	1287	36,0	383,26x10 ⁹	314,27x10 ⁹	237,62x10 ⁹	140,85x10 ⁹
110	2240	3000			7200	14400	1872	42,0	690,06x10 ⁹	565,85x10 ⁹	427,84x10 ⁹	253,60x10 ⁹
125	2000	2650			10000	20000	2600	48,0	1343,64x10 ⁹	1101,79x10 ⁹	833,06x10 ⁹	493,79x10 ⁹
140	1800	2360			12800	25600	3328	54,6	1424,58x10 ⁹	1168,16x10 ⁹	883,24x10 ⁹	523,54x10 ⁹
160	1500	2000			19200	38400	4992	75,0	2482,23x10 ⁹	2035,43x10 ⁹	1538,98x10 ⁹	912,22x10 ⁹
180	1400	1800			28000	56000	7280	78,0	3561,45x10 ⁹	2920,40x10 ⁹	2208,10x10 ⁹	1308,84x10 ⁹
Spider from polyurethane 64 Shore D-F; colour natural white with green tooth marking ¹⁾												
14	19000	–	4,5°	7,0°	16	32	4,2	9,0	0,76x10 ⁹	0,62x10 ⁹	0,47x10 ⁹	0,28x10 ⁹
19	14000	19000			21	42	5,5	7,2	5,35x10 ⁹	4,39x10 ⁹	3,32x10 ⁹	1,97x10 ⁹
24	10600	14000			75	150	19,5	9,9	15,11x10 ⁹	12,39x10 ⁹	9,37x10 ⁹	5,55x10 ⁹
28	8500	11800			200	400	52	12,6	27,52x10 ⁹	22,57x10 ⁹	17,06x10 ⁹	10,12x10 ⁹
38	7100	9500			405	810	105	15,3	70,15x10 ⁹	57,52x10 ⁹	43,49x10 ⁹	25,78x10 ⁹
42	6000	8000			560	1120	146	18,0	79,86x10 ⁹	65,49x10 ⁹	49,52x10 ⁹	29,35x10 ⁹
48	5600	7100			655	1310	170	20,7	95,51x10 ⁹	78,32x10 ⁹	59,22x10 ⁹	35,10x10 ⁹
55	4750	6300			825	1650	215	23,4	107,92x10 ⁹	88,50x10 ⁹	66,91x10 ⁹	39,66x10 ⁹
65	4250	5600	2,5°	3,6°	1175	2350	306	27,0	151,09x10 ⁹	123,90x10 ⁹	93,88x10 ⁹	55,53x10 ⁹
75	3550	4750			2400	4800	624	32,4	248,22x10 ⁹	203,54x10 ⁹	153,90x10 ⁹	91,22x10 ⁹
90	2800	3750			4500	9000	1170	45,0	674,52x10 ⁹	553,11x10 ⁹	418,20x10 ⁹	247,89x10 ⁹
100	2500	3350			6185	12370	1608	54,0	861,17x10 ⁹	706,16x10 ⁹	533,93x10 ⁹	316,48x10 ⁹
110	2240	3000			9000	18000	2340	63,0	1138,59x10 ⁹	933,64x10 ⁹	705,92x10 ⁹	418,43x10 ⁹
125	2000	2650			12500	25000	3250	72,0	1435,38x10 ⁹	1177,01x10 ⁹	889,93x10 ⁹	527,50x10 ⁹
140	1800	2360			16000	32000	4160	81,9	1780,73x10 ⁹	1460,20x10 ⁹	1104,05x10 ⁹	654,42x10 ⁹
160	1500	2000			24000	48000	6240	112,5	3075,80x10 ⁹	2522,16x10 ⁹	1907,00x10 ⁹	1130,36x10 ⁹
180	1400	1800			35000	70000	9100	117,0	6011,30x10 ⁹	4929,27x10 ⁹	3727,01x10 ⁹	2209,15x10 ⁹

Unless explicitly specified in your order, we will supply spiders with Shore hardness 92 A.

For peripheral speeds exceeding V = 30 m/sec., we would recommend only steel or nodular iron, respectively. Dynamic balancing required. 1) Hub material: EN-GJS-400-15 (GGG 40); steel

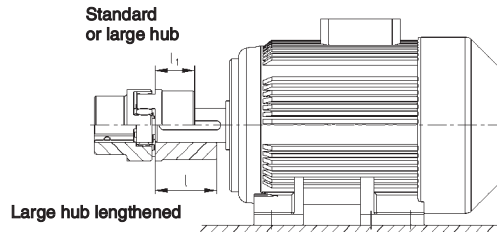
Spider from polyurethane	92 Shore A	95/98 Shore A	64 Shore D-F
Relative Damping ψ [-]	0,80	0,80	0,75
Resonance factor V _R [-]	7,90	7,90	8,50

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ROTEX
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Tyre couplings

Selection of standard IEC motors



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

Size	A. C. motor 50 Hz		Motor output n = 3000 1/min 2-pole		ROTEX® coupling size	Motor output n = 1500 1/min 4-pole		ROTEX® coupling size	Motor output n = 1000 1/min 6-pole		ROTEX® coupling size	Motor output n = 750 1/min 8-pole		ROTEX® coupling size
	Shaft end d x l [mm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]		Output P [kW]	Torque T [Nm]	
	2-pole	4,6,8 pole												
56	9 x 20		0,09	0,32	9 ¹⁾	0,06	0,43	9 ¹⁾	0,037	0,43	9 ¹⁾			
			0,12	0,41		0,09	0,64		0,045	0,52				
63	11 x 23		0,18	0,62	14	0,12	0,88	14	0,06	0,7	14			
			0,25	0,86		0,18	1,3		0,09	1,1				
71	14 x 30		0,37	1,3	19	0,25	1,8	19	0,18	2	19	0,09	1,4	14
			0,55	1,9		0,37	2,5		0,25	2,8		0,12	1,8	
80	19 x 40		0,75	2,5	24	0,55	3,7	24	0,37	3,9	24	0,18	2,5	19
			1,1	3,7		0,75	5,1		0,55	5,8		0,25	3,5	
90S	24 x 50		1,5	5	28	1,1	7,5	28	0,75	8	28	0,37	5,3	24
90L			2,2	7,4		1,5	10		1,1	12		0,55	7,9	
100L	28 x 60		3	9,8	38	2,2	15	38	1,5	15	38	0,75	11	38
112M			4	13		3	20		2,2	22		1,1	16	
132S	38 x 80		5,5	18	48	4	27	48	3	30	48	2,2	30	48
132M			7,5	25		5,5	36		4	40		3	40	
160M	42 x 110		11	36	55	11	72	55	7,5	75	55	4	54	55
160L			15	49		15	98		11	109		5,5	74	
180M	48 x 110		18,5	60	65 ²⁾	18,5	121	65 ²⁾	15	148	65 ²⁾	7,5	100	65 ²⁾
180L			22	71		22	144		15	148		11	145	
200L	55 x 110		30	97	75	30	196	75	18,5	181	75	15	198	75
			37	120		30	196		22	215		15	198	
225S	55 x 110		45	145	90	37	240	90	30	293	90	18,5	244	90
225M		60 x 140	55	177		45	292		30	293		22	290	
250M	60 x 140	65 x 140	55	177	110	55	356	110	37	361	110	30	392	110
280S		75 x 140	75	241		55	356		45	438		37	483	
280M	75 x 140		90	289	125	90	581	125	55	535	125	45	587	125
315S			110	353		90	581		55	535		45	587	
315M	80 x 170		132	423	140	132	849	140	90	873	140	75	971	140
315L	65 x 140		160	513		132	849		90	873		75	971	
315	85 x 170		160	513	160	160	1030	160	110	1070	160	90	1170	160
			200	641		160	1030		110	1070		90	1170	
355	95 x 170		250	802	180	250	1600	180	200	1930	180	160	2070	180
			315	1010		250	1600		200	1930		160	2070	
400	110 x 210		355	1140	200	355	2280	200	250	2410	200	200	2580	200
			400	1280		355	2280		250	2410		200	2580	
450	120 x 210		500	1600	225	400	2570	225	315	3040	225	250	3220	225
			560	1790		400	2570		315	3040		250	3220	
500	140 x 250		560	1790	250	560	3580	250	400	3850	250	315	4060	250
			630	2020		560	3580		400	3850		315	4060	
560	160 x 250		630	2020	280	630	4030	280	450	4330	280	355	4570	280
			710	2270		630	4030		450	4330		355	4570	
630	180 x 250		710	2270	315	710	4540	315	500	4810	315	400	5150	315
			800	2580		710	4540		500	4810		400	5150	
710	200 x 250		800	2580	355	800	5120	355	630	6060	355	500	6420	355
			900	2880		800	5120		630	6060		500	6420	
800	220 x 250		900	2880	400	900	5760	400	710	6830	400	560	7190	400
			1000	3200		900	5760		710	6830		560	7190	
900	250 x 250		1000	3200	450	1000	6400	450	800	7690	450	630	8090	450
						1000	6400		800	7690		630	8090	

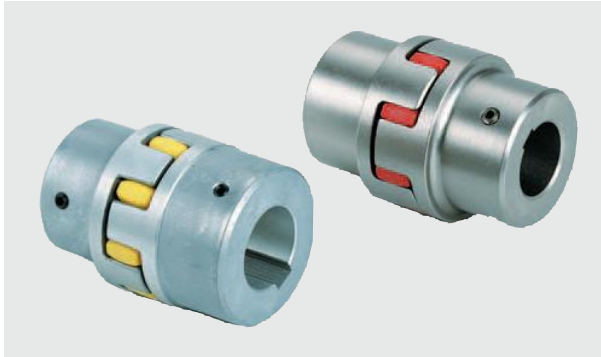
The arrangement of couplings is valid for an ambient temperature of up to +30 °C. For the selection there is a minimum safety factor of 2 of the max. coupling torque (T_{Kmax}). A detailed arrangement is possible according to catalogue, page 20 and 21. Drives with periodical torque curves must be selected according to DIN 740 part 2. If requested, KTR will make the selection.

- 1) For dimensions see ROTEX® GS line
- 2) Motor hub from steel see page 25

ROTEX® Torsionally flexible couplings

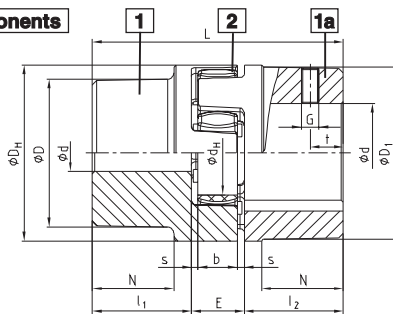


Shaft coupling design No. 001 - casted materials

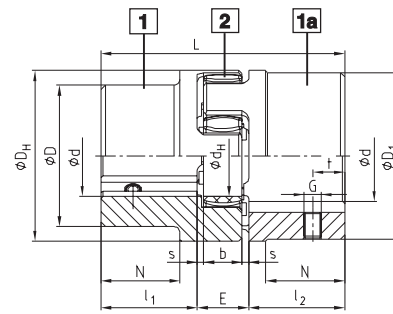


- Torsionally flexible, maintenance-free
- Damping vibrations
- Axial plug-in, fail-safe
- All-over machining – good dynamic properties
- Compact design/small flywheel effect
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Basic programme/stock programme see pages 38 and 39
- Approved according to EC Standard 94/9/EC (without aluminium AL-D)
- Mounting instructions under www.ktr.com

Components



AL-D (thread opposite the keyway)



EN-GJL-250 (GG 25) / EN-GJS-400-15 (GGG 40)
(thread on the keyway)

ROTEX® Aluminium diecast (AL-D)

Size	Component	Spider (part 2) ¹⁾			Dimensions [mm]												
		Rated torque [Nm]			Finish bore d (min-max)	General										Thread for setscrews	
		92 Sh A	98 Sh A	64 Sh D		L	l ₁ ; l ₂	E	b	s	D _H	d _H	D; D ₁	N	G	t	T _A [Nm]
14 ³⁾	1a	7,5	12,5	–	6-16	35	11	13	10	1,5	30	10	30	–	M4	5	1,5
19	1	10	17	–	6-19	66	25	16	12	2	41	18	32	20	M5	10	2
	1a				19-24								41				
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	67	30	48	28	M8	15	10
	1a				28-38								67				

ROTEX® Cast Iron EN-GJL-250 (GG 25)

38	1	190	325	405	12-38	114	45	24	18	3	80	38	66	37	M8	15	10	
	1a				38-45								78					62
	1b				164								70					
42	1	265	450	560	14-42	126	50	26	20	3	95	46	75	40	M8	20	10	
	1a				42-55								94					65
	1b				176								75					
48	1	310	525	655	15-48	140	56	28	21	3,5	105	51	85	45	M8	20	10	
	1a				48-60								104					69
	1b				188								80					
55	1	410	685	825	20-55	160	65	30	22	4	120	60	98	52	M10	20	17	
	1a				55-70								118					
65	1	625	940	1175	22-65	185	75	35	26	4,5	135	68	115	61	M10	20	17	
75	1	1280	1920	2400	30-75	210	85	40	30	5	160	80	135	69	M10	25	17	
90	1	2400	3600	4500	40-90	245	100	45	34	5,5	200	100	160	81	M12	30	40	

ROTEX® Nodular Iron EN-GJS-400-15 (GGG 40)

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

▲ = Material marking that the calculation/order is based on if no material is mentioned in the order.

1) Maximum torque of the coupling T_{Kmax} = rated torque of the coupling T_{KNom} · x 2

2) From size 125 thread for setscrews on request.

3) Material AL-H.

Order form:

ROTEX®-38	EN-GJL-250	92	1	–	Ø 38	1	–	Ø 25
Coupling size	Material	Spider hardness [Shore A]	Hub design		Finish bore	Hub design		Finish bore

ROTEX® Torsionally flexible couplings



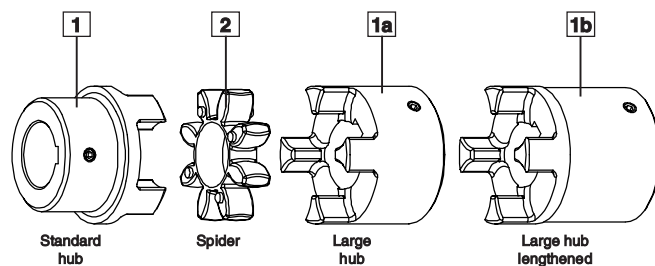
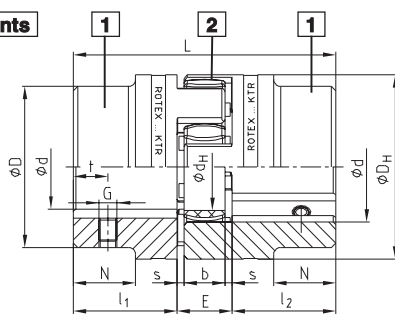
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Tyre couplings

Shaft coupling design No. 001 - material steel



- Hubs from steel, specifically suitable for drive elements subject to high loads, e. g. steel mills, elevator drives, spline hubs, etc.)
- Torsionally flexible, maintenance-free, vibration-damping
- Axial plug-in, fail-safe
- Allow machining - good dynamic properties
- Compact design/small flywheel effect
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Basic programme/stock programme see pages 38 and 39
- Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Mounting instructions under www.ktr.com

Components



Steel (thread on the keyway)

ROTEX® steel

Size	Component	Spider (part 2) ¹⁾ Rated torque [Nm]			Finish bore d (min-max)	Dimensions [mm]													
		92 Sh A	98 Sh A	64 Sh D		L	l ₁ ; l ₂	E	b	s	D _H	d _H	Spec. for steel				Thread for setscrews		
													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		
	1b	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	0-74	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		-													

ROTEX® sintered steel

Size	Component	Spider (part 2) ¹⁾ Rated torque [Nm]		Finish bore d	Dimensions [mm]													
		92 Sh A	98 Sh A		L	l ₁ ; l ₂	E	b	s	D _H	d _H	D	N	Thread for setscrews				
														G	t	T _A [Nm]		
14	1a	7,5	12,5	unbored, 8, 10, 11, 12, 14	35	11	13	10	1,5	30	10	30	-	M4	5	1,5		
19	1a	10	17	unbored, 14, 16, 19, 20, 22, 24	66	25	16	12	2	40	18	40	-	M5	10	2		

¹⁾ = If no material is mentioned in the order, the calculation/order is based on the material marked with
 1) Maximum torque of the coupling T_{Kmax} = rated torque of the coupling T_{KNenn} x 2

ROTEX® 19 – 48 from stainless steel available from stock

- ROTEX® 19, 28 and 42 – hub material X10CrNiS 18-9 material number 1.4305 (V2A) DIN 17440
- ROTEX® 24, 38 and 48 – hub material X6CrNiMoTi17-12-2 material number 1.4571 (V4A) DIN 17440

Order form:

ROTEX®-38	St	92	1	–	Ø 45	1a	–	Ø 25
Coupling size	Material	Spider hardness Shore A]	Hub design		Finish bore	Hub design		Finish bore

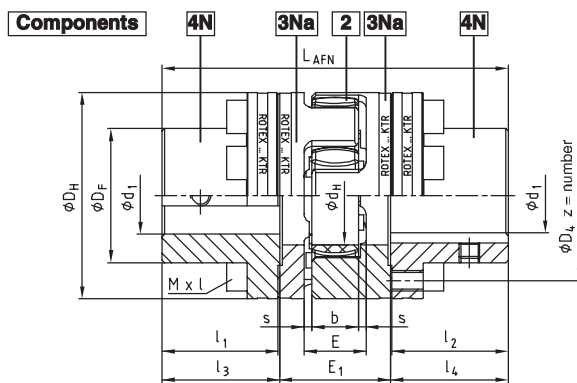
ROTEX® Torsionally flexible couplings

Flange programme

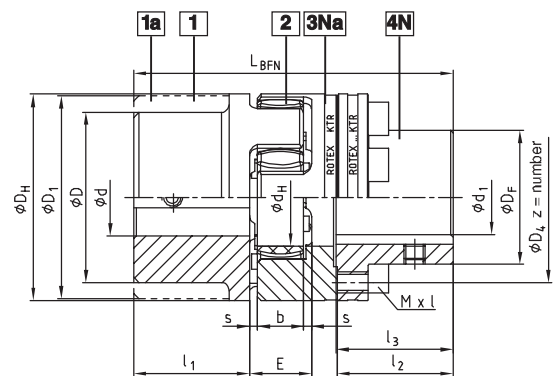
Designs AFN No. 002 and BFN No. 004



- Double flange design AFN and flange design BFN applicable to heavy machinery
- Radial assembly of driving or driven machine after disassembly of driving flanges
- For design AFN - spider interchangeable while coupling installed, without removal of driving or driven machine
- Power flow can be disconnected while coupling is installed
- Flange materials: comp. 4 N steel
comp. 3 Na EN-GJS-400-15 (GGG 40)
- Finish bore according to ISO fit H7,
feather keyway according to DIN 6885 sheet 1 - JS9
- Ex Approved according to EC Standard 94/9/EC
- Mounting instructions under www.ktr.com



Design AFN



Design BFN

Size AFN BFN	Pilot bored ϕd ϕD ϕD_1	Component 4N [St] unbored or finish bored ϕd_{max}	Dimensions													Cyl. 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}	$M \times l$	No. z	Pitch ²⁾ $z \times \ddagger$	T_A ¹⁾ [Nm]	
24		24	55	36	45	27	30	18	33	2	14	30,5	94	86	M5x16	8		10	
28		28	65	42	54	30	35	20	39	2,5	15	35,5	110	100	M6x20	8	8 x 45°	17	
38		38	80	52	66	38	45	24	43	3	18	45,5	134	124	M8x22	8		41	
42		42	95	62	80	46	50	26	48	3	20	51,0	150	138	M8x25	12		41	
48		48	105	70	90	51	56	28	50	3,5	21	57,0	164	152	M8x25	12	16 x 22,5°	41	
55		55	120	80	102	60	65	30	60	4	22	66,0	192	176	M10x30	8	8 x 45°	83	
65		65	135	94	116	68	75	35	65	4,5	26	76,0	217	201	M10x30	12	16 x 22,5°	83	
75		75	160	108	136	80	85	40	75	5	30	86,5	248	229	M12x40	15		120	
90		100	200	142	172	100	100	45	82	5,5	34	101,5	285	265	M16x40	15		295	
100		110	225	158	195	113	110	50	97	6	38	111,5	320	295	M16x50	15		295	
110		125	255	178	218	127	120	55	103	6,5	42	122,0	347	321	M20x50	15	20 x 18°	580	
125		145	290	206	252	147	140	60	116	7	46	142,0	400	370	M20x60	15		580	
140		165	320	235	282	165	155	65	128	7,5	50	157,5	443	409	M20x60	15		580	
160		190	370	270	325	190	175	75	146	9	57	177,5	501	463	M24x70	15		1000	
180		220	420	315	375	220	195	85	159	10,5	64	198,0	555	515	M24x80	18	24 x 15°	1000	

1) Screw tightening torque T_A [Nm].

2) Thread in driving flange between cams.

3) Coupling is delivered not assembled.

Order form:

ROTEX®-38	AFN	St/ EN-GJS-400-15	92	4N	–	Ø 38	4N	–	Ø 35
Coupling size	Design	Material	Spider hardness [Shore A]	Component		Finish bore	Component		Finish bore

ROTEX® Torsionally flexible couplings

Flange programm

Design A-H

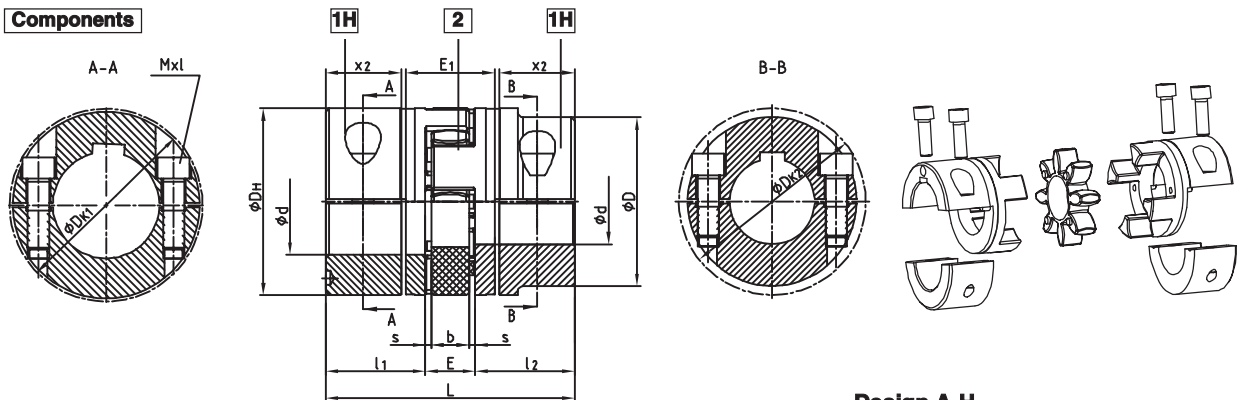


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REVOLUX KX
Tyre couplings



- Assembly/disassembly by means of 4 screws only
- Exchange of spider with no need to shift the driving and driven side (motor and pump)
- Positive-locking and frictionally engaged hub combinations to be assembled radially (dimension E1 of design AFN = dimension E1 of A-H)
- Finish bore according to ISO tolerance H7, feather key according to DIN 6885 sheet 1 - JS9
- Please order our separate dimension sheet (M425460)
- Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Mounting instructions under www.ktr.com

Components



Design A-H

Size A-H	Component	Finish bore $\varnothing_{d_{max}}$ [mm]	Dimensions [mm]											Cylinder screws DIN EN ISO 4762	
			L	$l_1; l_2$	E	b	s	D_H	D	D_{K1}	D_{K2}	x_2	E_1	Mx1	T_A [Nm]
19	1H	20	66	25	16	12	2	40	-	46	-	16	31	M6x16	14
24	1H	28	78	30	18	14	2	55	-	57,5	-	21	33	M6x20	14
28	1H	38	90	35	20	15	2,5	65	-	73	-	23,5	39	M8x25	35
38	1H	45	114	45	24	18	3	80	-	83,5	-	33,5	43	M8x30	35
42	1H	50	126	50	26	20	3	95	85	-	93,5	36,5	48	M10x30	69
		55							-	97	M10x35				
48	1H	55	140	56	28	21	3,5	105	95	-	105	42,5	50	M12x35	120
		60							-	108,5	M12x40				
55	1H	65	160	65	30	22	4	120	110	-	119,5	47,5	60	M12x40	120
		70							-	122	M12x45				
65	1H	70	185	75	35	26	4,5	135	115	-	123,5	57	65	M12x40	120
		80							-	132,5	M12x45				
75	1H	80	210	85	40	30	5	160	135	-	147,5	64,5	75	M16x50	295
		90							-	158	M20x60				
90	1H	90	245	100	45	34	5,5	200	160	-	176	78,5	82	M20x60	580
100 ¹⁾	1H	110	270	110	50	38	6	225	180	-	185,5	81	102	M16x50	295
110 ¹⁾	1H	120	295	120	55	42	6,5	255	200	-	208	87	115	M20x60	580
125 ¹⁾	1H	140	340	140	60	46	7	290	230	-	242,5	102	130	M24x70	1000

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

Please note:

With maximum bore the feather keys are offset to each other by approx. 5°!

Hub materials: up to size 90 S355J2G3
from size 100 EN-GJS-400-15

Order form:

ROTEX®-38	A-H	98	1H	Ø38	1H	Ø30
Coupling size	Design	Spider hardness [Sh A]	Component	Finish bore \varnothing_{d_1}	Component	Finish bore \varnothing_{d_2}

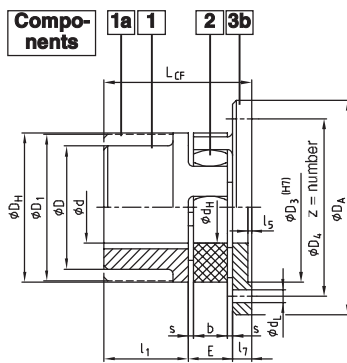
ROTEX® Torsionally flexible couplings

Flange programme

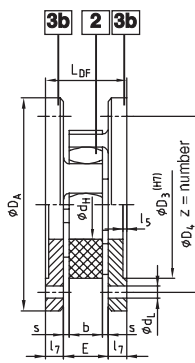
Designs CF a. CFN No. 005 and DF a. DFN No. 006



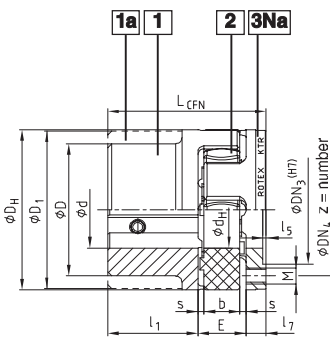
- Flange designs applicable to heavy machinery
- CF and CFN - connection flange to shaft
DF and DFN - double flange design for the connection of driving and driven machine, radial assembly possible without removal of other components, allowing for a quick replacement of spider
- CFN and DFN - particularly small outside diameters
- DF and DFN – compact design
- DFN - for customer-specific mounting flanges
- Flange material part 3b: EN-GJS-400-15 (GGG 40)
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)



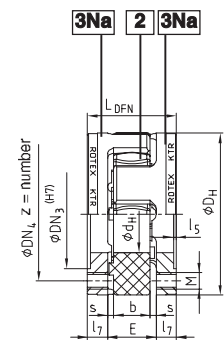
Design CF



Design DF



Design CFN



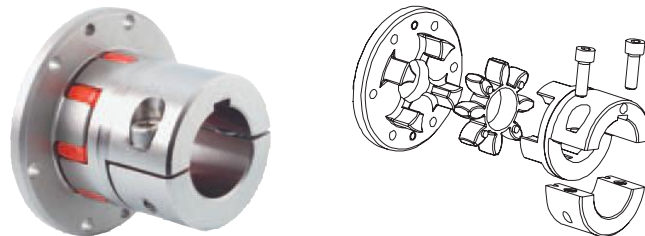
Design DFN

Size CF/CFN DF/DFN	Component 3b 3Na	Pilot bore $\phi d, \phi D$ ϕD_1	General dimensions							Dimensions CF and DF							Dimensions CFN and DFN							
			D_H	d_H	l_1	E	s	b	l_5	l_7	D_A	D_3	D_4	No. z	d_L	L_{CF}	L_{DF}	DN_3	DN_4	M	No. z	Pitch z x β	L_{CFN}	L_{DFN}
24	stock programme	see shaft coupling on pages 24 and 25 basic programme see pages 37 and 38	55	27	30	18	2	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	18	1,5	10	115	80	95	6	6,6	79	44	54	66	M8	8		79	44
42			95	46	50	26	3	20	2	12	140	95	115	6	9	88	50	65	80	M8	12	16x22,5°	88	50
48			105	51	56	28	3,5	21	2	12	150	105	125	8	9	96	52	75	90	M8	12		96	52
55			120	60	65	30	4	22	2	16	175	120	145	8	11	111	62	84	102	M10	8	8x45°	111	62
65			135	68	75	35	4,5	26	2	16	190	135	160	10	11	126	67	96	116	M10	12	16x22,5°	126	67
75			160	80	85	40	5	30	2,5	19	215	160	185	10	14	144	78	112	136	M12	15		144	78
90			200	100	100	45	5,5	34	3	20	260	200	225	12	14	165	85	145	172	M16	15		165	85
100			225	113	110	50	6	38	4	25	285	225	250	12	14	185	100	165	195	M16	15		185	100
110	on request	see shaft coupling on pages 24 and 25 basic programme see pages 37 and 38	255	127	120	55	6,5	42	4	26	330	255	290	12	18	201	107	180	218	M20	15	20x18°	201	107
125			290	147	140	60	7	46	5	30	370	290	325	16	18	230	120	215	252	M20	15		230	120
140			320	165	155	65	7,5	50	5	34	410	320	360	16	22	254	133	245	282	M20	15		254	133
160			370	190	175	75	9	57	5	38	460	370	410	16	22	288	151	280	325	M24	15		288	151
180			420	220	195	85	10,5	64	5,5	40	520	420	465	16	26	320	165	330	375	M24	18	24x15°	320	165

Other flanges (dimensions see page 26)

Further type: ROTEX® CF-H
flange drop-out center
design coupling

- Please order our separate dimension sheet (M412069).



Order form:

ROTEX®-38	CF	92	3b - EN-GJS-400-15	1 EN-GJL-250 - Ø20	
Coupling size	Design	Spider hardness [Shore A]	Component 3b material	Component and material	Finish bore
For design DF: 3b – EN-GJS-400-15					

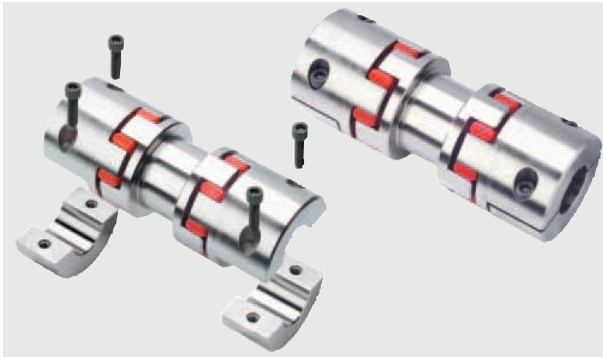
ROTEX® Torsionally flexible couplings

Double cardanic – the innovation in pump design

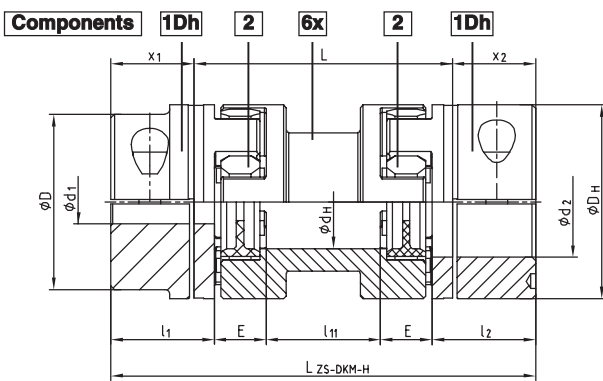
Type ZS-DKM-H



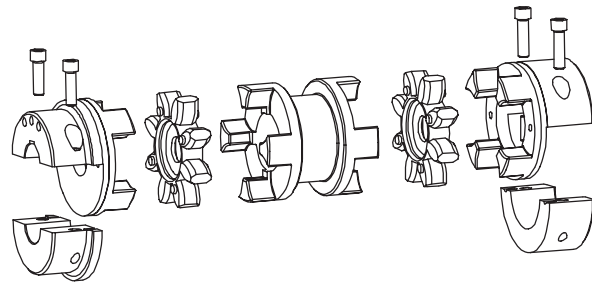
ROTEX
POLY-NORM
POLY-
REVOLUX KX
Tyre couplings



- Standard spacers up to 250 mm shaft distance dimension – ex stock
- Assembly/disassembly through 4 screws only
- Compensates for high shaft displacements due to double-cardanic design
- Remains torsionally symmetric in case of shaft displacements
- Reduced vibration and noise
- Low restoring forces → Increase of the total lifetime of all adjacent components (bearings, seals etc.)
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Mounting instructions under www.ktr.com



Type ZS-DKM-H



Size ZS-DKM-H	Dismount-able length L [mm]	Finish bored $\varnothing d_1/\varnothing d_2$ max. [mm]	Spider (part 2) ¹⁾ T_{KN} [Nm]	Dimensions [mm]										Cap screws DIN EN ISO 4762 – 12.9		Max. displacements				Weight ²⁾ [kg]
				D _H	D	d ₁	l ₁ ; l ₂	x ₁ ; x ₂	l ₁₁	E	L _{ZS-DKM-H}	M	T _A [Nm]	Axial [mm]	at n = 1500 1/min		at n = 3000 1/min			
															Radial [mm]	Angular [°]	Radial [mm]	Angular [°]		
24	100	28	35	55	-	27	30	22,5	49	18	145	M6x20	14	1,4	1,17	0,87	1,40	0,80	1,90	
	89								185		1,87				1,40					
28	100	38	95	65	-	30	35	25,5	41	20	151	M6x25	35	1,5	1,06	0,80	1,32	0,80	2,20	
	81								191		1,76				1,32					
38	100	45	190	80	-	38	45	35,5	33	24	171	M6x30	35	1,8	0,99	0,74	1,27	0,80	4,10	
	73								211		1,69				1,27					
42	100	55	265	95	85	46	50	39,0	26	26	178	M10x30	69	2,0	0,91	0,68	1,20	0,65	5,10	
	66								218		1,60				1,20					
48	100	60	310	105	95	51	56	45,0	22	28	190	M12x35	120	2,1	0,87	0,65	1,20	0,75	7,10	
	62								230		1,57				1,18					
55	100	70	410	120	110	60	65	50,0	10	30	200	M12x40	120	2,2	0,70	0,52	1,05	0,85	11,20	
	90								240		1,40				1,05					
65	140	80	625	135	115	68	75	60,0	40	35	260	M12x40	120	2,6	1,31	0,98	1,50	0,85	16,10	
	80								300		2,00				1,50					
75	140	90	1280	160	135	80	85	67,5	25	40	275	M16x50	295	3,0	1,13	0,85	1,37	0,85	23,60	
	135								315		1,83				1,37					
90	180	110	2400	200	160	100	100	81,5	53	45	343	M20x60	580	3,4	1,71	1,28	1,28	0,85	29,50	
	123								413		2,93				2,19					

1) Maximum torque of coupling T_{Kmax} = nominal torque of coupling $T_{KN} \times 2$
 Size 24 to 75 spider type 95/98 Sh A-GS; at size 90 spider type 95 Sh A with inner ring
 ZS-DKM-H: transmittable torque according to 92 Sh-A GS

2) Refer to max. bore

ATTENTION: The standard line is only for the horizontal assembly. Vertical assembly on request.

Order form:

ROTEX®-38	ZS-DKM-H	140	98	Ø 38	Ø 30
Coupling size	Type	Shaft distance dimension L	Spider hardness [Sh A-GS]	Finish bore $\varnothing d_1$	Finish bore $\varnothing d_2$

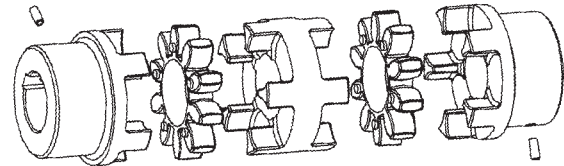
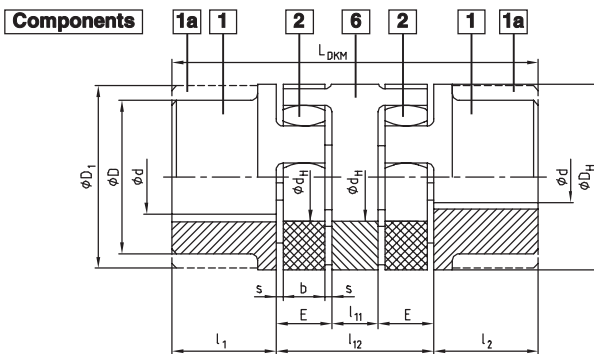
ROTEX® Torsionally flexible couplings

Double-cardanic – the innovation in pump design

Type DKM No. 018



- For high shaft displacements
- 3-part double-cardanic
- Reduced vibration and noise
- The restoring forces resulting from displacements are very low
- Increase of the total lifetime of all adjacent components (bearings, seals etc.)
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Mounting instructions under www.ktr.com
- Double-cardanic design without the need for bearing support or external guarding



Type DKM

Size DKM	Pilot bore ØD ØD ₁	Spider (part 2) Nominal torque [Nm]			Dimensions [mm]										Max. displacements at n = 1500 1/min		
		92 Sh-A	98 Sh-A	64 Sh-D	D _H	d _H	l ₁ ; l ₂	l ₁₁	l ₁₂	E	s	b	L _{DKM}	Radial [mm]	Angular [°]	Axial [mm]	
19	see shaft coupling page 24 and 25 standard range page 37 and 38	10	17	21	40	18	25	10	42	16	2	12	92	0,54	1,20	1,2	
24		35	60	75	55	27	30	16	52	18	2	14	112	0,53	0,90	1,4	
28		95	160	200	65	30	35	18	58	20	2,5	15	128	0,60	0,90	1,5	
38		190	325	405	80	38	45	20	68	24	3	18	158	0,77	1,00	1,8	
42		265	450	560	95	46	50	22	74	26	3	20	174	0,84	1,00	2,0	
48		310	525	655	105	51	56	24	80	28	3,5	21	192	1,00	1,10	2,1	
55		410	685	825	120	60	65	28	88	30	4	22	218	1,11	1,10	2,2	
65		625	940	1175	135	68	75	32	102	35	4,5	26	252	1,40	1,20	2,6	
75		1280	1920	2400	160	80	85	36	116	40	5	30	286	1,59	1,20	3,0	
90		2400	3600	4500	200	100	100	40	130	45	5,5	34	330	1,78	1,20	3,4	

Further type: ZS-DKM1



For detailed information please ask for our total data sheet no. M 359949.

Order form:

ROTEX®-38	DKM	EN-GJL-250	98	1	–	Ø 38	1	–	Ø 30
Coupling size	Type	Material	Spider hardness [Shore A]	Component		Finish bore	Component		Finish bore

ROTEX® Torsionally flexible couplings

Intermediate shaft programme

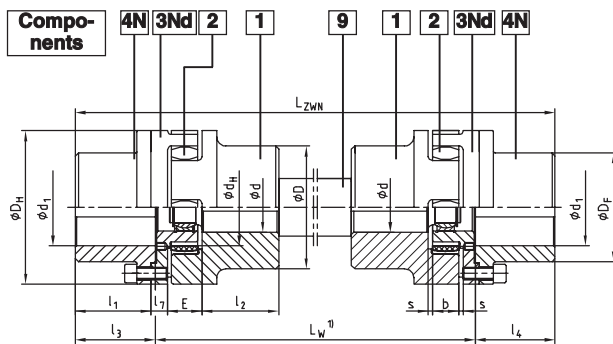
Designs ZWN No. 017 and ZR No. 037



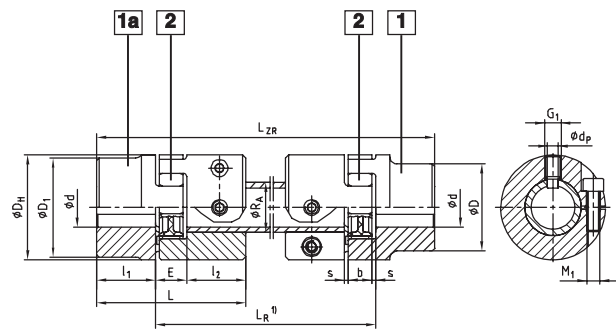
ROTEX
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REVOLLEX KX
Tyre couplings



- To connect shaft ends with extended shaft separations
- Double cardanic - thus able to compensate for high radial misalignments
- Good damping properties by the arrangement of two spiders
- Radial assembly possible without displacement of the driving or driven machine
- Design ZWN - intermediate shaft centered via the spherical plain bearings
- Design ZR - flexible within the GS spider - intermediate pipe with bearings, to be disassembled radially
- Designs ZWN and ZR - modification for customers from the stock programme
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9



Design ZWN



Design ZR with GS spider

Size ZWN ZR	Pilot bore Ød ØD ØD1	Component 4N [St] finish bore Ød1max	Materials see page 41										Dimensions of ZR									
			D _H	D _F	d _H	l ₁ ; l ₂	E	s	b	l ₃ ; l ₄	l ₇	L _{ZWN}	Intermediate pipe		Clamping screw		L _{ZR}	L	Locking screw G ₁	Locking pin d _b [mm]	Axial displacement [mm]	Angular displacement [degrees]
													R _A	C* Nm ² rad	M ₁	T _A [Nm]						
24		24	55	36	27	30	18	2	14	30,5	8	30x4	4522	M6	10		78	M8	5,5	1,4	0,9	
28	see shaft coupling on pages 24 and 25 basic programme see pages 37 and 38	28	65	42	30	35	20	2,5	15	35,5	10	35x4	7611	M8	25	L _{ZR} = L _H + 2 x l ₁	90	M10	7	1,5	0,9	
38		38	80	52	38	45	24	3	18	45,5	10	40x4	11870	M8	25		114	M12	8,5	1,8	1,0	
42		41	95	62	46	50	26	3	20	51,0	12	45x4	17487	M10	49		126	M12	8,5	2,0	1,0	
48		48	105	70	51	56	28	3,5	21	57,0	12	50x4	24648	M12	86		140	M16	12	2,1	1,1	
55		55	120	80	60	65	30	4	22	66,0	16	55x4	39662	M10	49		160	M16	12	2,2	1,1	
65		65	135	94	68	75	35	4,5	26	76,0	16	65x5	68329	M12	86		185	M16	12	2,6	1,2	
75		75	160	108	80	85	40	5	30	86,5	19	75x5	108000	M16	210		210	M16	12	3,0	1,2	
90		100	200	142	100	100	45	5,5	34	101,5	20	Selection indication for design ZR: • Friction torques of clamping hubs have to be observed. Please order dimension sheet no. 5020/000/017-757537. • Material on request.										
100		110	225	158	113	110	50	6	38	111,5	25											
110		125	255	178	127	120	55	6,5	42	122,0	26											
125	145	290	206	147	140	60	7	46	142,0	30												

- 1) Please indicate the shaft distance dimension L_W or L_R in all inquiries and orders along with the maximum speed to review the critical whirling speed.
- 2) Torsion spring stiffness when the intermediate shaft is 1m

Design ZWNV - for vertical assembly with thrust bearing, see dimension sheet no. 5020/000/027-760390.

Order form:

ROTEX®-38	ZWN	1200	St / EN-GJS-400-15	92	4N -	Ø 38	4N -	Ø 30
Coupling size	Design	Shaft distance dim. L _W	Material	Spider hardness [Shore A]	Hub design	Finish bore	Hub design	Finish bore

ROTEX® Torsionally flexible couplings

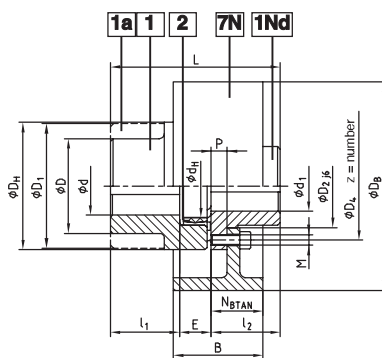
Brake drum/Disk brake

Designs BTAN No. 11 and SBAN No. 013

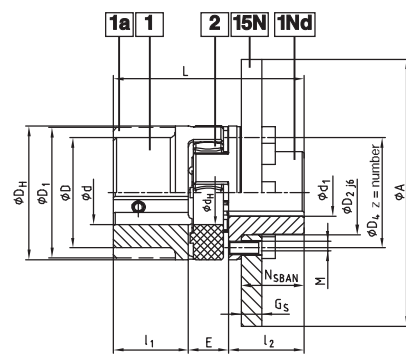


- Shaft coupling BTAN with brake drum to be mounted to external drum brakes with double shoes according to DIN 5431/15435
- Shaft coupling BTAN with disk for braking calipers
- Each coupling type to be combined with various sizes of brake drum disks (see dimension "N")
- The brake drum or disk brake has to be placed onto the shaft end with the biggest mass moment of inertia
- The maximum brake torque must not exceed the maximum torque of the coupling
- Designs BTAN and SBAN - modification for customer from the stock programme
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Mounting instructions under www.ktr.com

Components



Brake drum design BTAN



Disk brake design SBAN

Size BTAN SBAN	Pilot bore $\frac{\phi d}{\phi D_1}$	Part 1Nd	Finish bore d_1 max.		Dimensions													
			EN-GJS-400-15 (GGG)	St	D_H	D_2	D_4	d_H	z	pitch 1) $z \times \beta$	M	$l_1; l_2$	E	L	P	N BTAN	N SBAN	
38	see shaft couplings on pages 24 a. 25 basic programme on pages 37 a. 38 on request	unbored from stock	-	34	80	50	66	38	8	8 x 45°	M8	45	24	114	7,5	see selection below	37,5	
42			-	42	95	60	80	46	12	16 x 22,5°	M8	50	26	126	9,5		40,5	
48			-	48	105	68	90	51	12	8 x 45°	M10	65	30	140	10,5		45,5	
55			-	55	120	78	102	60	8	16 x 22,5°	M10	75	35	185	13,5		52,5	
65			-	65	135	92	116	68	12	M12	85	40	210	15,5	69,5			
75			-	75	160	106	136	80	15	M16	100	45	245	18,5	81,5			
90			-	100	200	140	172	100	15	20 x 18°	M16	110	50	270	20,5		89,5	
100			-	110	-	255	176	218	127	15	M20	120	55	295	23,5		96,5	
110			-	130	-	290	204	252	147	15	M20	140	60	340	27,5		112,5	

1) Thread in the hub between the cams

Brake drum	ROTEX® BTAN coupling/ Brake drum size dimension „N“										Speed 1/min [V] (30 m/s)	Disk brake	ROTEX® SBAN coupling/ Disk size dimension „N“										Speed 1/min [V] (30 m/s)
	DBxB	38	42	48	55	65	75	90	100	110			125	$\phi AxGs$	38	42	48	55	65	75	90	100	
160x60	31										3550	200x12,5	x										3800
200x75	36	38	39	41							2800	250x12,5	x	x	x								3056
250x95	44	46	47	49	50	52					2240	315x16		x	x	x	x						2425
315x118		55	56	58	59	61	64				1800	400x16			x	x	x	x	x	x	x		1910
400x150		68	69	71	72	74	77	79	82		1400	500x16			x	x	x	x	x	x	x	x	1528
500x190						87	89	92	94	97	101	1120	630x20			x	x	x	x	x	x	x	1213
630x236							107	110	112	115	119	900	710x20			x	x	x	x	x	x	x	1076
710x265									123	126	130	800	800x25					x	x	x	x	x	955
800x300											144	710	900x25								x	x	849

Other sizes on request according to dimension sheet no.:
 BTAN: M 380821
 SBAN straight: M380822; cranked: M 370065
 FNN hub: M 380823

Order form:

ROTEX®-38	BTAN	200 EN-GJL-250	92	d_A EN-GJL-250 – ϕ 38	d_B St – ϕ 30
Coupling size	Design	ϕ brake drum and material	Spider hardness [Shore A]	Component	Finish bore

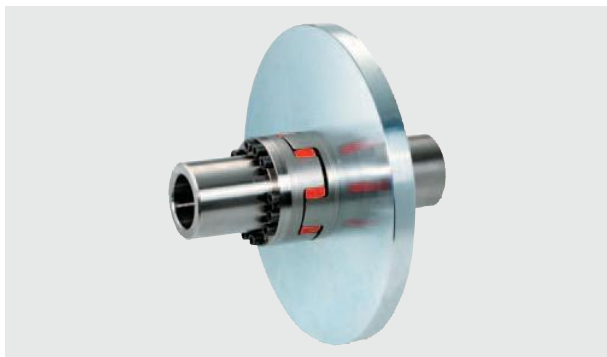
ROTEX® Torsionally flexible couplings

Disc brake

Design AFN-SB special

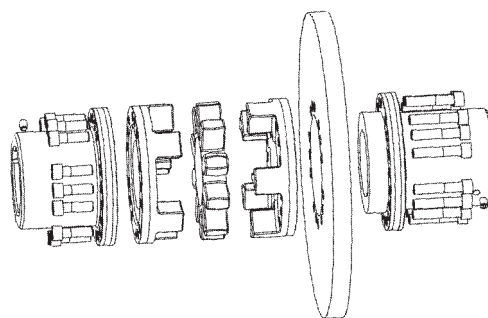
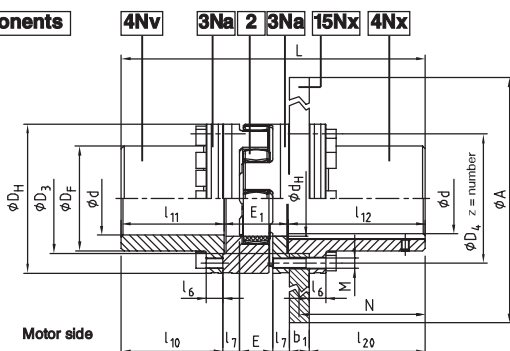


ROTEX
POLY-NORM
POLY-
REVOLEX IX
Tyre couplings



- Shaft coupling AFN-SB special with disk brake for braking calipers
- The disk brake has to be placed onto the shaft end with the biggest mass moment of inertia
- The maximum braking torque must not exceed the maximum torque of the coupling
- For details about ROTEX AFN-SB spec. please see our dimension sheet no. M 351054
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Mounting instructions under www.ktr.com

Components



Size AFN-SB spec.	Finish bore d		Dimensions									
	min.	max.	D _H	D _F	D _S ^{H7/h7}	D ₄	d _H	E	E ₁	M	z No.	Pitch = z x angle
65	22	65	135	94	96	116	68	35	65	M 10	12	16 x 22,5°
75	30	75	160	108	112	136	80	40	75	M 12	15	
90	40	100	200	142	145	172	100	45	82	M 16	15	
100	46	110	225	158	165	195	113	50	97	M 16	15	
110	60	125	255	178	180	218	127	55	103	M 20	15	20 x 18°
125	60	145	290	206	215	252	147	60	116	M 20	15	
140	60	165	320	235	245	282	165	65	128	M 20	15	
160	80	190	370	270	280	325	190	75	146	M 24	15	

Size AFN-SB spec.	Torque with ¹⁾ spider 95 Sh A [Nm]		Max. speed [1/min.]	Max. ¹⁾ brake torque [Nm]	Dimensions							
	T _{KN}	T _{Kmax.}			l ₆	l ₇	l ₁₀	l ₁₁	l ₁₂	l ₂₀	N	L
65	940	1880	3450	1880	15	16	112,5	113,5	166	135	150	344,5
75	1920	3840	3250	3840	20	19	131,5	133	166,5	135	150	374,5
90	3800	7200	3000	7200	20	20	164	165,5	206,5	175	190	454
100	4950	9900	2800	9900	25	25	153,5	155	206,5	175	190	468,5
110	7200	14400	2600	14400	25	26	201,5	203,5	212	180	195	518,5
125	10000	20000	2250	20000	30	30	198,5	200,5	212	180	195	528,5
140	12800	25600	1800	25600	30	34	244,5	247	252,5	220	235	627,5
										210 ²⁾	230 ²⁾	
160	19200	38400	1500	38400	34	38	226,5	229	252,5	220	235	627,5
										210 ²⁾	230 ²⁾	

Size	Disc brake size ØA x b ₁										
	355 x 30	400 x 30	450 x 30	500 x 30	560 x 30	630 x 30	710 x 30	800 x 30	900 x 30	900 x 40	1000 x 40
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	X
160							X	X	X	X	X

1) The max. braking torque must not exceed the maximum torque of the coupling.
2) Dimensions for a brake disk width b₁ of 40 mm.

Order form:

ROTEX®-90	AFN-SB-Spez.	450 x 30	95	4Nv	-	Ø 90	4Nx	-	Ø 90
Coupling size	Design	Ø disk brake x width	Spider hardness [Shore A]	Component		Finish bore	Component		Finish bore

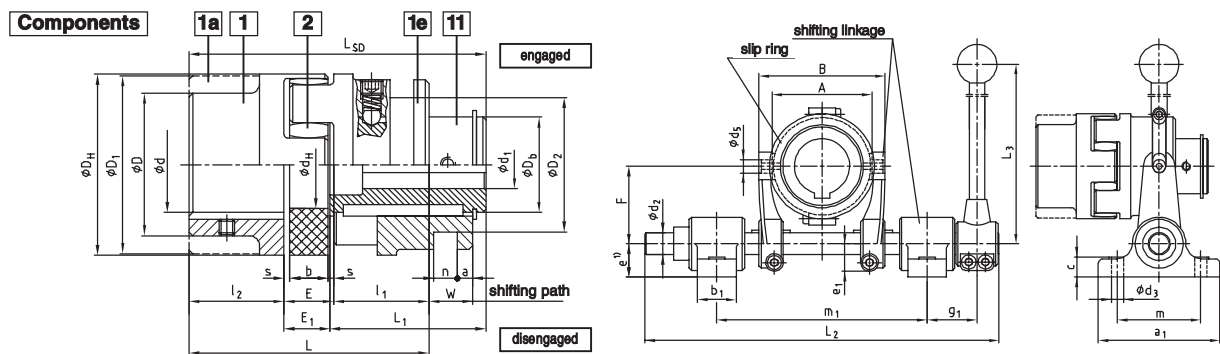
ROTEX® Torsionally flexible couplings

Shiftable at standstill

Design SD No. 015



- Shiftable shaft coupling for all applications in general engineering
- Easy to engage and disengage driving or driven machines with standstill of machine
- Existing shifting hub to be combined with slip ring and shiftable linkage
- With pilot bored shifting hubs the requested shifting force must be set after final machining
- Other sizes on request according to M 370266
- Complete shifting device consisting of: separated slip ring from red bronze, shift fork, shifting shaft, shifting lever, eye type bearing
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9



Size SD	Standard hub part 1; 1a	Shifting hub part 11	Dimensions																	Shifting force set in [N]	Slip ring size	Shiftable linkage size
			Finish bore d ₁		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	L _{SD}			
24	unbored from stock	see shaft coupling on pages 24 and 25 basic programme see pages 37 and 38	8	18	55	41	30	27	30	18	2	14	16,5	78	51,5	16	6	6	98	110	-	-
28			10	22	65	58	36	30	35	20	2,5	15	18	90	60	17,5	8	8	113	130	-	-
38			12	28	80	70,5	45	38	45	24	3	18	22	114	73	21	8	12,5	140	150	1,1	1
42			14	32	95	70,5	50	46	50	26	3	20	24	126	82	23	8	12,5	156	180	1,1	1
48			15	40	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	48	120	112,5	70	60	65	30	4	22	27	160	103	26	6	18	195	250	3,3	3
65			20	55	135	112,5	80	68	75	35	4,5	26	32	185	120	30,5	7	18	227	280	3,3	3
75			25	65	160	130,5	95	80	85	40	5	30	37	210	135	35	6	20,5	257	350	4,4	3
90			28	75	200	164,5	110	100	100	45	5,5	34	41	245	152	39,5	8	25,5	293	350	5,5	4
100			30	80	225	164,5	115	113	110	50	6	38	46	270	169	44	14	25,5	325	380	5,5	4
110	35	85	255	164,5	125	127	120	55	6,5	42	51	295	184	48,5	18,5	25,5	355	450	5,5	4		
125	40	100	290	210,5	145	147	140	60	7	46	55,5	340	208,5	53	18,5	30,5	404	500	6,6	5		

Size SD	Dimensions of slip ring and shiftable linkage																			
	Size	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	Max. speed n for slip ring [1/min]	
38	1	110	35	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								32,5	120	70	490	600	280	310	140	180	2120		
55	3	140	40	25	30	17	40	32,5	120	70	490	600	100	280	310	140	180	170	210	1710
65	3																			
75	3																			
90	4	160	45	35	21	50	37,5	147,5	70	565	750	120	321	365	200	244	1360			
100	4																			
110	4																			
125	5			40		25	46	190	80	630	1068		365	410	250	300	855			

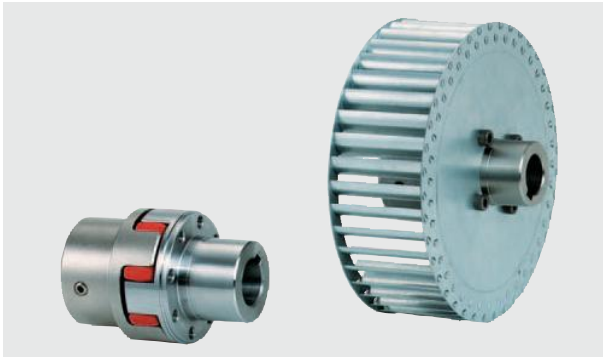
1) In case of a through base plate the dimension "e" of the shiftable linkage size 5 has to be increased by at least 10 mm.

ROTEX® Torsionally flexible couplings

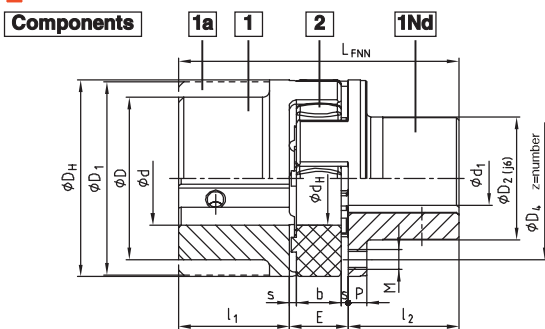


ROTEX
POLY-NORM
POLY-
REVOLEX KX
Tyre couplings

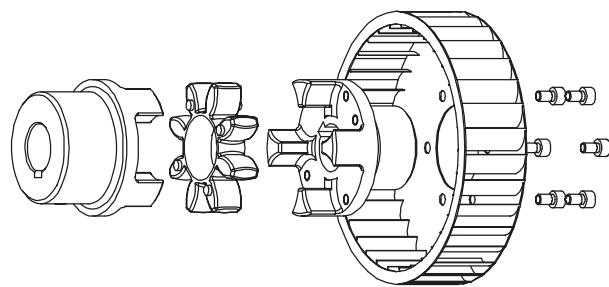
Designs FNN No. 021 and FNN with fan



- Damping vibrations and reducing noise
- Ideal compensation for misalignment due to crowned teeth
- Coupling as plug-in design
- Easy checking of wear by sight control
- Coupling to be equipped with any fan
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9



Design FNN



Design FNN with fan (type 1)

Size FNN	Pilot bore ϕd ϕD_1	Finish bore ϕd_1 max. part 1Nd steel	Dimensions [mm]												
			D_H	D_2	D_4	d_H	E	s	b	l_1, l_2	P	M	Numberz	Pitch z x angle	L_{FNN}
28		24	65	40	54	30	20	2,5	15	35	6,5	M6	8		90
38	see shaft coupling on pages 24 and 25 basic programme see pages 37 and 38	34	80	50	66	38	24	3	18	45	7,5	M8	8	8 x 45°	114
42		42	95	60	80	46	26	3	20	50	9,5	M8	12	16 x 22,5°	126
48		48	105	68	90	51	28	3,5	21	56	10,5	M8	12		140
55		55	120	78	102	60	30	4	22	65	12,5	M10	8	8 x 45°	160
65		65	135	92	116	68	35	4,5	26	75	13,5	M10	12	16 x 22,5°	185
75		75	160	106	136	80	40	5	30	85	15,5	M12	15		210
90		100	200	140	172	100	45	5,5	34	100	18,5	M16	15	20 x 18°	245

Other sizes on request

Type 1: Fan screwed on

The ROTEX® coupling can be supplied with the fan screwed on. Specific connection dimensions of customers such as pitch circle of threads, size of threads and number of centering of fans should be mentioned in your inquiry.



Type 2: Fans injection-moulded

Low prices due to production volumes depending on quantity.



Type 3: Fans pressed or glued on

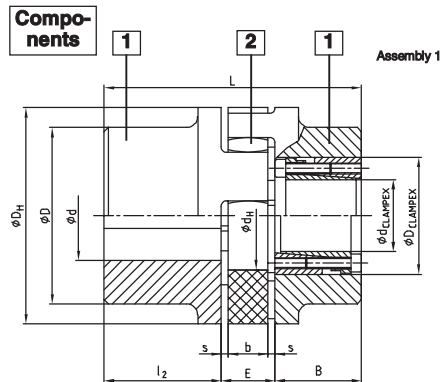
Special surface forming (knurling according to DIN 82) allows the fan to be pressed or glued onto the hub collar.



ROTEX® Torsionally flexible couplings

Further designs

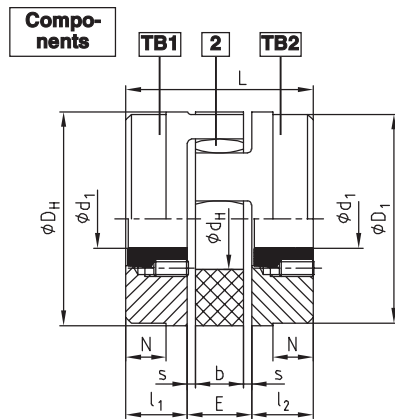
Clamping hubs



ROTEX® Size	Pilot bore ϕd ϕD_1	Hub material	CLAMPEX® KTR 200				Dimensions [mm]							
			Largest possible KTR clamping set $d \times D$	Transmittable torque and force T [Nm] F _{FX} [kN]	B	l_2	E	s	b	D _H	D	d ₁	L	
42		Steel part 1	30x55	769 51	48	50	26	3	20	95	-	46		
48			35x60	1197 68	48	56	28	3,5	21	105	-	51		
55			45x75	2132 95	59	65	30	4	22	120	-	60		
65			45x75	2132 95	59	75	35	4,5	26	135	115	68		
75			50x80	3159 126	59	85	40	5	30	160	135	80		
90			65x95	4107 126	59	100	45	5,5	34	200	160	100		
100			65x95	4107 126	59	110	50	6	38	225	180	113		
110			70x110	7023 201	70	120	55	6,5	42	255	200	127		
125			80x120	8026 201	70	140	60	7	46	290	230	147		
140			95x135	11373 239	70	155	65	7,5	50	320	255	165		
160		110x155	16068 292	80	175	75	9	57	370	290	190			
180		120x165	21910 365	80	195	85	10,5	64	420	325	220			

ROTEX® design No. 001 with clamping set CLAMPEX® KTR 200
Modification for customer from the stock programme

KTR 200 Size d x D	Length B	Transmittable torque and axial force		Clamping screw DIN EN ISO 4762 - 12.9		KTR 200 Size d x D	Length B	Transmittable torque and axial force		Clamping screw DIN EN ISO 4762 - 12.9		KTR 200 Size d x D	Length B	Transmittable torque and axial force		Clamping screw DIN EN ISO 4762 - 12.9	
		T [Nm]	F _{FX} [kN]	z x M	T _A [Nm]			T [Nm]	F _{FX} [kN]	z x M	T _A [Nm]			T [Nm]	F _{FX} [kN]	z x M	T _A [Nm]
20x47	48	513	51	6xM6	17	38x65	48	1299	68	8xM6	17	65x95	59	4107	126	8xM8	41
22x47	48	564	51	6xM6	17	40x65	48	1368	68	8xM6	17	70x110	70	7023	201	8xM10	83
24x50	48	616	51	6xM6	17	42x75	59	1990	95	6xM8	41	75x115	70	7524	201	8xM10	83
25x50	48	641	51	6xM6	17	45x75	59	2132	95	6xM8	41	80x120	70	8026	201	8xM10	83
28x55	48	718	51	6xM6	17	48x80	59	3033	126	8xM8	41	85x125	70	10659	251	10xM10	83
30x55	48	769	51	6xM6	17	50x80	59	3159	126	8xM8	41	90x130	70	11286	251	10xM10	83
32x60	48	1094	68	8xM6	17	55x85	59	3475	126	8xM8	41	95x135	66	11373	239	10xM10	83
35x60	48	1197	68	8xM6	17	60x90	59	3791	126	8xM8	41	for further details please see CLAMPEX® catalogue					



ROTEX® Size	Taper clamping bush	Dimensions [mm]										Fixing screw for taper bush			
		$l_1/2$	E	s	b	L	N	D _H	D ₁	d ₁	Size [Inch]	Length [mm]	Number	T _A [Nm]	
28	1108	23	20	2,5	15	66	-	65	65	30	1/4"	13	2	5,7	
38	1108	23	24	3	18	70	15	80	78	38	1/4"	13	2	5,7	
42	1610	26	26	3	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	22	96	20	120	118	60	7/16"	22	2	31	
75	2517	52	40	5	30	144	36	160	135	80	1/2"	25	2	49	
	5/8"										32	2	92		

- Only available for design TB 2
- TB1 modification for customer from the stock programme
- 1. BSW thread

ROTEX® - design No. 001 with taper clamping bush
Coupling type TB 1/1; TB 2/2; TB 1/2 possible

• Please order our separate dimension sheet (M 373054).

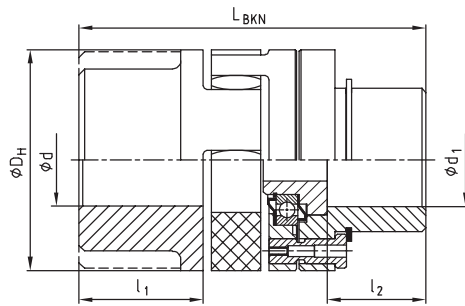
Size of taper bushes	Bore dimensions d, available; H7 fit - keyways to DIN 6885 sheet 1 * Bore with keyway (flat design) to DIN 6885 sheet 3																		
1108	10	11	12	14	16	18	19	20	22	24	25	28*							
1610	14	16	18	19	20	22	24	25	28	30	32	35	38	40	42*				
1615	14	16	18	19	20	22	24	25	28	30	32	35	38	40	42*				
2012	14	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	
2517	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60
3020	25	28	30	35	38	40	42	45	48	50	55	60	65	70	75				

ROTEX® Torsionally flexible couplings

Further designs
Torque limiters



ROTEX
POLY-NORM
POLY-
REVOLEX KX
Reifenkuppl.



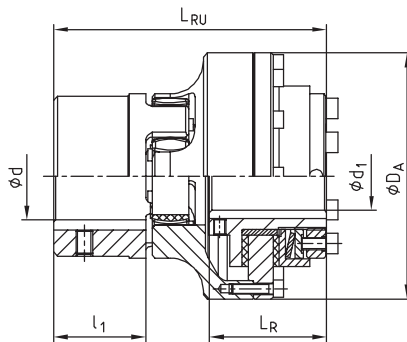
ROTEX® Size	d	d _{1 max}	l ₁	l ₂	L _{BKN}	D _H	Min. fracture torque [Nm]
28		28	35	25	101	65	100
38		38	45	35	125	80	190
42		42	50	40	139	95	250
48		48	56	46	153	105	300
55		55	65	55	177	120	400
65		65	75	65	202	135	500
75		75	85	70	230	160	600
90		100	100	85	266	200	700

ROTEX® BKN shear pin coupling, design BKN No. 009

Modification for customer from the stock programme.

Please mention the fracture torques with your order!

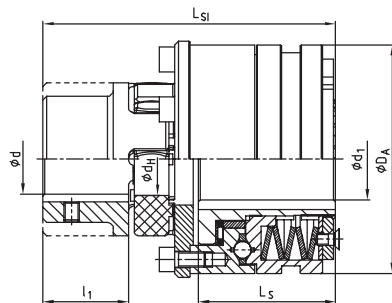
For further details please see dim. sheet no. 5020/000/009-760313



ROTEX® Size	RUFLEX® Size	Slipping torques [Nm]	d	d _{1 max}	D _A	l ₁	L _R	L _{RU}
14	00	0,5-5	see shaft couplings on pages 24-25 basic programme see p. 37-38	10	44	11	31	59
19	0	2-20		20 ₁₎	63	25	33	78
24	01	5-70		22	80	30	45	98
28	1	20-200		25	98	35	52	113
38	2	25-400		35	120	45	57	133
48	3	50-800		45	162	56	68	166
75	4	90-1600		55	185	85	78	205

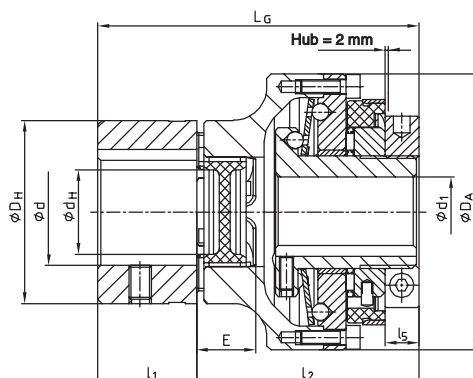
1) Finish bore exceeding ø 19, keyway according to 6885 sheet 8

ROTEX® - RUFLEX® - coupling with torque limiter, design No. 070



ROTEX® Size	KTR-SI design	KTR-SI Size	Ratchet torques [Nm]	d	d _{1 max}	D _A	l ₁	L _S	L _{SI}
28	DK	2	12-200	see shaft coupling on page 24 and 25 basic programme see page 37 and 38	35	100	35	56	124
	SR a. SGR	0	5-40		20	55		34,5	102
38	DK	3	25-450		45	120	45	73	155
	SR a. SGR	1	12-100		25	82		48	129,5
48	DK	4	50-1000		55	146	56	93,5	194
	SR a. SGR	2	25-200		35	100		56	155
55	DK	5	85-2000		65	176	65	107	222,5
	SR a. SGR	3	50-450	45	120	73		186	
75	DK	-	-	-	-	85	-	-	
	SR a. SGR	4	100-2000	55	146		93,5	241,5	
90	DK	-	-	-	-	100	-	-	
	SR a. SGR	5	170-3400	65	176		107	275,5	

ROTEX® - KTR-SI coupling with torque limiter, design No. 070



ROTEX® Size	SYNTAX® Size	SYNTAX® torque range disk spring [Nm]				Max. bore		D _A	D _H	d _H	E	L	L _G	l ₁	l ₂	l ₅
		DK ₁	DK ₂	SK ₁	SK ₂	d	d ₁									
24	20	6-20	15-30	10-20	20-65	28	20	80	55	27	18	45	100	30	70	10
28	25	20-60	45-90	25-65	40-100	38	25	98	65	30	20	50	113	35	78	11
38	35	25-80	75-150	30-100	70-180	45	35	120	80	38	24	60	136	45	91	13
48	50	60-180	175-300	80-280	160-400	62	50	162	105	51	28	70	167	56	111	14

SYNTAX® backlash-free, torsionally rigid overload coupling with shaft coupling ROTEX® GS

ROTEX® Torsionally flexible couplings



Basic programme (cylindrical bores)/Inch bores

Basic programme (cylindrical bores)

ROTEX® Size material	Component	Cylindrical finish bore [mm] H7 keyway to DIN 6885 sheet 1 [JS9] with thread for setscrew																																				
		un/pilot bored	6	8	9	10	11	12	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	48	50	55	60	65	70	75	80	85	90			
14	Sint	1a	●		●		●	●	●																													
19	Sint	1a	●										●				●		●	●	●																	
14	Al-H	1a	■	●	●	●	●	●	■	■	■	■	●	●																								
19	Al-D	1	●					●	●	●	●	●	●	●																								
	Al-D	1a	●																																			
	St	1a	■					●	●	●	●	●	●	●	●	●	■	●	●	●	●	■	●	●	■	●												
24	Al-D	1	●					●	●	●	●	●	●	●	●	●																						
	Al-D	1a	●																																			
	St	1a	■					●	●	●	●	●	●	●	●	■	●	●	●	●	■	●	●	■	●													
28	Al-D	1	●																																			
	Al-D	1a	●																																			
	St	1a	■																																			
38	St	1	●																																			
	St	1a	●																																			
	GG	1	●																																			
	GG	1a	■																																			
42	St	1	●																																			
	St	1a	■																																			
	GG	1	●																																			
	GG	1a	■																																			
48	St	1	●																																			
	St	1a	■																																			
	GG	1	●																																			
	GG	1a	■																																			
55	GG	1	●																																			
	GG	1a	●																																			
65	GG	1	●																																			
	St	1	●																																			
75	GG	1	●																																			
	St	1	●																																			
90	GG	1	●																																			
	St	1	●																																			

● Standard length ■ Large hub lengthened GG = EN-GJS-250

Inch bores

Code	Ød	Ød Inch	b ^{+0.05}	t ₂ ^{+0.2}
Tb	9,5 ^{+0.03}	3/8	3,17	11,1
DNB	11,11 ^{M7}	7/16	2,4	12,5
T	12,69 ^{H7}	1/2	4,75	14,6
Ta	12,7 ^{+0.03}	1/2	3,17	14,3
DNC	13,45 ^{H7}	17/32	3,17	14,9
E	15,87 ^{+0.03}	5/8	3,17	17,5
Es	15,88 ^{+0.03}	5/8	4,0	17,7
DND	15,852 ^{H7}	5/8	4,75	18,1
Ed	15,87 ^{+0.03}	5/8	4,75	18,1
DNH	17,465 ^{H7}	11/16	4,75	19,6
Ad	19,02 ^{+0.03}	3/4	3,17	20,7
As	19,02 ^{+0.03}	3/4	4,78	21,3

Code	Ød	Ød Inch	b ^{+0.05}	t ₂ ^{+0.2}
A	19,05 ^{+0.03}	3/4	4,78	21,3
Fa	22,20 ^{+0.03}	7/8	6,35	25,2
DNI	22,228 ^{H7}	7/8	6,35	25,0
Gs	22,22 ^{+0.03}	7/8	4,78	24,4
G	22,22 ^{+0.03}	7/8	4,75	24,7
F	22,22 ^{+0.03}	7/8	6,38	25,2
Gd	22,225 ^{M7}	7/8	4,76	24,7
Gf	23,80 ^{+0.03}	15/16	6,35	26,8
Bs	25,38 ^{+0.03}	1	6,37	28,3
H	25,40 ^{+0.03}	1	4,78	27,8
DNF	25,38 ^{H7}	1	6,35	28,4
Hs	25,40 ^{+0.03}	1	6,35	28,7

Code	Ød	Ød Inch	b ^{+0.05}	t ₂ ^{+0.2}
Sa	28,575 ^{M7}	1 1/8	6,35	31,7
Sb	28,58 ^{+0.03}	1 1/8	6,35	31,5
Sd	28,58 ^{+0.03}	1 1/8	7,93	32,1
Ja	31,70 ^{H7}	1 1/4	7,93	34,4
Js	31,75 ^{+0.03}	1 1/4	6,35	34,6
K	31,75 ^{H7}	1 1/4	7,93	35,5
Ma	34,925 ^{M7}	1 3/8	7,93	38,7
M	34,92 ^{+0.03}	1 3/8	7,93	38,6
RH1	34,93 ^{M7}	1 3/8	9,55	37,8
Cb	36,50 ^{+0.03}	1 3/8	9,55	40,9
Ca	38,07 ^{+0.03}	1 1/2	7,93	42,0
C	38,07 ^{+0.03}	1 1/2	9,55	42,5

Code	Ød	Ød Inch	b ^{+0.05}	t ₂ ^{+0.2}
Nb	41,275 ^{M7}	1 5/8	9,55	45,8
Ls	44,42 ^{+0.03}	1 3/4	9,55	48,8
L	44,45 ^{H7}	1 3/4	11,11	49,4
Lu	47,625 ^{M7}	1 7/8	12,7	53,5
Da	49,20 ^{+0.03}	1 7/8	12,7	55,0
De	50,77 ^{+0.03}	2	12,7	56,4
D	50,80 ^{+0.03}	2	12,7	55,1
Pa	53,975 ^{M7}	2 1/8	12,7	60,0
Ub	60,325 ^{M7}	2 3/8	15,875	67,6
Wa	73,025 ^{M7}	2 7/8	19,05	81,7
Wd	85,725 ^{M7}	3 3/8	22,225	95,8
Wf	92,075 ^{M7}	3 5/8	22,225	101,9

ROTEX® Size	Material	Component	Code Inch bores (basic programme)						
14	Al-H	1a	Ed *						
	St	1a	A	Ed	Gs				
19	Al-D	1	A	Es					
	St	1a	A	G	F	Ta	Gd		
24	Al-D	1	A	G	F				
	St	1a	A	G	F	K			
28	Al-D	1	A	G					
	St	1a	A	G	F	K	Bs	DNI	
38	EN-GJL-250	1	A	G	F	K	Bs	DNI	

ROTEX® Size	Material	Component	Code Inch bores (basic programme)						
38	Al-D	1	C	F	K	Bs	Ma		
	EN-GJL-250	1a		G	F	K			
42	Al-D	1		Nb		L			
48	EN-GJL-250	1	C	G		K			
55	EN-GJL-250	1	C			K	L		
65	EN-GJL-250	1	C	Pa		K			
75	EN-GJL-250	1	C			K			

* Large hub lengthened

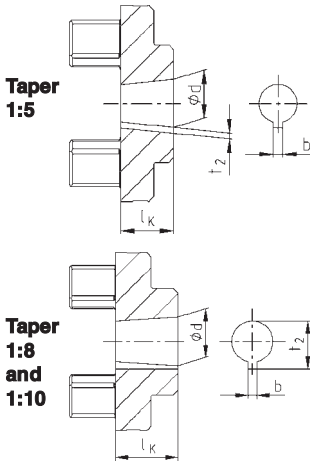
ROTEX® Torsionally flexible couplings



ROTEX
POLY-NORM
POLY-
REVOLUX IX
Tyre couplings

Taper bores · Spline bores (basic programme)

Taper bores



Taper 1:5				
Code	Details of bores			
	d +0,05	b ^{ISO}	t ₂ +0,1	l _k
A-10	9,85	2	1,0	11,5
B-17	16,85	3	1,8	18,5
C-20	19,85	4	2,2	21,5
Cs-22	21,95	3	1,8	21,5
D-25	24,85	5	2,9	26,5
E-30	29,85	6	2,6	31,5
F-35	34,85	6	2,6	36,5
G-40	39,85	6	2,6	41,5

Taper 1:8				
Code	Details of bores			
	d +0,05	b +0,05	t ₂ +0,1	l _k
...N.../1	9,7	2,4	10,85	17,0
...N.../1c	11,6	3	12,90	16,5
...N.../1e	13,0	2,4	13,80	21,0
...N.../1d	14,0	3	15,50	17,5
...N.../1b	14,3	3,2	15,65	19,5
...N.../2	17,287	3,2	18,24	24,0
...N.../2a	17,287	4	18,94	24,0
...N.../2b	17,287	3	18,34	24,0
...N.../3	22,002	4	23,40	28,0
...N.../4	25,463	4,78	27,83	36,0
...N.../4b	25,463	5	28,23	36,0
...N.../4a	27,0	4,78	28,80	32,5
...N.../4g	28,45	6	29,32	38,5
...N.../5	33,176	6,38	35,39	44,0
...N.../5a	33,176	7	35,39	44,0
...N.../6	43,057	7,95	3,378	51,0
...N.../6a	41,15	8	3,1	42,5

Taper 1:10				
Code	Details of bores			
	d +0,05	b ^{ISO}	t ₂ +0,1	l _k
CX	19,95	5	22,08	32
DX	24,95	6	26,68	45
EX	29,75	8	31,88	50

Taper 1:5 Code	ROTEX® basic programme (size/material)									
	19		24		28		38		42	
	St	Al-D	St	Al-D	St	Al-D	GG ¹⁾	Al-D	GG ¹⁾	
A-10	●	●								
B-17			●	●	●	●	●	●		
C-20			●		●		●			
D-25					●		●		●	

Taper 1:8 Code	ROTEX® basic programme (size/material)									
	19		24		28		38		42	
	St	Al-D	St	Al-D	St	Al-D	GG ¹⁾	Al-D	GG ¹⁾	
...N.../1	●	●	●	●	●	●				
...N.../1d	●		●	●						
...N.../2			●	●	●	●	●			
...N.../2a			●	●	●	●	●			
...N.../3					●	●	●	●		●

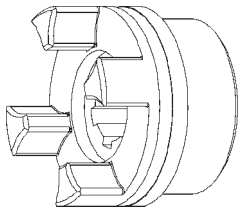
With codes N.../6 and N.../6a parallel to taper the respective pump code should be started before ...N and the respective size of coupling before and behind ...N.../.

1) EN-GJL-250

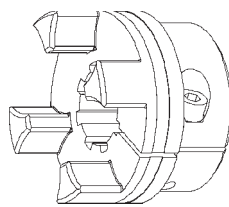
● basic programme

Spline bores

Design 1.3 hub with spline bore



Design 2.3 clamping hub with spline bore



Spline bores to DIN 5480			
Spline code	Pitch circle	Module	No. of teeth
20 x 1 x 18 x 7H	18	1	18
20 x 1,25 x 14 x 7H	17,5	1,25	14
25 x 1,25 x 18 x 7H	22,5	1,25	18
30 x 2 x 13 x 7H	26	2	13
30 x 2 x 14 x 7H	28	2	14
35 x 2 x 16 x 8H	32	2	16
40 x 2 x 18 x 7H	36	2	18
45 x 2 x 21 x 7H	41	2	21
48 x 2 x 22 x 9H	44	2	22
50 x 2 x 24 x 7H	48	2	24

SAE Involute spline					
Spline code	Size	Pitch circle	Pitch	No. of teeth	Angle
PH-S	5/8"	14,28	16/32	9	30°
PI-S	3/4"	17,46	16/32	11	30°
PB-S	7/8"	20,63	16/32	13	30°
PB-BS	1"	23,81	16/32	15	30°
PJ	1 1/8"	26,98	16/32	17	30°
PC-S	1 1/4"	29,63	12/24	14	30°
PA-S	1 3/8"	33,33	16/32	21	30°
PS-S	1 1/2"	35,98	12/24	17	30°
PD-S	1 1/2"	36,51	16/32	23	30°
PE-S	1 3/4"	42,86	16/32	27	30°
PK	1 3/4"	41,275	8/16	13	30°
PT	2"	47,625	8/16	15	30°

Spline bores to DIN 5482					
Spline code	Size	Pitch circle	Pitch	No. of teeth	Profile correction
P 8217	A 17 x 14	14,40	1,6	9	+0,600 ²⁾
P 8228	A 28 x 25	26,25	1,75	15	+0,302
P 8230	A 30 x 27	28,00	1,75	16	+0,327
P 8235	A 35 x 31	31,50	1,75	18	+0,676
P 8240	A 40 x 36	38,00	1,9	20	+0,049
P 8245	A 45 x 41	44,00	2	22	+0,181
P 8250	A 50 x 45	48,00	2	24	+0,181

2) spline correction different with DIN

Code	SAE Involute splines (ROTEX® size)								
	24	28	38	42	48	55	65	75	90
PH-S	■	●							
PB	■								
PB-S	■	●	●	●					
PB-B		■	●	■	●	●		●	
PC			●	●	●	●			
PA-S				●	■				
PS-S				●	■				
PD-S						■			
PK							●	●	●

Code	DIN 5482 options (ROTEX® size)					
	24	42	48	55	65	75
P 8235		■				
P 8245			■	■	●	
DIN 5480 options						
20 x 1,25 x 14 x 7H	■					
25 x 1,25 x 18 x 7H	■					
30 x 2 x 14 x 7H	●		●			
35 x 2 x 16 x 8H			■			
40 x 2 x 18 x 7H			●	■		
50 x 2 x 24 x 7H				●	■	■

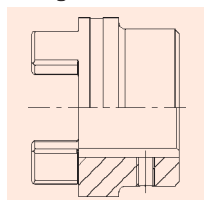
Preferred designs: ■ Type 1.3 hub with spline bore/for end plate/with recess

● Type 2.3 clamping hub with spline bore

Hub designs

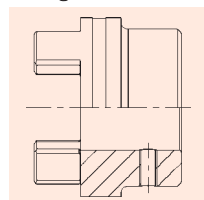
Due to the numerous applications of ROTEX® for many different mounting situations, this coupling system is available with various hub designs. These designs mainly differ in that they offer either positive or frictionally engaged connections, but mounting situations like, for example, gear shafts with integrated transmission cams or similar applications are covered, too.

Design 1.0 hub with keyway and fixing screw



Positive power transmission; permissible torque depends on the permissible surface pressure. Not suitable for backlash-free power transmission for heavily reversing operation.

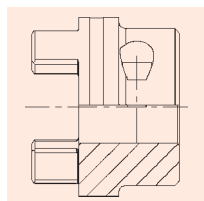
Design 1.1 hub without feather key, with setscrew



Positive torque transmission for connections pressed or glued in. (No ATEX release)

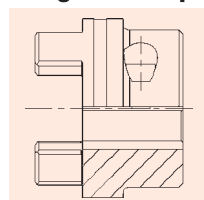
Design 1.3 hub with spline bore (page 39)

Design 2.0 clamping hub, single slotted, without keyway



Frictionally engaged, backlash-free shaft-hub-connection. Transmittable torques depend on the bore diameter. (Only for ATEX category 3)

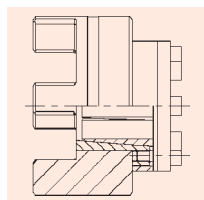
Design 2.1 clamping hub, single slotted, with keyway



Positive power transmission with additional frictional tightness. The frictional tightness avoids or reduces reversal backlash. Surface pressure of the keyway connection is reduced.

Design 2.3 clamping hub with spline bore (page 39)

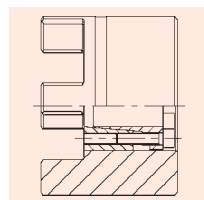
Design 4.2 with CLAMPEX® clamping set KTR 250



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

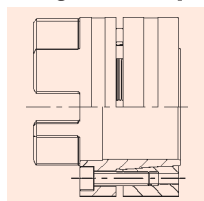
Design 4.1 w. CLAMPEX® clamping set KTR 200/

f. KTR 400 Ausf. 4.3



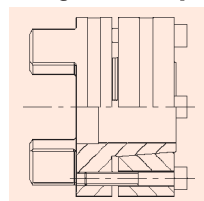
Frictionally engaged, backlash-free shaft-hub-connection for transmission of larger torques. Largest clamping set possible depends on the hub collar diameter. Clamping set screw fitting possible both internally and externally. For details of calculation please see CLAMPEX® catalogue.

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



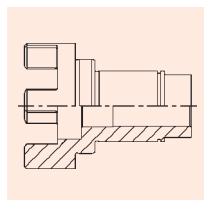
Integrated frictionally engaged shaft-hub-connection for transmission of higher torques. Screw fitting on elastomer side. For details about torques and dimensions see ROTEX® GS catalogue on page 106. Suitable for high speeds.

Design 6.5 clamping ring hub



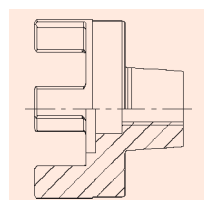
Design equal to 6.0, but clamping screws to be fitted externally. Suitable, for example, for disassembly of radial spacer tubes (special design).

Special hubs on request



Special lengthened hub/shaft with integrated cams.

Special hubs on request



Special hub with external taper as a frictionally engaged connection.

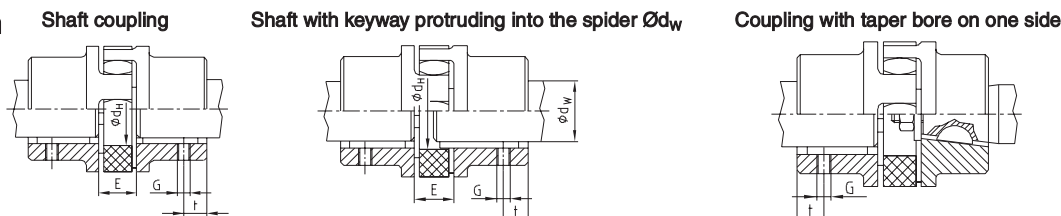
ROTEX® Torsionally flexible couplings



ROTEX
POLY-NORM
POLY-
REVOLLEX KX
Tyre couplings

Installation · Displacements · Pull-off threads · Threads for setscrews

Installation



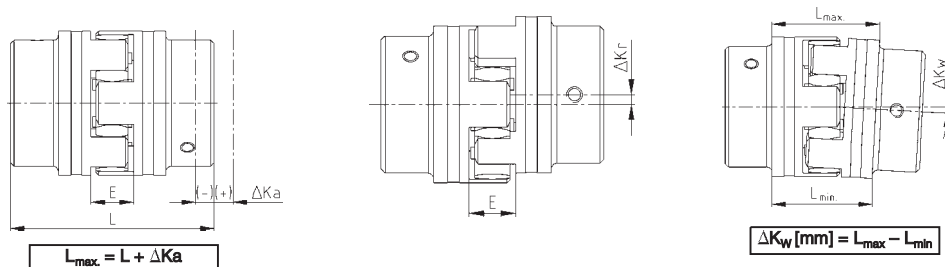
ROTEX® Size	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180	
Mounting dimension																		
Distance dimension E	13	16	18	20	24	26	28	30	35	40	45	50	55	60	65	75	85	
Dimension d _h	10	18	27	30	38	46	51	60	68	80	100	113	127	147	165	190	220	
Dimension d _w	7	12	20	22	28	36	40	48	55	65	80	95	100	120	135	160	185	
Displacements																		
Max. axial displacement ΔKa [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 1/min. ΔKr [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	
ΔKw [degrees] Max. angular displacement with n = 1500 1/min. ΔKw [mm]	1,2 0,67	1,2 0,82	0,9 0,85	0,9 1,05	1,0 1,35	1,0 1,70	1,1 2,00	1,1 2,30	1,2 2,70	1,2 3,30	1,2 4,30	1,2 4,80	1,3 5,60	1,3 6,50	1,2 6,60	1,2 7,60	1,2 9,00	
Pull-off threads																		
Standard hub dimension A	–	25	32	38	50	55	68	80	90	98	115	145	165	190	210	230	270	
Stand. hub from steel, large hub and flange dimension A	–	32	45	54	66	80	90	102	116	136	172	195	222	252	282	325	375	
Dimension M	–	M4	M5	M6	M8	M8	M8	M10	M10	M12	M16	M16	M16	M20	M20	M24	M24	
Dimension B	–	6	6	8	10	10	10	12	12	15	20	20	20	25	25	30	30	
Threads for setscrews																		
Dimension G	M4	M5	M5	M8	M8	M8	M8	M10	M10	M10	M12	M12	M16	M16	M20	M20	M20	
Dimension t	5	10	10	15	15	20	20	20	20	25	30	30	35	40	45	50	50	
Tightening torque T _A [Nm]	1,5	2	2	10	10	10	10	17	17	17	40	40	80	80	140	140	140	

Displacements

Axial displacement ΔKa

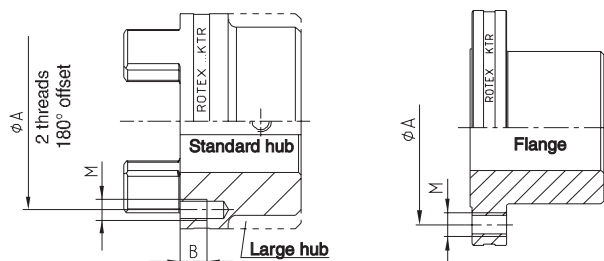
Radial displacement ΔKr

Angular displacement ΔKw [degrees]



The above-mentioned figures of displacement of flexible ROTEX® couplings are standard values taking into account the load of the coupling up to the rated torque T_{KV} and an operating speed n = 1500 1/min along with an ambient temperature of + 30° C. For different operating conditions please order our data sheet KTR-N 20240 regarding displacements for ROTEX®. 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. In case of an axial shifting the dimension "L" has to be considered as a minimum dimension in order to keep the spider free from pressure on its faces. Detailed mounting instructions are shown on our homepage (<http://www.ktr.com>).

Fixing screws/Pull-off threads



Standard hubs with pull-off threads are produced on request only.

Standard flanges up to size 90 with 2 pull-off threads, from size 100 with 3 pull-off threads.

Fixing screws to DIN EN ISO 4762 for couplings with brake drums or disk brakes, spline clamping hubs

Cap screw DIN EN ISO 4762 – 12.9							
M4	M6	M8	M10	M12	M16	M20	M24
Screw tightening torque T _A [Nm]							
4,1	14	35	69	120	295	580	1000

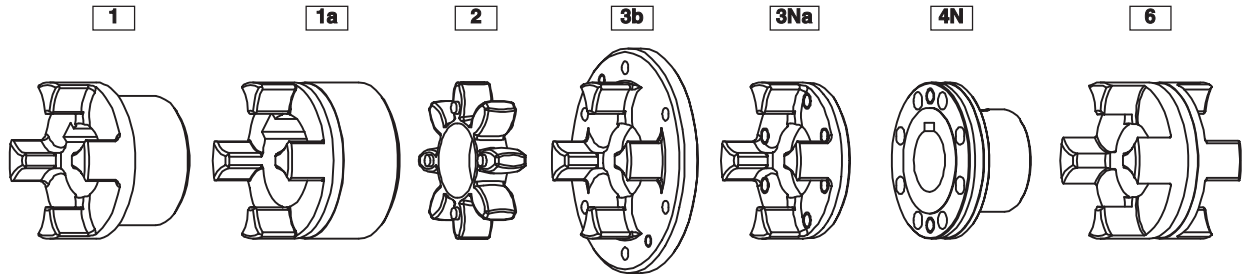
ROTEX® Torsionally flexible couplings

Weights - Mass moments of inertia

Individual components



Components



ROTEX® components													
ROTEX® Size	Standard hub				Large hub			Spider	Driving flange			Coupling flange	DKM-spacer
	Part 1				Part 1a			Part 2	Part 3b	Part 3Na		Part 4N	Part 6
	Weight/Mass moment of inertia												
	Alu [kg] [kgm²]	EN-GJL-250 [kg] [kgm²]	EN-GJS-400-15 [kg] [kgm²]	St [kg] [kgm²]	Alu [kg] [kgm²]	EN-GJL-250 [kg] [kgm²]	S [kg] [kgm²]	Polyurethane (Vulkollan) [kg] [kgm²]	EN-GJS-400-15 [kg] [kgm²]	St [kg] [kgm²]	EN-GJS-400-15 [kg] [kgm²]	St [kg] [kgm²]	Alu [kg] [kgm²]
14	-	-	-	-	0,020	-	-	0,0046	-	-	-	-	-
	-	-	-	-	0,000003	-	-	-	-	-	-	-	-
19	0,054	-	-	-	0,066	-	0,18	0,009	-	-	-	-	-
	0,00001	-	-	-	0,00002	-	0,00005	0,000003	-	-	-	-	-
24	0,11	-	-	-	0,160	-	0,37	0,02	0,03	0,18	-	0,24	0,14
	0,00004	-	-	-	0,00009	-	0,00021	0,00001	0,0003	0,00009	-	0,00009	0,00006
28	0,18	-	-	-	0,255	-	0,64	0,03	0,58	0,30	-	0,39	0,22
	0,00009	-	-	-	0,0002	-	0,00048	0,00002	0,0008	0,00021	-	0,0002	0,00013
38	0,38	1,01	-	1,00	0,42	1,17	1,27	0,06	0,80	-	0,313	0,62	0,35
	0,0003	0,0009	-	0,00098	0,00044	0,0012	0,0014	0,00005	0,001	-	0,00047	0,0005	0,00035
42	0,58	1,56	-	1,81	0,71	1,88	1,84	0,09	1,41	-	0,76	1,05	0,51
	0,0007	0,002	-	0,0025	0,0011	0,0029	0,0017	0,0001	0,004	-	0,0012	0,0011	0,0007
48	0,80	2,15	-	2,43	0,90	2,55	2,74	0,11	1,62	-	0,89	1,38	0,67
	0,0011	0,003	-	0,0041	0,0016	0,0047	0,0052	0,0002	0,005	-	0,0017	0,0018	0,001
55	-	3,25	-	3,70	-	3,69	3,93	0,14	2,82	-	1,47	2,08	0,97
	-	0,006	-	0,0082	-	0,0085	0,010	0,0003	0,012	-	0,0035	0,0035	0,002
65	-	4,96	-	4,50	-	-	5,85	0,21	3,46	-	1,89	3,00	1,43
	-	0,012	-	0,012	-	-	0,019	0,0005	0,017	-	0,0059	0,0064	0,004
75	-	7,82	-	7,18	-	-	9,06	0,39	5,03	-	3,0	4,86	2,2
	-	0,026	-	0,026	-	-	0,040	0,002	0,032	-	0,0125	0,015	0,009
90	-	13,4	-	12,5	-	-	17,0	0,7	7,9	-	4,87	8,67	3,9
	-	0,067	-	0,067	-	-	0,117	0,004	0,073	-	0,033	0,042	0,025
100	-	-	16,8	-	-	-	-	0,9	-	-	7,55	12,6	-
	-	-	0,11	-	-	-	-	0,007	-	-	0,063	0,077	-
110	-	-	23,9	-	-	-	-	1,4	-	-	10,15	16,9	-
	-	-	0,20	-	-	-	-	0,015	-	-	0,11	0,132	-
125	-	-	35,6	-	-	-	-	1,9	-	-	14,9	26,0	-
	-	-	0,39	-	-	-	-	0,025	-	-	0,21	0,27	-
140	-	-	48,3	-	-	-	-	2,5	-	-	20,1	35,3	-
	-	-	0,65	-	-	-	-	0,04	-	-	0,34	0,45	-
160	-	-	70,3	-	-	-	-	3,9	-	-	30,4	53,1	-
	-	-	1,26	-	-	-	-	0,08	-	-	0,70	0,89	-
180	-	-	108	-	-	-	-	6,5	-	-	38,7	79,8	-
	-	-	2,35	-	-	-	-	0,173	-	-	1,14	1,78	-

Weight and mass moment of inertia each refer to the maximum finish bore without keyway.

ROTEX® Torsionally flexible couplings

Weights - Mass moments of inertia

Complete couplings



ROTEX
POLY-NORM
POLY-
REVOLLEX KX
Tyre couplings

Size	AFN		BFN		CF		DF		ZWN ¹⁾		SD	
	Weight in [kg]	Mass moment of inertia J [kgm ²]	Weight in [kg]	Mass moment of inertia J [kgm ²]	Weight in [kg]	Mass moment of inertia J [kgm ²]	Weight in [kg]	Mass moment of inertia J [kgm ²]	Weight in [kg]	Mass moment of inertia J [kgm ²]	Weight in [kg]	Mass moment of inertia J [kgm ²]
19	–	–	–	–	–	–	–	–	–	–	0,42	0,00008
24	0,86	0,00037	0,81	0,0004	0,61	0,0004	0,62	0,0005	1,62	0,0008	0,81	0,0003
28	1,41	0,00084	1,36	0,0009	1,08	0,001	1,19	0,0015	2,72	0,0018	1,42	0,0007
38	1,93	0,002	2,003	0,0019	1,87	0,002	1,66	0,0028	4,006	0,0038	2,71	0,0022
42	3,71	0,0047	3,46	0,0044	3,06	0,005	2,91	0,0072	6,92	0,0088	4,41	0,005
48	4,65	0,0072	4,53	0,0084	3,88	0,008	3,35	0,0097	9,06	0,0168	5,75	0,008
55	7,24	0,0143	6,94	0,0133	6,21	0,018	5,78	0,023	13,4	0,0266	9,1	0,017
65	9,99	0,025	10,06	0,0248	8,63	0,029	7,13	0,034	20,12	0,0496	13,0	0,033
75	16,11	0,057	16,07	0,0555	13,2	0,060	10,5	0,065	32,14	0,111	21,2	0,073
90	27,78	0,154	27,64	0,146	22,0	0,144	16,5	0,15	55,28	0,292	34,6	0,165
100	41,2	0,287	37,85	0,257	31,2	0,256	24,0	0,267	75,7	0,514	48,1	0,288
110	55,5	0,534	52,35	0,457	44,1	0,47	34,2	0,51	104,7	0,914	68,4	0,528
125	83,7	0,985	78,4	0,895	64,9	0,878	48,0	0,91	156,8	1,79	103,1	1,05
140	113,3	1,62	106,2	1,48	88,1	1,47	66,5	1,54	212,4	2,96	140,3	1,78
160	170,9	3,26	157,7	2,93	127,9	2,72	94,0	2,71	315,4	5,86	210,2	3,53
180	243,5	6,01	233	5,44	179,5	4,86	128,5	4,78	466	10,88	306,9	6,68

Size	BTAN/SBAN without drum/without disk	
	Weight in [kg]	Mass moment of inertia J [kgm ²]
28	0,90	0,0004
38	1,84	0,0016
42	2,84	0,0033
48	3,95	0,0052
55	6,02	0,0103
65	8,81	0,021
75	14,31	0,045
90	25,4	0,122
100	35,3	0,213
110	49,9	0,387
125	74,8	0,75
140	100,7	1,232
160	150,9	2,44
180	218,4	4,54

Drum for BTAN ²⁾		
Brake disk D _B x B	Weight in [kg]	Mass moment of inertia J [kgm ²]
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

Disk for SBAN ²⁾		
Disk brake A x G _S	Weight in [kg]	Mass moment of inertia J [kgm ²]
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

Weights and mass moments of inertia refer to standard hub with maximum bore without keyway.

- 1) Weights and mass moments of inertia without intermediate shaft.
2) Selection of ROTEX® brake drum - disk brake please see page 31.