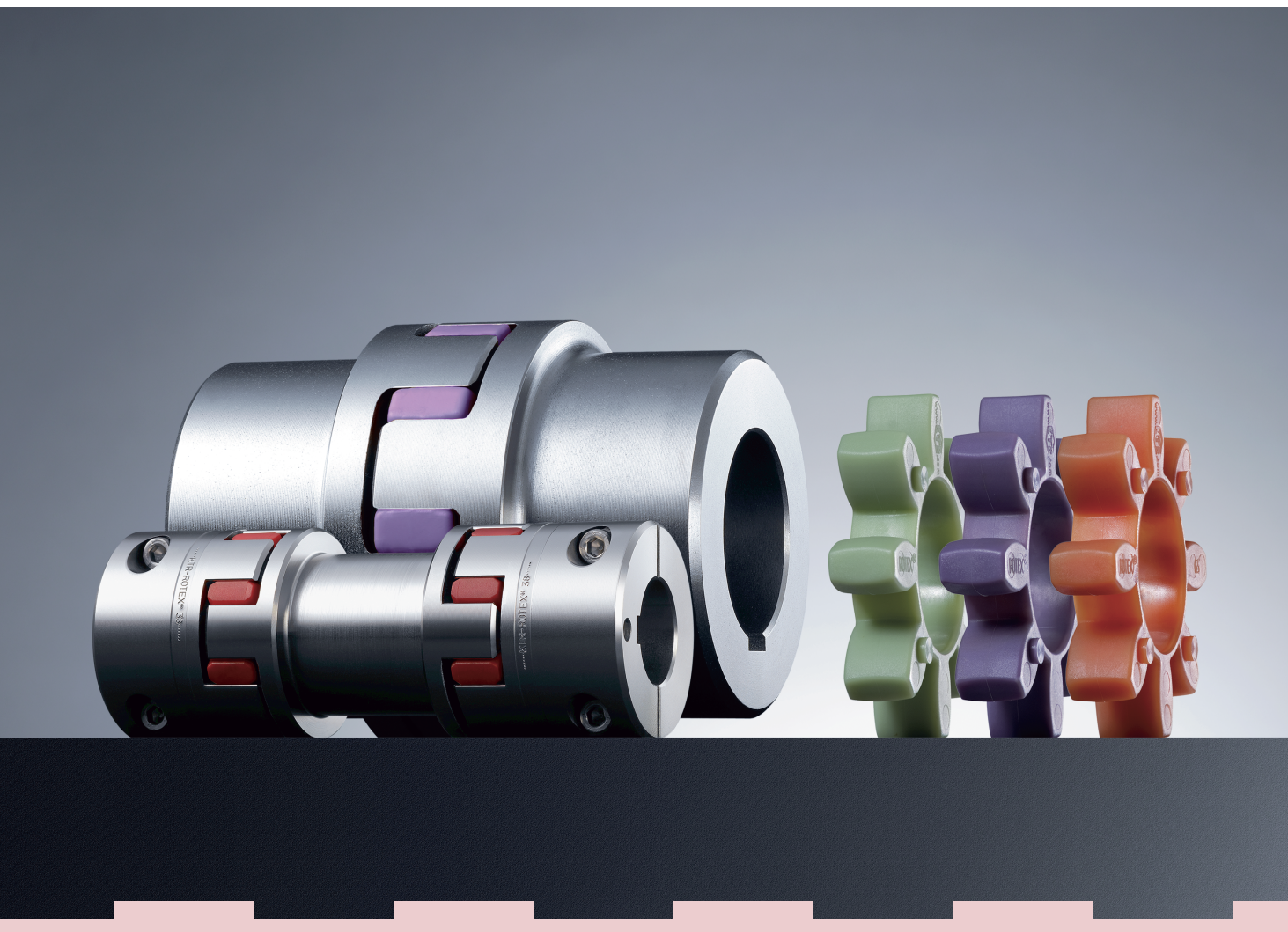




ROTEX®

Torsionally flexible coupling

Made for Motion



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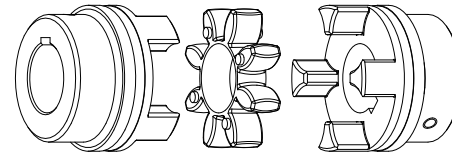


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Coupling description

General description

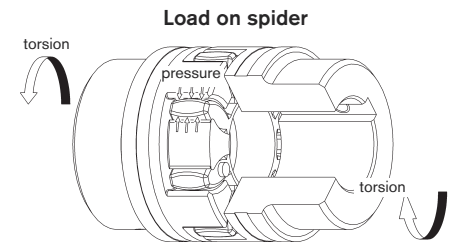
ROTEX® couplings are designed to transmit torque between drive and driven components via curved jaw hubs and elastomeric elements commonly known as spiders. The combination of these components provides dampening and accommodation for misalignments. This product is available in a variety of metals, elastomers and mounting configurations to meet your specific needs.



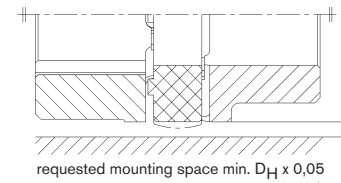
Function and Design

ROTEX® – couplings suitable for horizontal or vertical applications are constructed from a variety of materials and geometries providing a torsionally flexible platform optimizing the balance between inertia, coupling performance and application requirements. The machined concaved jaws provide a pocket for the crowned spider legs, allowing the hubs to articulate freely while accommodating misalignment, minimizing restoring forces, dampening shock and vibration while providing failsafe torque transmission. The symmetrical relationship of the hubs allows for a variety of accessories to accommodate different shaft distances. Together with the curved jaw, the crowned design reduces edge loading of the ROTEX® spider while compensating for misalignment and providing system dampening. The unique geometry of the coupling, in addition to a variety of spider materials and durometers, contribute to the dampening characteristics of the system. In contrast to other flexible couplings with elastomeric elements in shear, ROTEX® coupling spiders are in compression, defining the torque of the coupling. This design characteristic results in a maximum torsional angle of 5° and minimizes spider expansion due to deformation at excessive speed/loads as illustrated.

Interlocking curved jaws with a variety of standard clamping options accommodates shafts up to 7.875 inches and a maximum nominal torque of 309,750 lb-in while still accommodating blind assembly. As defined by the spider, ROTEX couplings are suitable for moderate industrial temperature ranges. Together these features reduce the maintenance required during the life-cycle of the coupling.



Deformation with load



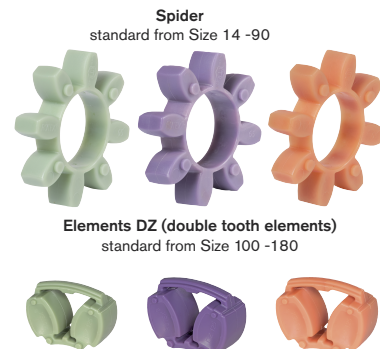
Explosion-proof use

ROTEX® couplings are suitable for power transmission in hazardous areas. The couplings are certified and conform to EC standard 94/9/EC (ATEX 95) as units of category 2G/2D and are suitable for use in hazardous areas of zone 1, 2, 21 and 22. Please read through our information included in our Type Examination Certificate and the operating and installation instructions at www.ktr.com.

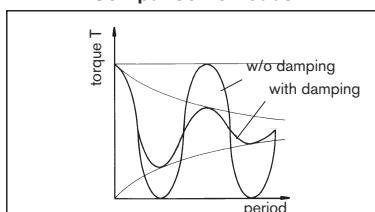


Spiders - our innovation T-PUR®

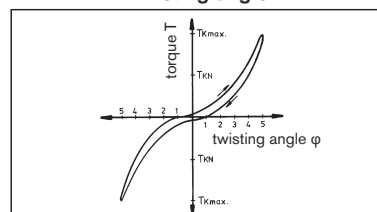
KTR has developed a new standard material for our ROTEX couplings. The improved polyurethane material, T-PUR® is able to accommodate higher application temperatures for an even longer life than our previous polyurethane. In order to see the improvement, our T-PUR® material are identified in color as; orange (92 Shore-A), purple (98 Shore-A) and pale green (64 shore-D). The previous colors yellow, red and natural white with green ends are still available for a limited time. As in the past ROTEX coupling sizes 100 to 180 utilize our DZ segments as standard, with a single element available as an option.



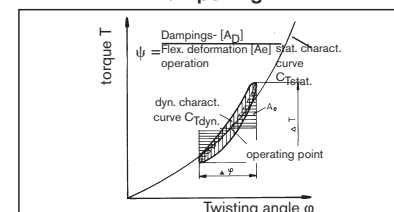
Comparison of loads



Twisting angle



Dampening



Coupling selection

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

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

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

$$T_N [\text{lb in}] = 63025 \frac{[\text{HP}]}{[\text{RPM}]}$$

1.2 Load produced by torque shocks

The permissible maximum torque of the coupling must correspond with 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.

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 the calculation of the peak driving torque with the help of our simulation program.

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

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

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

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

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 safe operation. If requested, we will perform the torsional vibration calculation and the coupling selection for you. For details please contact KTR Engineering.

2.1 Load produced by rated torque

Taking ambient temperature into consideration, the permissible rated torque T_{KN} of the coupling must correspond with the rated torque T_N of the machine.

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

2.2 Passing through the resonance range

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

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

2.3 Load produced by vibratory torque shocks

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

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.

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

$$P_{KW} \geq P_W$$

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 $+ 86^\circ\text{F}$.
Rated torque of coupling	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	

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

Allowable load on key of the coupling hub

The shaft-hub-connection has to be verified by the customer. Allowable surface pressure according to DIN 6892 (method C).

Cast iron EN-GJL-250 (GG 25)	32,633 psi
material nodular iron EN-GJS-400-15 (GGG 40)	32,633 psi
material steel S355J2G3 (St 52.3)	36,259 psi
for other steel materials $p_{zul} =$	$0,9 \cdot R_e (R_{p0.2})$

Coupling selection

Service Factor S_t for Temperature °F											
	-58° F	-22 -86° F	104° F	122° F	140° F	158° F	176° F	194° F	212° F	230° F	248° F
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	-	-	-

Service Factor S_z for Starting Frequency					Service factor S_A/S_L for shocks	
starting frequency/h	100	200	400	800		S_A/S_L
S_z	1.0	1.2	1.4	1.6	gentle shocks	1.5
					average shocks	1.8
					heavy shocks	2.5

Example of selection:

Given: Details of driving side

A. C. motor	449TS	$S_A = 1.8$
Motor output	$P = 300$ HP	
Speed	$n = 1,750$ rpm	
Moment of inertia driven side	$J_A = 25.7$ lb in sec ²	
Start-up frequency	$z = 6^{1/4}$	$S_z = 1.0$
Ambient temperature	$= + 140$ °F	$S_t = 1.4$

Given: Details of load side

Screw compressor	
Rated torque of load side	$T_{LN} = 8,230$ lb-in
Moment of inertia of load side	$J_L = 60.2$ lb in sec ²

Calculation

● Rated driving torque

$$T_{AN} \text{ [lb-in]} = 63,025 \cdot \frac{P(\text{HP})}{n_{AN} \text{ [rpm]}}$$

$$T_{AN} = 63,025 \cdot \frac{300 \text{ HP}}{1,750 \text{ rpm}} = 10,804 \text{ lb-in}$$

Coupling selection:

● Load produced by rated torque:

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

$$T_{KN} \geq 8,230 \text{ lb-in} \cdot 1.4 = 11,522 \text{ lb-in}$$

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

$$T_{KN} = 21,240 \text{ lb-in}$$

$$T_{K \max} = 42,480 \text{ lb-in}$$

● Load produced by torque shocks:

$$T_{K \max} \geq T_S \cdot S_z \cdot S_t$$

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

$$M_A = \frac{J_L}{(J_A + J_L)} = \frac{60.2 \text{ lb-in-sec}^2}{(25.7 \text{ lb-in-sec}^2 + 60.2 \text{ lb-in-sec}^2)} = 0.7$$

● Driving torque

$$T_{AS} = 2.0 \cdot T_{AN}$$

$$= 2.0 \cdot 10,804 \text{ lb-in} = 21,608 \text{ lb-in}$$

$$T_S = 21,608 \text{ lb-in} \cdot 0.7 \cdot 1.8 = 27,226 \text{ lb-in}$$

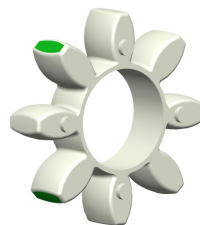
$$T_{K \max} \geq 27,226 \text{ lb-in} \cdot 1 \cdot 1.4 = 38,117 \text{ lb-in}$$

$$T_{K \max} \text{ with } 42,480 \text{ lb-in} \geq 38,117 \text{ lb-in} \quad \checkmark$$

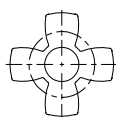
Spider types - Materials, characteristics and properties

Spider type (hardness shore)	92 Shore-A (T-PUR®)	DZ 92 Shore-A (T-PUR®)	92 Shore-A
	 Innovation T-PUR®		
Size	14 to 90	100 to 180	14 to 90
Material	T-PUR®		Polyurethane (PUR)
Perm. temperature range Continuous temperature Max.temperature short time	-58°F to +248°F -58°F to +302°F		-58°F to +194°F -58°F to +248°F
Properties	-significantly longer service life - very good temperature resistance -improved damping of vibrations -good damping, average elasticity -suitable for all hub materials		-good damping, average elasticity -suitable for all hub materials

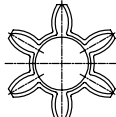
Spider type (hardness shore)	98 Shore-A (T-PUR®)	DZ 95 Shore-A (T-PUR®)	98 Shore-A
	 Innovation T-PUR®		
Size	14 to 90	100 to 180	14 to 90
Material	T-PUR®		Polyurethane (PUR)
Perm. temperature range Continuous temperature Max.temperature short time	-58°F to +248°F -58°F to +302°F		-22°F to +194°F -58°F to +248°F
Properties	-significantly longer service life - 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 (hardness shore)	64 Shore-D (T-PUR®)	DZ 64 Shore-D (T-PUR®)	64 Shore-D
	 Innovation T-PUR®		
Size	14 to 90	100 to 180	14 to 90
Material	T-PUR®		Polyurethane (PUR)
Perm. temperature range Continuous temperature Max.temperature short time	-58°F to +248°F -58°F to +302°F		-22°F to +230°F -22°F to +266°F
Properties	-significantly longer service life - very good temperature resistance -improved damping of vibrations -transmission of very high torques with low damping -recommended hub material: Steel and GJS		-transmission of very high torques with low damping -suitable for displacing critical speeds -resistant to hydrolysis -recommended hub material: Steel and GJS

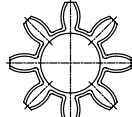
ROTEX® 14



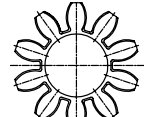
ROTEX® 19



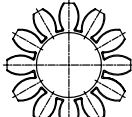
ROTEX® 24-65



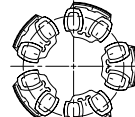
ROTEX® 75-160



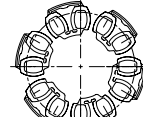
ROTEX® 180



ROTEX® DZ 100-160



ROTEX® DZ 180



Technical data

ROTEX® sizes for all designs and materials	Max. speed (rpm) with V =		Twisting angle with		Torque [lb-in]			Damping power [W] with +86 °F P _{KW}	Torsion stiffness C _{dyn} [$\frac{\times 10^3 \text{ lb-in}}{\text{rad}}$]			
	115 ft/s iron	131 ft/s steel	T _{KN} φ	T _{K max} φ	Rated T _{KN}	Max T _{K max}	Vibratory T _{KW}		1.00 T _{KN}	0.75 T _{KN}	0.50 T _{KN}	0.25 T _{KN}
	Spider 92 Shore A; made from T-PUR® and PUR											
14	22,200	25,400	6.4°	10°	66	130	18	–	3.4	2.7	2.1	1.2
19	16,700	19,000		89	170	23	4.8	11.3	9.3	7.1	4.2	
24	12,100	13,800			300	610	81	6.6	43.0	35.2	26.6	15.8
28	10,100	11,500			840	1,680	220	8.4	96.5	79.1	59.8	35.5
38	8,300	9,500			1,680	3,360	430	10.2	186.3	152.8	115.5	68.5
42	7,000	8,000			2,340	4,690	610	12.0	210.1	172.3	130.3	77.3
48	6,350	7,250			2,740	5,480	710	13.8	324.8	266.3	201.4	119.4
55	5,550	6,350			3,620	7,250	940	15.6	448.9	368.1	278.4	165.0
65	4,950	5,650	3.2°	5°	5,530	11,060	1,440	18.0	859.7	705.0	533.0	316.0
75	4,150	4,750			11,320	22,650	2,940	21.6	1,003.0	822.4	621.9	368.6
90	3,300	3,800			21,240	42,480	5,520	30.0	1,682.5	1,379.6	1,043.2	618.3
100	2,950	3,350			29,200	58,410	7,590	36.0	2,240.0	1,836.8	1,388.8	823.2
110	2,600	2,950			42,480	84,960	11,040	42.0	2,758.1	2,261.6	1,710.0	1,013.6
125	2,300	2,600			58,850	117,710	15,300	48.0	4,203.0	3,446.5	2,605.8	1,544.6
140	2,050	2,350			75,670	151,350	19,670	54.6	5,846.0	4,793.7	3,624.5	2,148.4
160	1,800	2,050			113,290	226,580	29,450	75.0	7,880.6	6,462.1	4,886.0	2,896.1
180	1,550	1,800			165,070	330,140	42,910	78.0	22,734.3	18,642.2	14,095.3	8,354.9

Spider 95/98 Shore A; made from T-PUR® and PUR												
14	22,200	25,400	6.4°	10°	110	220	29	—	5.0	4.1	3.1	1.9
24	12,100	13,800			530	1,060	140	6.6	87.9	72.0	54.5	32.3
38	8,300	9,500			2,870	5,750	750	10.2	429.9	352.5	266.5	158.0
48	6,350	7,250			4,640	9,290	1,210	13.8	577.9	473.9	358.3	212.4
65	4,950	5,650	3.2°	5°	8,310	16,630	2,150	18.0	1,146.3	940.0	710.7	421.3
90	3,300	3,800			31,860	63,720	8,280	30.0	2,763.3	2,265.9	1,713.2	1,015.5
110	2,600	2,950			63,720	127,450	16,560	42.0	6,107.7	5,008.3	3,786.8	2,244.6
140	2,050	2,350			113,290	226,580	29,450	54.6	12,609.0	10,339.4	7,817.6	4,633.9
180	1,550	1,800			247,820	495,650	64,430	78.0	31,522.4	25,848.5	19,543.9	11,584.5

Spider 64 Shore D; made from T-PUR® and PUR												
14	22,200	25,400	4.5°	7.0°	140	280	37	9.0	6.7	5.5	4.2	2.5
19	16,700	19,000			180	370	49	7.2	47.4	38.9	29.4	17.4
24	12,100	13,800			660	1,320	170	9.9	133.7	109.7	82.9	49.1
28	10,100	11,500			1,770	3,540	460	12.6	243.6	199.8	151.0	89.6
38	8,300	9,500			3,580	7,160	920	15.3	620.9	509.1	384.9	228.2
42	7,000	8,000			4,950	9,910	1,290	18.0	706.8	579.7	438.3	259.8
48	6,350	7,250			5,790	11,590	1,500	20.7	845.4	693.2	524.2	310.7
55	5,550	6,350			7,300	14,600	1,900	23.4	955.2	783.3	592.2	351.0
65	4,950	5,650	2.5°	3.6°	10,390	20,790	2,700	27.0	1,337.3	1,096.6	829.2	491.5
75	4,150	4,750			21,240	42,480	5,520	32.4	2,197.0	1,801.5	1,362.2	807.4
90	3,300	3,800			39,820	79,650	10,350	45.0	5,970.2	4,895.6	3,701.5	2,194.1
100	2,950	3,350			54,740	109,480	14,230	54.0	7,622.2	6,250.2	4,725.8	2,801.2
110	2,600	2,950			79,650	159,310	20,710	63.0	10,077.7	8,263.6	6,248.1	3,703.5
125	2,300	2,600			110,630	221,270	28,760	72.0	12,704.5	10,417.7	7,876.8	4,668.9
140	2,050	2,350			141,610	283,230	36,820	81.9	15,761.2	12,924.2	9,771.9	5,792.3
160	1,800	2,050			212,420	424,840	55,230	113	27,223.9	22,323.6	16,878.9	10,004.8
180	1,550	1,800			309,780	619,570	80,540	117	53,206.0	43,629.0	32,987.8	19,553.2

Temperature Factor S_t											
	-58°F	-22°F 86°F	+104°F	+122°F	+140°F	+158°F	+176°F	+194°F	+212°F	+230°F	+248°F
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	-	-	-

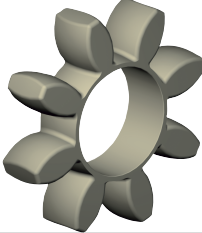
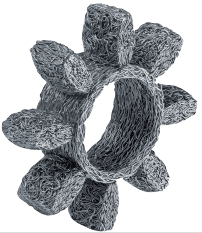
Unless specified, Shore hardness 92 Sh-A T-PUR. For circumferential speeds exceeding V = 98 ft/sec dynamic balancing is necessary.

For circumferential speeds exceeding V = 115 ft/sec only steel or nodular iron.

For peripheral speeds exceeding V = 115 ft/sec dynamic balancing of steel or nodular iron hubs is required.

1) at +86°F

Technical data and properties of the special spiders

			
Size	PA	PEEK	Spider from wire
Material	Polyamide	Polyetheretherthone	Stainless steel
Perm. temperature range Continuous temperature Max.temperature short time	-4 °F to +266 °F ¹⁾ -22 °F to +302 °F ¹⁾	to + 356 °F ¹⁾ (ATEX to 320 °F) to +482 °F	to +482 °F
Properties	- low twisting angles and high torsion spring stiffness - transmission of very high torques with very low damping - very good to good resistance to chemicals - recommended hub material: steel - high restoring forces with misalignment	- low twisting angles 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 misalignment	- transmission of very high torques with average damping - highly temperature resistant, resistant to hydrolysis - very good to good resistance to chemicals - recommended hub material: steel, GJL and hard coated ALU

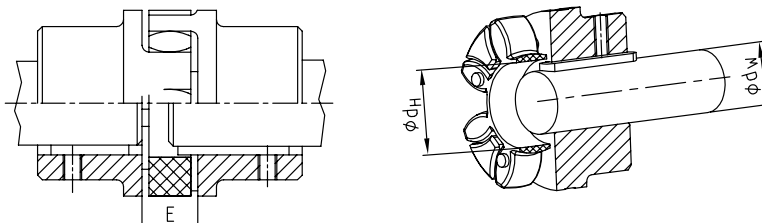
¹⁾ Different properties depending on compound

Torques (in inch* pound)					
ROTEX® Size	PA PEEK			Spider from wire	
	TKN [lb-in]	TK max [lb-in]	TKW [lb-in]	TKN [lb-in]	TK max [lb-in]
14	195	389	49	66	133
18	266	531	71	89	177
24	929	1859	243	310	620
28	2478	4957	646	841	3363
38	501	1002	1301	1682	4691
42	6948	13896	1806	2346	5488
48	8099	16197	2107	2744	5488
55	10621	21242	2762	3629	7258
65	14560	29120	3779	-	-
75	22659	45317	5904	-	-
90	55761	111523	14516	-	-
100	76561	153122	19915	-	-
110	92936	185871	24163	-	-
125	115063	230126	29916	-	-

Temperature Factor S _t												
	-58°F	-22°F 86°F	+104°F	+122°F	+140°F	+158°F	+176°F	+194°F	+212°F	+230°F	+248°F	+356°F
PA	-	1.0	1.15	1.25	1.4	1.6	1.9	2.3	3	-	-	-
PEEK	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Spider from wire	-	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Installation

Maximum shaft size includes standard keyway which can extend into the spider bore $\varnothing d_W$

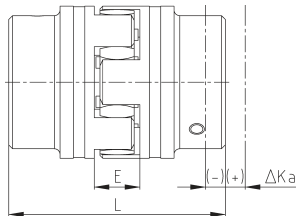


Dimensions for assembly																	
ROTEX® Size	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
Distance dimension E	0.51	0.63	0.71	0.79	0.94	1.02	1.10	1.18	1.38	1.57	1.77	1.97	2.17	2.36	2.56	2.95	3.35
Dimension d _H	0.39	0.71	1.06	1.18	1.50	1.81	2.01	2.36	2.68	3.15	3.94	4.45	5.00	5.79	6.5	7.4	8.66
Dimension d _W	0.28	0.47	0.79	0.87	1.10	1.42	1.57	1.89	2.17	2.50	3.15	3.74	3.94	4.72	5.31	6.30	7.28

Misalignments and installation

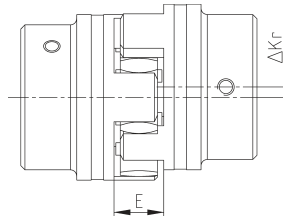
Misalignments

Axial misalignment ΔK_a

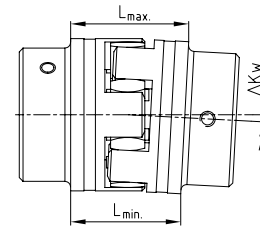


$$L_{\max.} = L + \Delta K_a$$

Parallel misalignment ΔK_r



Angular misalignment ΔK_w [degrees]



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

Misalignments																	
ROTEX® Size	14	19	24	28	38	42	48	55	65	75	90	100	110	125	140	160	180
Max. axial misalignment ΔK_a [in]	-0.02 +0.04	-0.02 +0.05	-0.02 +0.06	-0.03 +0.06	-0.03 +0.07	-0.04 +0.08	-0.04 +0.08	-0.04 +0.09	-0.04 +0.10	-0.06 +0.12	-0.06 +0.13	-0.06 +0.15	-0.08 +0.17	-0.08 +0.18	-0.08 +0.20	-0.10 +0.22	-0.12 +0.25
Max. parallel misalignment at n=1,800 rpm ΔK_r [in]	0.006	0.007	0.008	0.009	0.010	0.011	0.013	0.014	0.015	0.017	0.018	0.019	0.020	0.021	0.022	0.022	0.024
Max. angular misalignment at n=1,800 rpm ΔK_w [degree]	1.1	1.0	0.8	0.9	0.9	1.0	1.1	1.1	1.1	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2
ΔK_w [in]	0.024	0.029	0.031	0.039	0.051	0.067	0.079	0.090	0.102	0.126	0.161	0.181	0.213	0.248	0.256	0.303	0.354

The above misalignment figures for ROTEX® couplings are standard values, taking into account the load of the coupling up to the rated torque T_{KN} and an operating speed $n = 1,800$ RPM along with an ambient temperature of $+ 86^\circ \text{F}$.

For other operating parameters, please ask for KTR-Norm 20240 on misalignments for ROTEX®. The maximum angular and parallel misalignments must not be used concurrently. For example; 70% of the maximum parallel value allows 30% of the maximum angular value. Also, care should be taken to accurately maintain the distance dimension "E", allowing for axial clearance of the coupling while in operation. In case of an axial thrust, the dimension "L" must be taken as a minimum dimension in order to keep the spider free from pressure against the face.

Detailed installation instructions are available at www.ktr.com.

ROTEX® part numbers

ROTEX Hub - Part numbers by product size and standard material								
Inch Sizes		14	19	24	28	38	42	
Bore	Keyway	Sintered Steel	Aluminum			Cast Iron		
1/4	No Key	BA020142170611	BA020196070611					
5/16	No Key	BA020142170711	BA020196070711					
3/8	No Key	BA020142170911	BA020196070911					
3/8	3/32	BA020142170902	BA020196070902	BA020246070902				
3/8	1/8	BA020142170903	BA020196070903	BA020246070903				
7/16	No Key	BA020142171111	BA020196071111	BA020246071111	BA020286071111			
7/16	3/32	BA020142171101	BA020196071101	BA020246071101	BA020286071101			
7/16	1/8	BA020142171102	BA020196071102	BA020246071102	BA020286071102			
1/2	No Key	BA020142171211	BA020196071211	BA020246071211	BA020286071211	BA020383071211		
1/2	1/8	BA020142171200	BA020196071200	BA020246071200	BA020286071200	BA020383071200		
9/16	No Key	BA020142171411	BA020196071411	BA020246071411	BA020286071411	BA020383071411	BA020423071411	
9/16	1/8	BA020142171400	BA020196071400	BA020246071400	BA020286071400	BA020383071400	BA020423071400	
5/8	No Key	BA020142171511	BA020196071511	BA020246071511	BA020286071511	BA020383071511	BA020423071511	
5/8	5/32	BA020142171503	BA020196071503	BA020246071503	BA020286071503	BA020383071503	BA020423071503	
5/8	3/16	BA020142171500	BA020196071500	BA020246071500	BA020286071500	BA020383071500	BA020423071500	
11/16	3/16		BA020196071700	BA020246071700	BA020286071700	BA020383071700	BA020423071700	
3/4	No Key		BA020196071911	BA020246071911	BA020286071911	BA020383071911	BA020423071911	
3/4	1/8		BA020196071901	BA020246071901	BA020286071901	BA020383071901	BA020423071901	
3/4	3/16		BA020196071900	BA020246071900	BA020286071900	BA020383071900	BA020423071900	
13/16	3/16		BA020196172000	BA020246072000	BA020286072000	BA020383072000	BA020423072000	
7/8	No Key		BA020196172211	BA020246072211	BA020286072211	BA020383072211	BA020423072211	
7/8	3/16		BA020196172200	BA020246072200	BA020286072200	BA020383072200	BA020423072200	
7/8	1/4		BA020196172202	BA020246072202	BA020286072202	BA020383072202	BA020423072202	
15/16	1/4		BA020196172300	BA020246072300	BA020286072300	BA020383072300	BA020423072300	
1	1/4			BA020246172500	BA020286072500	BA020383072500	BA020423072500	
1	3/16			BA020246172502	BA020286072502	BA020383072502	BA020423072502	
1 1/16	1/4			BA020246172600	BA020286072600	BA020383072600	BA020423072600	
1 1/8	1/4			BA020246172800	BA020286072800	BA020383072800	BA020423072800	
1 3/16	1/4				BA020286173000	BA020383073000	BA020423073000	
1 1/4	1/4				BA020286173100	BA020383073100	BA020423073100	
1 1/4	5/16				BA020286173102	BA020383073102	BA020423073102	
1 5/16	5/16				BA020286173300	BA020383073300	BA020423073300	
1 3/8	5/16				BA020286173400	BA020383073400	BA020423073400	
1 3/8	3/8				BA020286173401	BA020383073401	BA020423073401	
1 7/16	3/8				BA020286173600	BA020383073600	BA020423073600	
1 1/2	5/16				BA020286173802	BA020383073802	BA020423073802	
1 1/2	3/8				BA020286173800	BA020383173800	BA020423073800	
1 9/16	3/8					BA020383173900	BA020423073900	
1 5/8	3/8					BA020383174100	BA020423074100	
1 11/16	3/8					BA020383174200	BA020423074200	
1 3/4	3/8					BA020383174400	BA020423174400	
1 3/4	7/16					BA020383174402	BA020423174402	
1 13/16	1/2					BA020383174600	BA020423174600	
1 7/8	1/2						BA020423174700	
1 15/16	1/2						BA020423174900	
2	1/2						BA020423175000	
2 1/16	1/2						BA020423175200	
2 1/8	1/2						BA020423175300	

All hubs supplied standard with one setscrew
Non-standard bores available. Consult KTR Engineering
Inch bores machined to AGMA Class 1

ROTEX® part numbers

ROTEX® Hubs - Part numbers by product size and standard material							
Metric Sizes		14	19	24	28	38	42
Bore	Keyway	Sintered Steel	Aluminum			Cast Iron	
6	2	BA020142100600	BA020196000600				
8	2	BA020142100800	BA020196000800				
9	3	BA020142100900	BA020196000900	BA020246000900			
10	3	BA020142101000	BA020196001000	BA020246001000	BA020286001000		
11	4	BA020142101100	BA020196001100	BA020246001100	BA020286001100		
12	4	BA020142101200	BA020196001200	BA020246001200	BA020286001200	BA020383001200	
14	5	BA020142101400	BA020196001400	BA020246001400	BA020286001400	BA020383001400	BA020423001400
15	5	BA020142101500	BA020196001500	BA020246001500	BA020286001500	BA020383001500	BA020423001500
16	5	BA020142101600	BA020196001600	BA020246001600	BA020286001600	BA020383001600	BA020423001600
18	6		BA020196001800	BA020246001800	BA020286001800	BA020383001800	BA020423001800
19	6		BA020196001900	BA020246001900	BA020286001900	BA020383001900	BA020423001900
20	6		BA020196102000	BA020246002000	BA020286002000	BA020383002000	BA020423002000
22	6		BA020196102200	BA020246002200	BA020286002200	BA020383002200	BA020423002200
24	8		BA020196102400	BA020246002400	BA020286002400	BA020383002400	BA020423002400
25	8			BA020246102500	BA020286002500	BA020383002500	BA020423002500
28	8			BA020246102800	BA020286002800	BA020383002800	BA020423002800
30	8				BA020286103000	BA020383003000	BA020423003000
32	10				BA020286103200	BA020383003200	BA020423003200
35	10				BA020286103500	BA020383003500	BA020423003500
38	10				BA020286103800	BA020383003800	BA020423003800
40	12					BA020383004000	BA020423004000
42	12					BA020383104200	BA020423004200
45	14					BA020383104500	BA020423004500
48	14					BA020383104800	BA020423104800
50	14						BA020423105000
55	16						BA020423105500

All hubs supplied standard with one setscrew
 Non standard bores available. Consult KTR Engineering
 Metric bores machined to H7 if greater than 55mm

ROTEX® Spiders - Part numbers by product size and material								
Type / Hardness	Color	Material	14	19	24	28	38	42
92 SH A	Orange	T-PUR®	020141000045	020191000045	020241000045	020281000045	020381000045	020421000045
98 SH A	Purple	T-PUR®	020141000042	020191000042	020241000042	020281000042	020381000042	020421000042
64 SH D	Light green	T-PUR®	020141000020	020191000020	020241000020	020281000020	020381000020	020421000020
94 SH A-T	Blue w/ yellow tips	Polyurethane		020191000044	020241000044	020281000044	020381000044	020421000044
64 SH D-H	Green	Hytrell		020191000025	020241000025	020281000025	020381000025	020421000025
Polyamide	White	PA		020191000088	020241000088	020281000088	020381000088	
PEEK	Light gray	PEEK		020191000075	020241000076	020281000075	020381000073	020421000079

SAE Splines

ROTEX® Hubs - Part numbers by product size and standard material									
Teeth	Pitch	SAE	Major Diameter	Minor Diameter	Shaft Diameter	24	28	38	42
						Steel			
9	16/32	A	0.651	0.509	0.625	BA020245141601	BA020285141601	BA020385041601	
11	16/32		0.776	0.631	0.750	BA020245141901	BA020285141901	BA020385041901	BA020425041901
13	16/32	B	0.901	0.754	0.875	BA020245142201	BA020285142201	BA020385042201	BA020425042201
15	16/32	BB	1.026	0.877	1.000		BA020285142601	BA020385042601	BA020425042601
14	12/24	C	1.283	1.087	1.250		BA020285143201	BA020385043201	BA020425043201
21	16/32		1.401	1.250	1.375			BA020385042101	BA020425043501
17	12/24	CC	1.533	1.334	1.500			BA020385043801	BA020425043801
23	16/32		1.526	1.375	1.500				BA020425043802
13	8/16	D, E	1.798	1.506	1.750				BA020425044501

All hubs supplied standard with cross clamp
 Additional splines available. Consult KTR Engineering

ROTEX® part numbers

ROTEX Hubs - Part numbers by product size and standard material						
Inch Sizes		48	55	65	75	90
Bore	Keyway	Cast Iron				
5/8	No Key	BA020483071511				
5/8	5/32	BA020483071503				
5/8	3/16	BA020483071500				
11/16	3/16	BA020483071700				
3/4	No Key	BA020483071911				
3/4	1/8	BA020483071901				
3/4	3/16	BA020483071900				
13/16	3/16	BA020483072000	BA020553072000			
7/8	No Key	BA020483072211	BA020553072211	BA020653072211		
7/8	3/16	BA020483072200	BA020553072200	BA020653072200		
7/8	1/4	BA020483072202	BA020553072202	BA020653072202		
15/16	1/4	BA020483072300	BA020553072300	BA020653072300		
1	1/4	BA020483072500	BA020553072500	BA020653072500		
1	3/16	BA020483072502	BA020553072502	BA020653072502		
1 1/16	1/4	BA020483072600	BA020553072600	BA020653072600		
1 1/8	1/4	BA020483072800	BA020553072800	BA020653072800		
1 3/16	1/4	BA020483073000	BA020553073000	BA020653073000	BA020753073000	
1 1/4	1/4	BA020483073100	BA020553073100	BA020653073100	BA020753073100	
1 1/4	5/16	BA020483073102	BA020553073102	BA020653073102	BA020753073102	
1 5/16	5/16	BA020483073300	BA020553073300	BA020653073300	BA020753073300	
1 3/8	5/16	BA020483073400	BA020553073400	BA020653073400	BA020753073400	
1 3/8	3/8	BA020483073401	BA020553073401	BA020653073401	BA020753073401	
1 7/16	3/8	BA020483073600	BA020553073600	BA020653073600	BA020753073600	
1 1/2	5/16	BA020483073802	BA020553073802	BA020653073802	BA020753073802	
1 1/2	3/8	BA020483073800	BA020553073800	BA020653073800	BA020753073800	
1 9/16	3/8	BA020483073900	BA020553073900	BA020653073900	BA020753073900	
1 5/8	3/8	BA020483074100	BA020553074100	BA020653074100	BA020753074100	BA020903074100
1 11/16	3/8	BA020483074200	BA020553074200	BA020653074200	BA020753074200	BA020903074200
1 3/4	3/8	BA020483074400	BA020553074400	BA020653074400	BA020753074400	BA020903074400
1 3/4	7/16	BA020483074402	BA020553074402	BA020653074402	BA020753074402	BA020903074402
1 13/16	1/2	BA020483074600	BA020553074600	BA020653074600	BA020753074600	BA020903074600
1 7/8	1/2	BA020483074700	BA020553074700	BA020653074700	BA020753074700	BA020903074700
1 15/16	1/2	BA020483174900	BA020553074900	BA020653074900	BA020753074900	BA020903074900
2	1/2	BA020483175000	BA020553075000	BA020653075000	BA020753075000	BA020903075000
2 1/16	1/2	BA020483175200	BA020553075200	BA020653075200	BA020753075200	BA020903075200
2 1/8	1/2	BA020483175300	BA020553075300	BA020653075300	BA020753075300	BA020903075300
2 3/16	1/2	BA020483175500	BA020553075500	BA020653075500	BA020753075500	BA020903075500
2 1/4	1/2	BA020483175700	BA020553075700	BA020653075700	BA020753075700	BA020903075700
2 3/8	5/8	BA020483176000	BA020553176000	BA020653076000	BA020753076000	BA020903076000
2 5/8	5/8		BA020553176600	BA020653076600	BA020753076600	BA020903076600
2 7/8	3/4				BA020753077300	BA020903077300
2 15/16	3/4				BA020753077400	BA020903077400
3	3/4				BA020753077600	BA020903077600
3 1/8	3/4					BA020903077900
3 1/4	3/4					BA020903078200
3 3/8	7/8					BA020903078500
3 1/2	7/8					BA020903078800
3 5/8	7/8					BA020903079200
3 3/4	7/8					BA020903079500

All hubs supplied standard with one setscrew
Non standard bores available. Consult KTR Engineering
Inch bores machined to AGMA Class 1

ROTEX® part numbers

ROTEX® Hubs - Part numbers by product size and standard material						
Metric Sizes		48	55	65	75	90
Bore	Keyway	Cast Iron				
15	5	BA020483001500				
16	5	BA020483001600				
18	6	BA020483001800				
19	6	BA020483001900				
20	6	BA020483002000	BA020553002000			
22	6	BA020483002200	BA020553002200	BA020653002200		
24	8	BA020483002400	BA020553002400	BA020653002400		
25	8	BA020483002500	BA020553002500	BA020653002500		
28	8	BA020483002800	BA020553002800	BA020653002800		
30	8	BA020483003000	BA020553003000	BA020653003000	BA020753003000	
32	10	BA020483003200	BA020553003200	BA020653003200	BA020753003200	
35	10	BA020483003500	BA020553003500	BA020653003500	BA020753003500	
38	10	BA020483003800	BA020553003800	BA020653003800	BA020753003800	
40	12	BA020483004000	BA020553004000	BA020653004000	BA020753004000	BA020903004000
42	12	BA020483004200	BA020553004200	BA020653004200	BA020753004200	BA020903004200
45	14	BA020483004500	BA020553004500	BA020653004500	BA020753004500	BA020903004500
48	14	BA020483004800	BA020553004800	BA020653004800	BA020753004800	BA020903004800
50	14	BA020483005000	BA020553005000	BA020653005000	BA020753005000	BA020903005000
55	16	BA020483105500	BA020553005500	BA020653005500	BA020753005500	BA020903005500
60	18	BA020483106000	BA020553006000	BA020653006000	BA020753006000	BA020903006000
65	18		BA020553106500	BA020653006500	BA020753006500	BA020903006500
70	20		BA020553107000	BA020653007000	BA020753007000	BA020903007000
75	20				BA020753007500	BA020903007500
80	22				BA020753008000	BA020903008000
85	22					BA020903008500
90	25					BA020903009000

All hubs supplied standard with one setscrew
Non standard bores available. Consult KTR Engineering
Metric bores machined to H7 if greater than 55mm

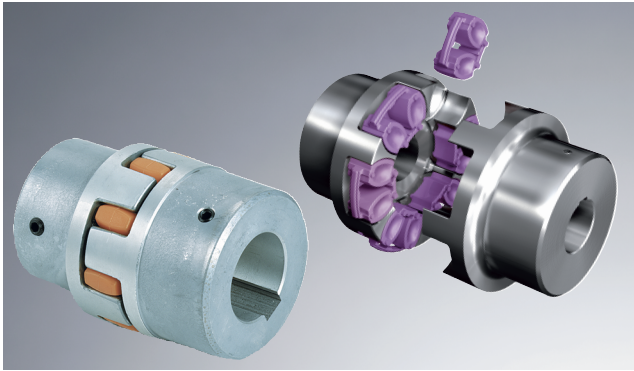
ROTEX Spiders - Part numbers by product size and material							
Type / Hardness	Color	Material	48	55	65	75	90
92 SH A	Orange	T-PUR®	020481000045	020551000045	020651000045	020751000045	020901000045
95/98 SH A	Purple	T-PUR®	020481000042	020551000042	020651000042	020751000042	020901000042
64 SH D	Light green	T-PUR®	020481000020	020551000020	020651000020	020751000020	020901000020
94 SH A-T	Blue w/ yellow tips	Polyurethane	020481000044	020551000044	020651000044	020751000044	020901000044
64 SH D-H	Green	Hytrel	020481000025	020551000025		020751000025	
Polyamide	White	PA		020551000088	020651000088	020751000088	
PEEK	Light gray	PEEK	020141000072	020551000075	020651000075	020751000084	020901000098

SAE Splines

ROTEX Hubs - Part numbers by product size and standard material										
Teeth	Pitch	SAE	Major Diameter	Minor Diameter	Shaft Diameter	48	55	65	75	90
						Steel				
13	16/32	B	0.901	0.754	0.875	BA020485042201	BA020555042201			
15	16/32	BB	1.026	0.877	1.000	BA020485042601	BA020555042601			
14	12/24	C	1.283	1.087	1.250	BA020485043201	BA020555043201	BA020655043201		
21	16/32		1.401	1.250	1.375	BA020485043501	BA020555043501	BA020655043503		
17	12/24	CC	1.533	1.334	1.500	BA020485043801	BA020555043801	BA020655043801	BA020755043801	
23	16/32		1.526	1.375	1.500	BA020485043802	BA020555043802	BA020655043803	BA020755043804	
13	8/16	D, E	1.798	1.506	1.750	BA020485044501	BA020555044501	BA020655044501	BA020755044501	BA020905044501
15	8/16	F	2.048	1.753	2.000		BA020555045201	BA020655045201	BA020755045201	BA020905045201

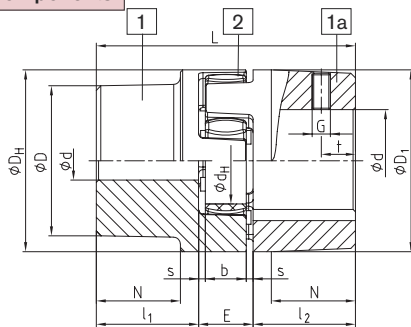
All hubs supplied standard with cross clamp
Additional splines available. Consult KTR Engineering

Shaft coupling standard design – cast materials

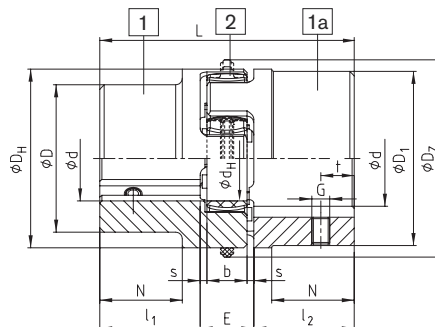


- Failsafe, reduced maintenance, blind assembly
- Torsionally flexible / vibration-damping
- Machined jaws - good dynamic properties and reduced spider wear
- Low weight cast aluminum hubs up to size 28
- Cast and nodular iron hubs from size 38 up to size 180
- ⓧ approved according to EC Standard 94/9/EC (Cast and Nodular Iron materials)
- Installation instructions available at www.ktr.com

Components



AL-D (thread on the keyway)

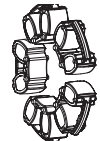


EN-GJL-250 / EN-GJS-400-15 (thread on the keyway)

Spider
as hardness 92 Sh-A
and 95/98 Sh-A
standard from size
14 - 100 and 64 Sh-D
size 14 - 180



**elements DZ (double
tooth elements)**
as hardness 92 Sh-A
and 95 Sh-A
standard from size 110 -
180



ROTEX® Aluminium Diecast (Al-D)																		
Size	Component	Spider (part 2) ¹⁾			Bore Ød (min-max)	Dimensions [in]											Setscrews	
		92 Sh A	98 Sh A	64 Sh D		L	$l_1:l_2$	E	b	s	D_H	Dz	d_H	D; D_1	N	G	t	T_A [lb-in]
14 ²⁾	1a	66	110	-	0.250 - 0.625	1.38	0.43	0.51	0.39	0.06	1.18	-	0.39	1.18	-	M4	0.20	13
19	1	89	150	-	0.250 - 0.750	2.60	0.98	0.63	0.47	0.08	1.61	-	0.71	1.26	0.79	M5	0.39	18
	1a				0.750 - 0.938									1.61				
24	1	300	530	-	0.375 - 0.938	3.07	1.18	0.71	0.55	0.08	2.20	-	1.06	1.57	0.79	M5	0.39	18
	1a				0.875 - 1.125									2.20				
28	1	840	1,410	-	0.438 - 1.125	3.54	1.38	0.79	0.59	0.10	2.60	-	1.18	1.89	1.10	M8	0.59	89
	1a				1.125 - 1.438									2.60				

ROTEX® Cast iron EN-GJL-250 (GG 25)																		
38	1	1,680	2,870	3,580	0.500 - 1.500	4.49	1.77	0.94	0.71	0.12	3.15	-	1.50	2.60	1.46	M8	0.59	89
	1a				1.500 - 1.875									3.07				
42	1	2,340	3,980	4,950	0.563 - 1.688	4.96	1.97	1.02	0.79	0.12	3.74	-	1.81	2.95	1.57	M8	0.59	89
	1a				1.688 - 2.125									3.70				
48	1	2,740	4,640	5,790	0.625 - 2.000	5.51	2.20	1.10	0.83	0.14	4.13	-	2.01	3.35	1.77	M8	0.59	89
	1a				1.938 - 2.375									4.09				
55	1	3,620	6,060	7,300	0.813 - 2.313	6.30	2.56	1.18	0.87	0.16	4.72	-	2.36	3.86	2.05	M10	0.79	150
	1a				2.188 - 2.875									4.65				
65	1	5,530	8,310	10,390	0.875 - 2.625	7.28	2.95	1.38	1.02	0.18	5.31	-	2.68	4.53	2.40	M10	0.79	150
75	1	11,320	16,990	21,240	1.188 - 3.000	8.27	3.35	1.57	1.18	0.20	6.30	-	3.15	5.31	2.72	M10	0.98	150
90	1	21,240	31,860	39,820	1.625 - 3.750	9.65	3.94	1.77	1.34	0.22	7.87	8.58	3.94	6.30	3.19	M12	1.18	354

ROTEX® Nodular iron EN-GJS-400-15 (GGG 40)																		
100	1	29,200	43,800	54,730	2.000 - 4.375	10.63	4.33	1.97	1.50	0.24	8.86	9.69	4.45	7.09	3.50	M12	1.18	354
110	1	42,480	63,720	79,650	2.375 - 4.813	11.61	4.72	2.17	1.65	0.26	10.04	10.87	5.00	7.87	3.78	M16	1.38	708
125	1	58,850	88,500	110,620	2.375 - 5.563	13.39	5.51	2.36	1.81	0.28	11.42	12.40	5.79	9.06	4.41	M16	1.57	708
140	1	75,660	113,280	141,600	2.375 - 6.188	14.76	6.10	2.56	1.97	0.30	12.60	13.58	6.50	10.04	4.88	M20	1.77	1,239
160	1	113,280	169,920	212,400	3.188 - 7.125	16.73	6.89	2.95	2.24	0.35	14.57	15.75	7.48	11.42	5.51	M20	1.97	1,239
180	1	165,050	247,800	309,750	3.375 - 7.688	18.70	7.68	3.35	2.52	0.41	16.54	17.72	8.66	12.80	6.14	M20	1.97	1,239

■ = If material is not specified on the order, the selection/order will be based on the standard material listed above

1) Maximum torque of the coupling T_{Kmax} = rated torque of the coupling T_{KN} x 2. For selection, please see page 20/21.

2) Material Al-H (machined aluminum).

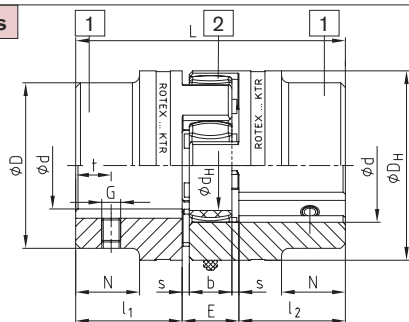
Inch bores machined to AGMA Class 1, Metric bores machined to H7

Shaft coupling standard design – steel materials

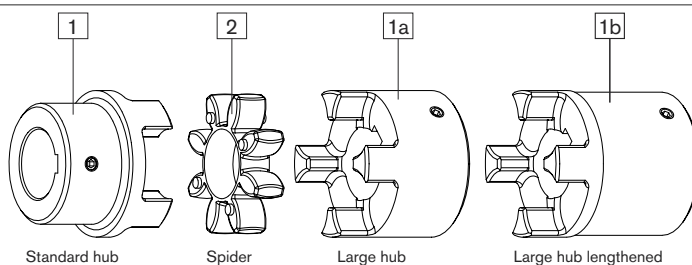


- Failsafe, reduced maintenance, blind assembly
- Torsionally flexible / vibration-damping
- Machined jaws - good dynamic properties and reduced spider wear
- Steel hubs, for high shock applications, (e.g. steel mills, elevator drives, spline hubs, etc.)
- Ex approved according to EC Standard 94/9/EC
- Installation instructions available at www.ktr.com

Components



Steel (thread on the keyway)



ROTEX® steel																	
Size	Component	Spider (part 2) ¹⁾ Rated torque [lb-in]			Dimensions [in]												
					Bore Ød (min-max)	General										Setscrews	
		92 Sh A	98Sh A	64 Sh D		L	l ₁ ; l ₂	E	b	s	D _H	d _H	D	N	G	t	
14	1a	66	110	142	0.625	1.38	0.43	0.51	0.39	0.06	1.18	0.39	1.18	-	M4	0.20	13
	1b				1.97	0.73											
19	1a	89	150	186	1.000	2.60	0.98	0.63	0.47	0.08	1.57	0.71	1.57	-	M5	0.39	18
	1b				3.54	1.46											
24	1a	300	530	664	1.375	3.07	1.18	0.71	0.55	0.08	2.17	1.06	2.17	-	M5	0.39	18
	1b				4.65	1.97											
28	1a	840	1,410	1,770	1.500	3.54	1.38	0.79	0.59	0.10	2.56	1.18	2.56	-	M8	0.59	89
	1b				5.51	2.36											
38	1	1,680	2,870	3,580	1.875	4.49	1.77	0.94	0.71	0.12	3.15	1.50	2.76	1.06	M8	0.59	89
	1b				6.46	2.76	3.15						-				
42	1	2,340	3,980	4,950	2.125	4.96	1.97	1.02	0.79	0.12	3.74	1.81	3.35	1.10	M8	0.79	89
	1b				6.93	2.95	3.74						-				
48	1	2,740	4,640	5,790	2.375	5.51	2.20	1.10	0.83	0.14	4.13	2.01	3.74	1.26	M8	0.79	89
	1b				7.40	3.15	4.13						-				
55	1	3,620	6,060	7,300	2.875	6.30	2.56	1.18	0.87	0.16	4.72	2.36	4.33	1.46	M10	0.79	150
	1b				8.27	3.54	4.72						-				
65	1	5,530	8,310	10,390	3.000	7.28	2.95	1.38	1.02	0.18	5.31	2.68	4.53	1.85	M10	0.79	150
	1b				9.25	3.94	5.31						-				
75	1	11,320	16,990	21,240	3.625	8.27	3.35	1.57	1.18	0.20	6.30	3.15	5.31	2.09	M10	0.98	150
	1b				10.24	4.33	6.30						-				
90	1	21,240	31,860	39,820	4.250	9.65	3.94	1.77	1.34	0.22	7.87	3.94	6.30	2.44	M12	1.18	354
	1b				11.61	4.92	7.87						-				

ROTEX® sintered steel																	
Size	Component	Spider (part 2) ¹⁾ Rated torque [lb-in]		Bore Ød	Dimensions [in]										Setscrews		
		92 Sh-A	98 Sh-A		General												
					L	l ₁ ; l ₂	E	b	s	D _H	d _H	D	N	G	t	T _A [lb-in]	
14	1a	66	111	unbored	1.38	0.43	0.51	0.39	0.06	1.18	0.39	1.18	-	M4	0.20	13	
19	1a	89	150	unbored, 1/2, 5/8, 3/4, 7/8	2.60	0.98	0.63	0.47	0.08	1.57	0.71	1.57	-	M5	0.39	18	
24	1a	310	531	unbored, 1/2, 5/8, 3/4, 7/8, 1-1/8	3.07	1.18	0.71	0.55	0.08	2.17	1.06	2.17	-	M5	0.39	18	

= If material is not specified on the order, the selection/order will be based on the standard material listed above

¹⁾ Maximum torque of the coupling TK_{max} = rated torque of the coupling T_{KN} x 2. For selection, please see page 20/21.

Inch bores machined to AGMA Class 1, Metric bores machined to H7

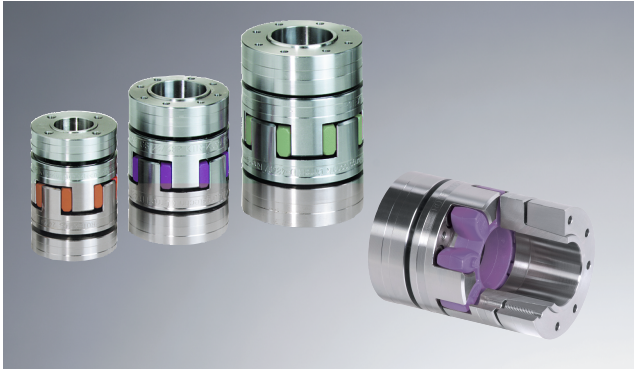
- ROTEX® 19 – 48 stainless steel are available

- ROTEX® 19, 28 and 42 – hub material X10CrNiS 18-9 standard number 1.4305 (V2A) DIN 17440

- ROTEX® 24, 38 and 48 – hub material X6CrNiMoTi17-12-2 standard number 1.4571 (V4A) DIN 17440

Order form:	ROTEX® -38	St	92	1	–	Ø 45	1	–	Ø 25
	Coupling size	Material	Spider hardness Shore A]	Hub design		Bore	Hub design		Bore

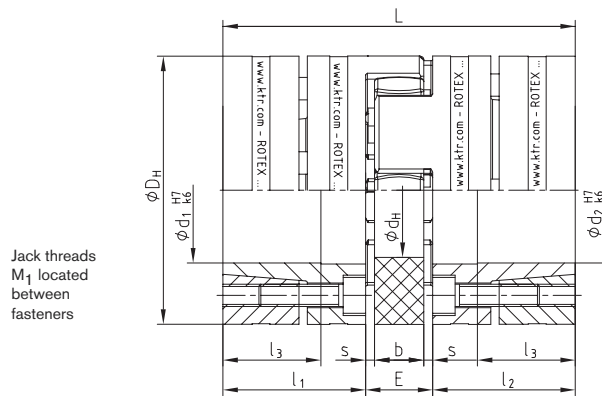
Clamping ring hubs



Same advantages as the standard ROTEX®:

- Integrated frictional clamping design
- High frictional torque capacity
- Easy installation with fasteners in the jaw pocket
- Ex approved according to EC Standard 94/9/EC (review the selection for Ex explosion protection use)
- Installation instructions available at www.ktr.com

Components



Inch bores machined to AGMA Class 1, Metric bores machined to H7 or G7 if greater than 2.157 in.

Size	Torques [lb-in] ¹⁾				Dimensions [in]									Fasteners				Weight per hub with max. bore [lbs]	Mass moment of inertia per hub with max. bore [x10³ lb-in sec²]
	92 Sh A		98 Sh A																
	T _{KN}	T _{Kmax}	T _{KN}	T _{Kmax}	D _H ³⁾	d _H	L	l ₁ ; l ₂	l ₃	E	b	s	M	Quantity z	T _A [lb-in]	M ₁			
Hub and clamping ring material – Steel (St-H)																			
19	89	170	150	300	1.57	0.71	2.60	0.98	0.71	0.63	0.47	0.08	M4	6	36	M4	0.39	0.389	
24	300	610	530	1,060	2.17	1.06	3.07	1.18	0.87	0.71	0.55	0.08	M5	4	75	M5	0.88	1.690	
28	840	1,680	1,410	2,830	2.56	1.18	3.54	1.38	1.06	0.79	0.59	0.10	M5	8	75	M5	1.31	3.699	
38	1,680	3,360	2,870	5,750	3.15	1.50	4.49	1.77	1.38	0.94	0.71	0.12	M6	8	124	M6	2.70	11.42	
42	2,340	4,690	3,980	7,960	3.74	1.81	4.96	1.97	1.38	1.02	0.79	0.12	M8	4	310	M8	5.07	28.05	
48	2,740	5,480	4,640	9,290	4.13	2.01	5.51	2.20	1.61	1.10	0.83	0.14	M10	4	611	M10	6.79	46.02	
55	3,310	6,630	6,060	12,120	4.72	2.36	6.30	2.56	1.77	1.18	0.87	0.16	M10	4	611	M10	10.3	91.16	
65	-	-	8,310 ²⁾	16,630 ²⁾	5.31	2.68	7.28	2.95	2.17	1.38	1.02	0.18	M12	4	1,062	M12	14.8	169.0	
75	-	-	16,990 ²⁾	33,980 ²⁾	6.30	3.15	8.27	3.35	2.48	1.57	1.18	0.20	M12	5	1,062	M12	21.8	351.2	
90	-	-	31,860 ²⁾	39,820 ²⁾	7.87	4.09	9.05	3.94	2.95	1.77	1.34	0.22	M12	5	2,611	M12	39.0	1005.4	

¹⁾ For selection, please see pages 122/123.

²⁾ Figures for 95 Sh A – GS

³⁾ Add 0.08 in to ØD_H at higher speeds for expansion of spider

Inch bores machined to AGMA Class 1, Metric bores machined to H7

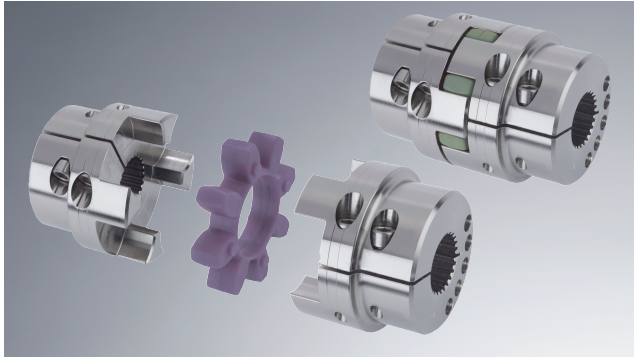
Bores Ød1/Ød2 and the corresponding transmittable friction torques T _R of clamping ring hub in [lb-in] ¹⁾																				
Size	0.394	0.551	0.591	0.630	0.748	0.787	1.102	1.181	1.260	1.378	1.575	1.654	1.772	1.969	2.165	2.362	2.559	2.756	3.150	3.543
19	239	611	743	505	832	974														
24		620	770	496	859	1,009	1,699													
28			956	1,159	1,832	1,310	2,788	3,381	2,921	3,832										
38						1,841	3,886	4,700	4,098	5,337	6,098	7,019	6,868							
42						3,523	4,275	3,682	4,841	5,532	5,054	6,231	7,656							
48							5,452	6,231	7,957	9,117	8,515	10,267	10,816	13,657						
55									7,658	8,771	8,125	9,904	11,037	11,303	14,799	14,206	17,773			
65										12,799	11,993	14,489	16,171	16,702	21,499	20,959	25,933			
75											15,135	18,171	20,304	21,101	26,907	26,403	32,430	37,997		
90														34,032	37,608	42,432	51,849	52,221	62,276	71,224
																			84,748	95,989

For transmittable torques of the clamping connection consider the max. tolerance to the shaft fit k6 / bore H7, from Ø55mm m6/G7. With bigger, shafts with larger tolerances the torque is reduced.

To calculate stiffness of the shaft/hollow shaft request KTR standard 45510

Order form:		ROTEX® GS 24	98 Sh-A	6.0	–	Ø 24	6.0	–	Ø 20
		Coupling size	Spider hardness	Hub design	Bore		Hub design	Bore	

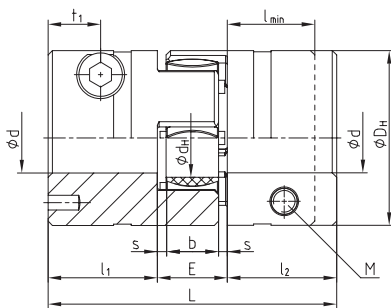
Steel cross clamp hubs



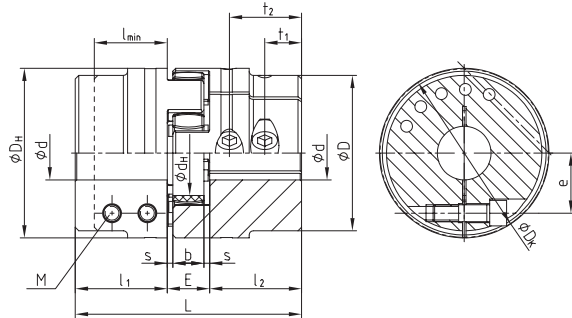
Same advantages as the standard ROTEX® in addition:

- Ideal clamping design for splined shafts
- Static balanced
- Suitable for reversing applications
- ⚠ protection assessed and confirmed to EU standard 94/9/EC (acceptable for hub designs 2.1 and 2.3, hub design 2.0 only to category 3)
- Installation instructions available at www.ktr.com

Components



ROTEX® 19 - 28



ROTEX® 38 - 90

ROTEX® with clamping hubs																		
Size	Dimensions [in]																	Screw DIN EN ISO 4762
	d max.	L	l1, l2	l min.	E	b	s	DH	D	dH	M	DK	t1	t2	e	M	TA [lb-in]	
19	0.813 ¹⁾	2.60	0.98	0.79	0.63	0.47	0.08	1.57	-	0.71	M6	1.81	0.47	-	0.57	M6	124	
24	1.125	3.07	1.18	0.98	0.71	0.55	0.08	2.17	-	1.06	M6	2.26	0.47	-	0.79	M6	124	
28	1.438	3.54	1.38	1.18	0.79	0.59	0.10	2.56	-	1.18	M8	2.87	0.55 ²⁾	-	0.98	M8	310	
38	1.563	4.49	1.77	1.38	0.94	0.71	0.12	3.15	2.76	1.50	M8	3.05	0.75	-	1.04	M8	310	
42	1.875	4.96	1.97	1.65	1.02	0.79	0.12	3.74	3.35	1.81	M10	3.68	0.71 ²⁾	-	1.26	M10	611	
48	2.125	5.51	2.20	1.81	1.10	0.83	0.14	4.13	3.74	2.01	M12	4.13	0.83 ²⁾	-	1.42	M12	1,062	
55	2.563	6.30	2.56	1.97	1.18	0.87	0.16	4.72	4.33	2.36	M12	4.70	1.02	2.01 ²⁾	1.67 ³⁾	M12	1,062	
65	2.625	7.28	2.95	2.17	1.38	1.02	0.18	5.31	4.53	2.68	M12	5.22	1.30	2.40 ²⁾	1.97 ³⁾	M12	1,062	
75	3.000	8.27	3.35	2.56	1.57	1.18	0.20	6.30	5.31	3.15	M16	6.22	1.42	2.68 ²⁾	2.24 ³⁾	M16	2,611	
90	3.438	9.65	3.94	3.15	1.77	1.34	0.22	7.87	6.30	3.94	M20	7.76	1.57	3.15 ²⁾	2.83 ³⁾	M20	5,133	

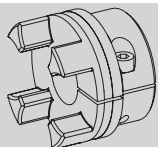
Bore Ød and the corresponding transmittable friction torques [lb-in] of ROTEX® clamping design 2.0																												
Size	0.344	0.374	0.438	0.563	0.625	0.750	0.787	0.875	1.000	1.125	1.188	1.250	1.378	1.500	1.563	1.625	1.750	1.875	2.000	2.125	2.375	2.563	2.756	3.000	3.156	3.375	3.543	
19	392	400	417	450	466	499	509																					
24		515	531	564	580	613	623	646	679	712																		
28				1,224	1,255	1,315	1,333	1,376	1,436	1,497	1,527	1,557	1,619	1,678														
38					1,455	1,506	1,524	1,566	1,627	1,687	1,717	1,748	1,809	1,868	1,899	1,929												
42								2,540	2,608	2,704	2,800	2,848	2,896	2,994	3,088	3,136	3,184	3,280	3,376	3,472								
48								5,735	5,873	6,071	6,269	6,368	6,467	6,670	6,863	6,963	7,061	7,259	7,457	7,655	7,853							
55													10,674	10,971	11,254	11,401	11,545	11,835	12,125	12,415	12,706	13,286	13,722					
65														11,428	11,711	11,858	12,002	12,292	12,582	12,873	13,163	13,743	14,179	14,628				
75																	24,742	25,291	25,839	26,387	26,935	28,032	28,854	29,703	30,773	31,459		
90																	45,313	46,173	47,033	47,893	48,753	50,473	51,763	53,094	55,773	55,848	57,354	58,512

¹⁾ With design 2.1 dmax. Ø.625 in

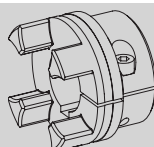
²⁾ With reduced hubs the dimension t1 varies or the number of fasteners changes from qty-2 to qty-1

³⁾ t1 and t2 have a different e dimensions

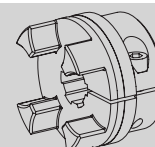
Inch bores machined to AGMA Class 1, Metric bores machined to H7



Design 2.0
clamping hub,
single slit,
without keyway



Design 2.1
clamping hub,
single slit,
with keyway



Design 2.3
clamping hub with spline

Order form:

ROTEX® 24	98 Sh-A	2.1	-	Ø 24	2.0	-	Ø 20
Coupling size	Spider hardness	Hub design		Bore	Hub design		Bore

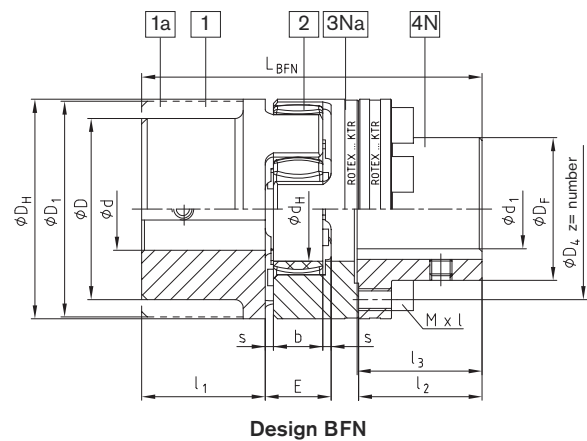
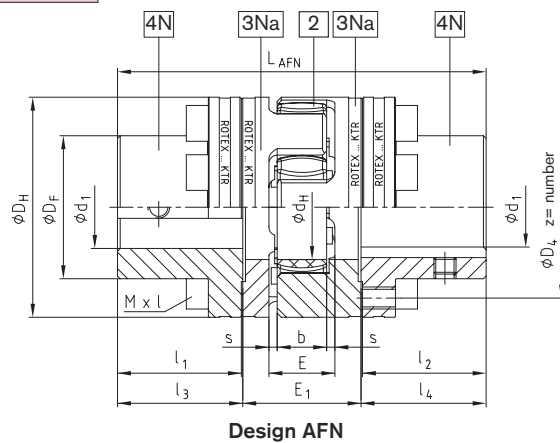
Flange designs AFN and BFN



Same advantages as the standard ROTEX® in addition:

- Double flange design AFN and single flange design BFN
- Reduced maintenance, eliminates the need to move components (e.g. motor and pump)
- AFN design allows spider replacement while coupling is installed
- Flange component materials: 4N Steel
3Na Nodular Iron
EN-GJS-400-15 (GGG 40)
- approved according to EC Standard 94/9/EC
- Installation instructions available at www.ktr.com

Components



ROTEX® AFN (No. 002) and BFN (No. 004)

Size	Bore $\varnothing d; \varnothing D; \varnothing D_1$	Component 4N bore $\varnothing d_1$	Dimensions [in]											Fasteners 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}	$M \times l$	z	Pitch ²⁾	$^{1)}T_A$ [lb-in]
24	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	0.938	2.17	1.42	1.77	1.06	1.18	0.71	1.30	0.08	0.55	1.20	3.70	3.39	M5x16	8		89
28		1.125	2.56	1.65	2.13	1.18	1.38	0.79	1.54	0.10	0.59	1.40	4.33	3.94	M6x20	8	8x45°	150
38		1.438	3.15	2.05	2.60	1.50	1.77	0.94	1.69	0.12	0.71	1.79	5.28	4.88	M8x22	8		363
42		1.563	3.74	2.44	3.15	1.81	1.97	1.02	1.89	0.12	0.79	2.01	5.91	5.43	M8x25	12	16x22.5°	363
48		1.813	4.13	2.76	3.54	2.01	2.20	1.10	1.97	0.14	0.83	2.24	6.46	5.98	M8x25	12		363
55		2.125	4.72	3.15	4.02	2.36	2.56	1.18	2.36	0.16	0.87	2.60	7.56	6.93	M10x30	8	8x45°	735
65		2.500	5.31	3.70	4.57	2.68	2.95	1.38	2.56	0.18	1.02	2.99	8.54	7.91	M10x30	12	16x22.5°	735
75		2.813	6.30	4.25	5.35	3.15	3.35	1.57	2.95	0.20	1.18	3.41	9.76	9.02	M12x40	15		1,062
90		3.875	7.87	5.59	6.77	3.94	3.94	1.77	3.23	0.22	1.34	4.00	11.22	10.43	M16x40	15		2,611
100		4.250	8.86	6.22	7.68	4.45	4.33	1.97	3.82	0.24	1.50	4.39	12.60	11.61	M16x50	15		2,611
110		4.813	10.04	7.01	8.58	5.00	4.72	2.17	4.06	0.26	1.65	4.80	13.66	12.64	M20x50	15	20x18°	5,133
125		5.563	11.42	8.11	9.92	5.79	5.51	2.36	4.57	0.28	1.81	5.59	15.75	14.57	M20x60	15		5,133
140		6.375	12.60	9.25	11.10	6.50	6.10	2.56	5.04	0.30	1.97	6.20	17.44	16.10	M20x60	15		5,133
160		7.313	14.57	10.63	12.80	7.48	6.89	2.95	5.75	0.35	2.24	6.99	19.72	18.23	M24x70	15		8,850
180		8.500	16.54	12.40	14.76	8.66	7.68	3.35	6.26	0.41	2.52	7.80	21.85	20.28	M24x80	18	24x15°	8,850

¹⁾ Fastener tightening torque T_A [lb in].

²⁾ Thread in drive flange between jaws.

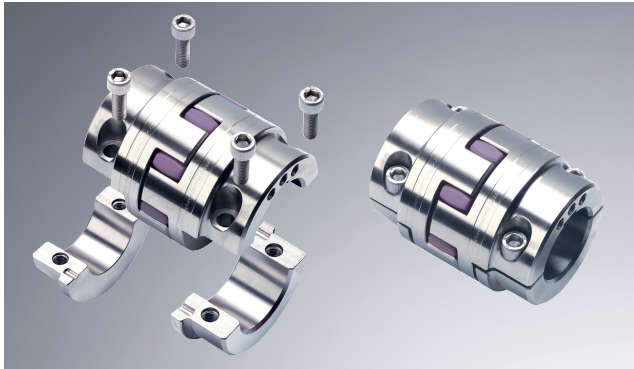
³⁾ Coupling is shipped unassembled.

Inch bores machined to AGMA Class 1, Metric bores machined to H7

Order form

ROTEX® 38	AFN	92 Sh A	4N – Ø 38	4N – Ø 35
Coupling size	Type	Spider hardness	Component	Bore

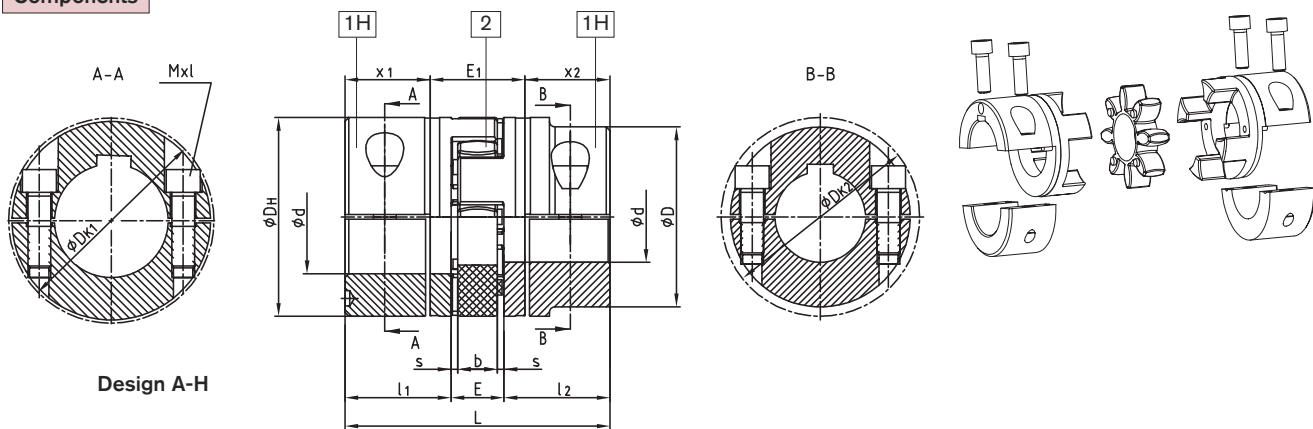
Drop-out center coupling design A-H



Same advantages as the standard ROTEX® in addition:

- Complete installation and removal using only 4 fasteners
- Reduced maintenance by not having to move components (e.g. motor and pump)
- Keyed and frictional hub combinations can be installed radially (dimension E_1 for design AFN = dimension E_1 for A-H)
- Ex approved according to EC Standard 94/9/EC (design 7.8 clamping hub without key only to category 3)
- Installation instructions available at www.ktr.com

Components



Design A-H

ROTEX® Design A-H															
Size	Component	Bore $\varnothing_{d_{max}}$ [in]	Dimension [in]											Fastener 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	Mx1	T_A [lb-in]
19	1H	0.813	2.60	0.98	0.63	0.47	0.08	1.57	-	1.81	-	0.69	1.22	M6x16	124
24	1H	1.125	3.07	1.18	0.71	0.55	0.08	2.17	-	2.26	-	0.89	1.30	M6x20	
28	1H	1.438	3.54	1.38	0.79	0.59	0.10	2.56	-	2.87	-	1.00	1.54	M8x25	310
38	1H	1.688	4.49	1.77	0.94	0.71	0.12	3.15	-	3.29	-	1.40	1.69	M8x30	
42	1H	1.875	4.96	1.97	1.02	0.79	0.12	3.74	3.35	-	3.68	1.54	1.89	M10x30	611
		2.125							-	3.82	-			M10x35	
48	1H	2.125	5.51	2.20	1.10	0.83	0.14	4.13	3.74	-	4.13	1.77	1.97	M12x35	1,062
		2.313							-	4.27	0.00			M12x40	
55	1H	2.500	6.30	2.56	1.18	0.87	0.16	4.72	4.33	-	4.70	1.97	2.36	M12x40	1,062
		2.625							-	4.80	-			M12x45	
65	1H	2.625	7.28	2.95	1.38	1.02	0.18	5.31	4.53	-	4.86	2.36	2.56	M12x40	1,062
		3.000							-	5.22	-			M12x45	
75	1H	3.000	8.27	3.35	1.57	1.18	0.20	6.30	5.31	-	5.81	2.66	2.95	M16x50	2,611
		3.438							-	6.22	-				
90	1H	3.438	9.65	3.94	1.77	1.34	0.22	7.87	6.30	-	6.93	3.21	3.23	M20x60	5,133
		4.250							-	7.76	-				
100 1)	1H	4.250	10.63	4.33	1.97	1.50	0.24	8.86	7.09	-	7.30	3.31	4.02	M16x50	2,611
110 1)	1H	4.625	11.61	4.72	2.17	1.65	0.26	10.04	7.87	-	8.19	3.54	4.69	M20x60	5,133
125 1)	1H	5.375	13.39	5.51	2.36	1.81	0.28	11.42	9.06	-	9.55	4.13	5.12	M24x70	8,850

With maximum bore the keyways are offset by approx. 5°.

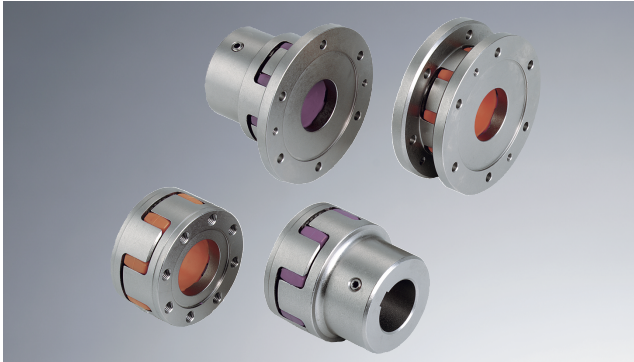
Hub materials: up to size 90 S355J2G3
from size 100 EN-GJS-400-15

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

Inch bores machined to AGMA Class 1, Metric bores machined to H7

Order form	ROTEX® 38	A-H	98 Sh A	1H – Ø 38	1H – Ø 30
	Coupling size	Design	Spider hardness	Component Bore	Component Bore

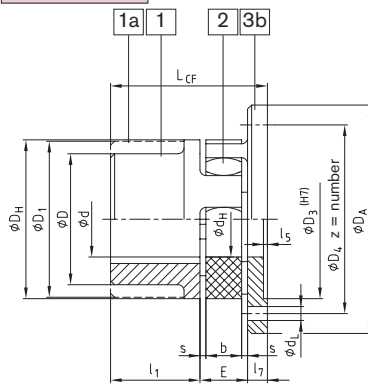
Flange designs CF, CFN, DF and DFN



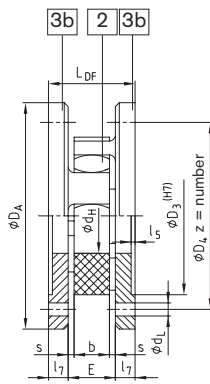
Same advantages as the standard ROTEX® in addition:

- CF and CFN - flange to shaft connection
- DF and DFN - double flange design, allows radial installation without moving components
- CFN and DFN - small outside diameters
- DF and DFN – compact design
- Flange material part 3b: Nodular Iron EN-GJS-400-15 (GGG 40)
- approved according to EC Standard 94/9/EC
- Installation instructions available at www.ktr.com

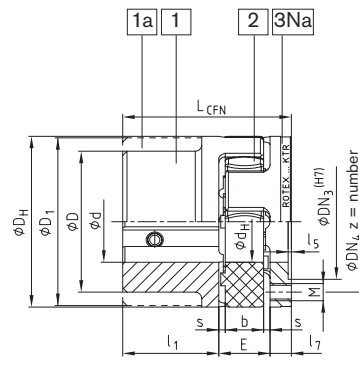
Components



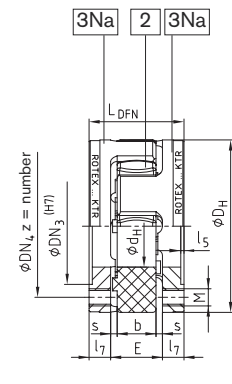
Design CF



Design DF



Design CFN



Design DFN

ROTEX® CF; CFN (No. 005) and DF; DFN (No. 006)

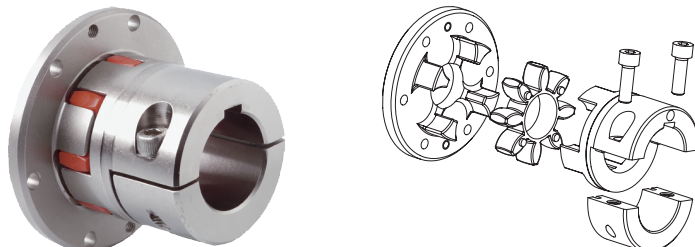
Size	Ød ØD ØD ₁	General dimension (in)									Dimensions CF and DF (in)							Dimensions CFN and DFN (in)							
		D _H	d _H	l ₁	E	s	b	l ₅	l ₇	D _A	D ₃	D ₄	z	d _L	L _{CF}	L _{DF}	DN ₃	DN ₄	M	z	Pitch ²⁾	L _{CFN}	L _{DFN}		
24	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	2.17	1.06	1.18	0.71	0.08	0.55	0.06	0.31	3.15	2.17	2.56	5	0.18	2.20	1.34	1.42	1.77	M5	8		2.20	1.34		
28		2.56	1.18	1.38	0.79	0.10	0.59	0.06	0.39	3.94	2.56	3.15	6	0.26	2.56	1.57	1.73	2.13	M6	8	8x45°	2.56	1.57		
38		3.15	1.50	1.77	0.94	0.12	0.71	0.06	0.39	4.53	3.15	3.74	6	0.26	3.11	1.73	2.13	2.60	M8	8		3.11	1.73		
42		3.74	1.81	1.97	1.02	0.12	0.79	0.08	0.47	5.51	3.74	4.53	6	0.35	3.46	1.97	2.56	3.15	M8	12	16x22.5°	3.46	1.97		
48		4.13	2.01	2.20	1.10	0.14	0.83	0.08	0.47	5.91	4.13	4.92	8	0.35	3.78	2.05	2.95	3.54	M8	12		3.78	2.05		
55		4.72	2.36	2.56	1.18	0.16	0.87	0.08	0.63	6.89	4.72	5.71	8	0.43	4.37	2.44	3.31	4.02	M10	8	8x45°	4.37	2.44		
65		5.31	2.68	2.95	1.38	0.18	1.02	0.08	0.63	7.48	5.31	6.30	10	0.43	4.96	2.64	3.78	4.57	M10	12	16x22.5°	4.96	2.64		
75		6.30	3.15	3.35	1.57	0.20	1.18	0.10	0.75	8.46	6.30	7.28	10	0.53	5.67	3.07	4.41	5.35	M12	15		5.67	3.07		
90		7.87	3.94	3.94	1.77	0.22	1.34	0.12	0.79	10.24	7.87	8.86	12	0.53	6.50	3.35	5.71	6.77	M16	15		6.50	3.35		
100		8.86	4.45	4.33	1.97	0.24	1.50	0.16	0.98	11.22	8.86	9.84	12	0.53	7.28	3.94	6.50	7.68	M16	15		7.28	3.94		
110		10.04	5.00	4.72	2.17	0.26	1.65	0.16	1.02	12.99	10.04	11.42	12	0.71	7.91	4.21	7.09	8.58	M20	15	20x18°	7.91	4.21		
125		11.42	5.79	5.51	2.36	0.28	1.81	0.20	1.18	14.57	11.42	12.80	16	0.71	9.06	4.72	8.46	9.92	M20	15		9.06	4.72		
140		12.60	6.50	6.10	2.56	0.30	1.97	0.20	1.34	16.14	12.60	14.17	16	0.87	10.00	5.24	9.65	11.10	M20	15		10.00	5.24		
160		14.57	7.48	6.89	2.95	0.35	2.24	0.20	1.50	18.11	14.57	16.14	16	0.87	11.34	5.94	11.02	12.80	M24	15		11.34	5.94		
180		16.54	8.66	7.68	3.35	0.41	2.52	0.22	1.57	20.47	16.54	18.31	16	1.02	12.60	6.50	12.99	14.76	M24	18	24x15°	12.60	6.50		

See Page 34 for additional flange dimensions
Inch bores machined to AGMA Class 1

Additional designs: ROTEX® CF-H

Drop-out center flange coupling

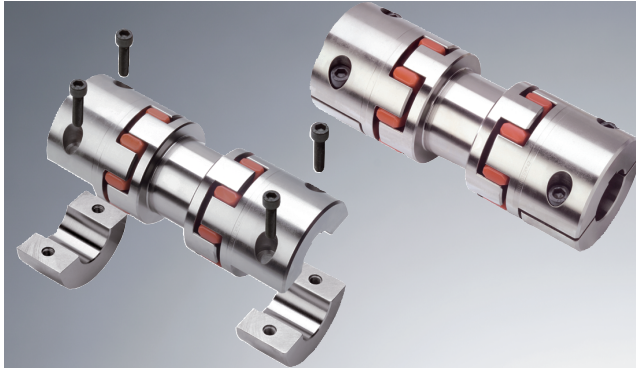
Please request sheet M412069



Order form:

ROTEX® 38	CF	92 Sh A	1 — EN-GJL-250 — Ø 20
Coupling size	Design	Spider hardness	Component material Bore

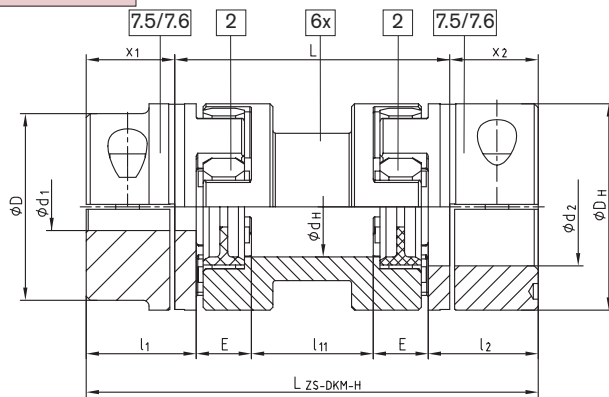
Double-cardanic spacer design ZS-DKM-H



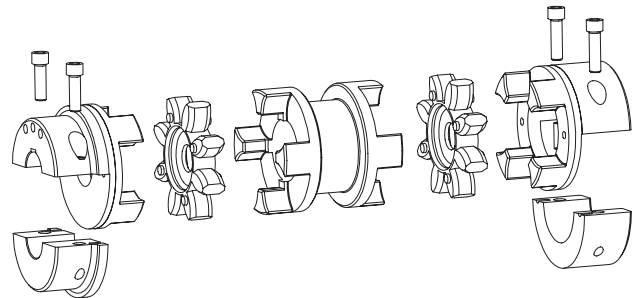
Same advantages as the standard ROTEX® in addition:

- Standard spacers up to 9.84" shaft gap
- Complete installation and removal using only 4 fasteners
- Accommodates high shaft misalignments while remaining torsionally symmetric
- Restoring forces are reduced to a minimum
- approved according to EC Standard 94/9/EC (design 7.5 clamping hub without key according to category 3)
- Installation instructions available at www.ktr.com

Components



Design ZS-DKM-H



ROTEX® ZS-DKM-H

ROTEX® ZS-DKM-H																		
Size	DBSE L [in]	Bore. Ød ₁ /d ₂ [in]	Spider (part 2) ¹⁾ T _{KN} [lb- in]	Dimensions [in]							Fastener DIN EN ISO 4762 - 12.9		Max. misalignments					Weight ²⁾ [lbs]
				D _H	d _H	l ₁ : l ₂	x ₁ : x ₂	l ₁₁	E	L _{ZS-DKM-H}	M	T _A [lb-in]	Axial [in]	at n = 1500 rpm		at n = 3000 rpm		
														Parallel [in]	Angular [°]	Parallel [in]	Angular [°]	
24	3.94	1.125	300	2.17	1.06	1.18	0.89	1.93	0.71	5.71	M6	124	0.06	0.04		0.03		3.1
	5.51							3.50		7.28				0.07		0.04		3.5
28	3.94	1.438	840	2.56	1.18	1.38	1.00	1.61	0.79	5.94	M8	310	0.06	0.04		0.03		4.2
	5.51							3.19		7.52				0.06		0.04		4.9
38	3.94	1.688	1,680	3.15	1.50	1.77	1.40	1.30	0.94	6.73	M8	310	0.07	0.04		0.02		8.6
	5.51							2.87		8.31				0.06		0.04		9.0
42	3.94	2.125	2,340	3.74	1.81	1.97	1.54	1.02	1.02	7.01	M10	611	0.08	0.03		0.02		11
	5.51							2.60		8.58				0.06		0.04		13
48	3.94	2.313	2,740	4.13	2.01	2.20	1.77	0.87	1.10	7.48	M12	1,062	0.08	0.03		0.02		16
	5.51							2.44		9.06				0.06		0.04		17
55	3.94	2.625	3,620	4.72	2.36	2.56	1.97	0.39	1.18	7.87	M12	1,062	0.09	0.02	0.9	0.02	0.6	21
	5.51							1.97		9.45				0.05		0.03		25
	7.09							3.54		11.02				0.07		0.05		27
	7.87							4.33		11.81				0.09		0.06		28
65	5.51	3.000	5,530	5.31	2.68	2.95	2.36	1.57	1.38	10.24	M12	1,062	0.10	0.05		0.03		36
	7.09							3.15		11.81				0.07		0.05		37
	5.51							0.98		10.83				0.04		0.03		52
75	7.09	3.438	11,320	6.30	3.15	3.35	2.66	2.56	1.57	12.40	M16	2,611	0.12	0.06		0.04		57
	7.87							3.35		13.19				0.08		0.05		60
	9.84							5.31		15.16				0.11		0.07		65
90	7.09	4.250	21,240	7.87	3.94	3.94	3.21	2.09	1.77	13.50	M20	5,133	0.13	0.06		0.04		108
	9.84							4.84		16.26				0.10		0.07		116

1) Maximum torque of the coupling $T_{K\max}$ = rated torque of the 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) Calculated to max. bore

Inch bores machined to AGMA Class 1, Metric bores machined to H7

NOTE: The standard is only for horizontal design. Vertical design on request.

Order form

ROTEX® 38	ZS-DKM-H	140	98 Sh A	Ø38	Ø30
Coupling size	Design	Shaft distance dimension L	Spider hardness	Bore	Bore

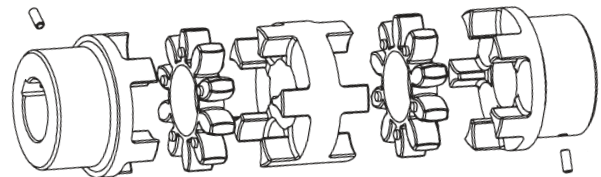
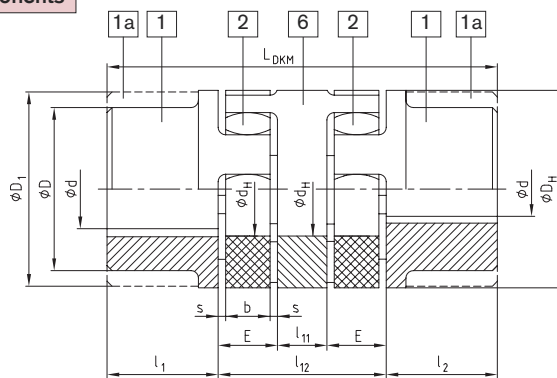
Double-cardanic spacer design DKM



Same advantages as the standard ROTEX® in addition:

- Greater shaft misalignments
- 3-part double cardanic design eliminating the need for bearing support
- Restoring forces are reduced to a minimum
-  approved according to EC Standard 94/9/EC (Explosion Certificate ATEX 95)
- Installation instructions available at www.ktr.com

Components



Design DKM

ROTEX® DKM (No. 018)															
Size	ød øD øD1	Spider (part 2) Nominal torque [lb-in] ¹⁾		Dimensions [in]									Max. misalignments at n = 1500 rpm		
		92 Sh-A	98 Sh-A	DH	dH	l1; l2	l11	l12	E	s	b	LDKM	Parallel [in]	Angular [°]	Axial [in]
19	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	89	150	1.57	0.71	0.98	0.39	1.65	0.63	0.08	0.47	3.62	0.018	1.0	+0.05/-0.04
24		300	530	2.17	1.06	1.18	0.63	2.05	0.71	0.08	0.55	4.41	0.023	1.0	+0.06/-0.04
28		840	1,410	2.56	1.18	1.38	0.71	2.28	0.79	0.10	0.59	5.04	0.026	1.0	+0.06/-0.06
38		1,680	2,870	3.15	1.50	1.77	0.79	2.68	0.94	0.12	0.71	6.22	0.030	1.0	+0.07/-0.06
42		2,340	3,980	3.74	1.81	1.97	0.87	2.91	1.02	0.12	0.79	6.85	0.033	1.0	+0.08/-0.08
48		2,740	4,640	4.13	2.01	2.20	0.94	3.15	1.10	0.14	0.83	7.56	0.036	1.0	+0.08/-0.08
55		3,620	6,060	4.72	2.36	2.56	1.10	3.46	1.18	0.16	0.87	8.58	0.040	1.0	+0.09/-0.08
65		5,530	8,310	5.31	2.68	2.95	1.26	4.02	1.38	0.18	1.02	9.92	0.046	1.0	+0.10/-0.08
75		11,320	16,990	6.30	3.15	3.35	1.42	4.57	1.57	0.20	1.18	11.26	0.052	1.0	+0.12/-0.12
90		21,240	31,860	7.87	3.94	3.94	1.57	5.12	1.77	0.22	1.34	12.99	0.058	1.0	+0.13/-0.12

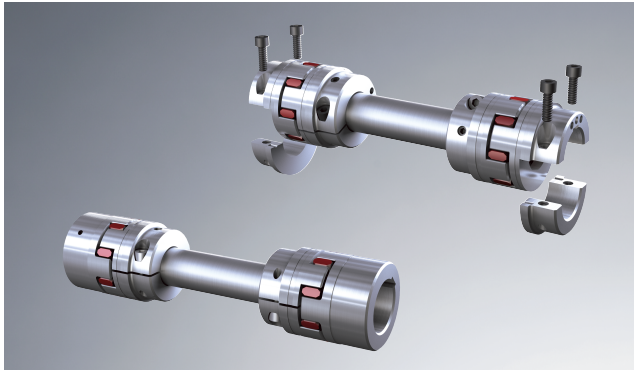
1) For selection, please see pages 20/21.

Inch bores machined to AGMA Class 1, Metric bores machined to H7

Order form:

ROTEX® 38	DKM	EN-GJL-250	98 Sh A	1 —	Ø 38	1 —	Ø 30
Coupling size	Design	Material	Spider hardness	Comp- onent	Bore	Comp- onent	Bore

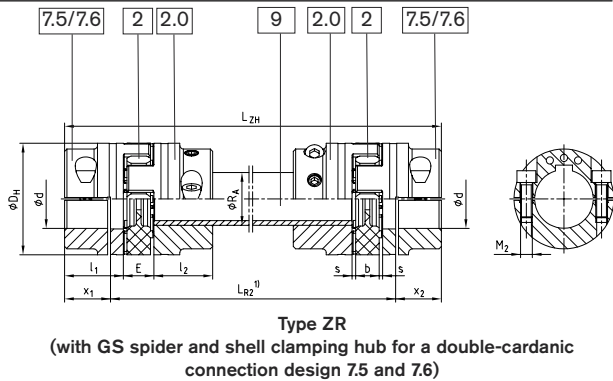
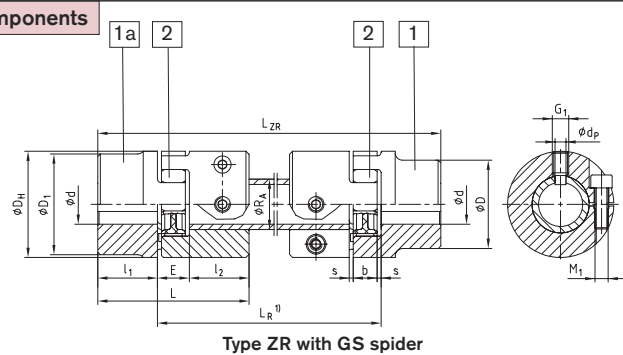
Intermediate shaft design ZR



Same advantages as the standard ROTEX® in addition:

- Connects applications with large shaft gaps
- Compensates for greater parallel misalignments
- Allows radial installation without moving components
- ZR style - intermediate shaft coupling with the GS spider can be removed radially
- Installation instructions available at www.ktr.com

Components



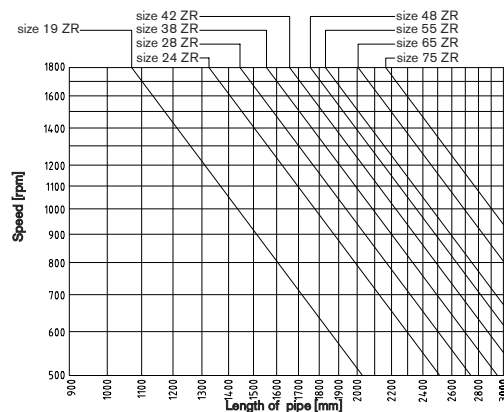
ROTEX® ZR (Nr. 037)																					
Dimensions for ZR (in)																					
	Max finish bore		Dimensions (in)						Intermediate pipe Torsional stiffness/ft		Cap Screw Component 2.0		Cap Screw Component 1H		LZR LZH	L _{R1}	L _{R2}	Dog point setscrew G ₁	Dog Point d _p [in]	Axial misalign- ment [in]	Angular misalign- ment [degrees]
Size	1a	1H	D _H	l ₁ ; l ₂	X1;X2	E	s	b	R _A	C ²⁾ lb-ft ² /rad	M ₁	T _A [lb-in]	M ₁	T _A [lb-in]							
19	0.98	0.79	1.57	0.98	0.69	0.63	0.08	0.47	3/4x11GA	520	M6	124	M6	89	LZR = L _R + 2 • l ₁ LZH = l ₁ + 2 • X ₁	4.33	3.82	M6	0.16	0.05	0.9
24	1.38	1.10	2.17	1.18	0.89	0.71	0.08	0.55	1x5/32	2,463	M6	124	M6	124		5.04	4.37	M8	0.22	0.06	0.9
28	1.57	1.50	2.56	1.38	1.00	0.79	0.10	0.59	1-3/8x5/32	4,145	M8	310	M8	310		5.71	5.08	M10	0.28	0.06	0.9
38	1.89	1.77	3.15	1.77	1.40	0.94	0.12	0.71	1-5/8x5/32	6,464	M8	221	M8	221		7.09	6.18	M12	0.33	0.07	1.0
42	2.17	2.17	3.74	1.97	1.54	1.02	0.12	0.79	1-3/4x5/32	9,523	M10	434	M10	434		7.80	6.85	M12	0.33	0.08	1.0
48	2.44	2.36	4.13	2.20	1.77	1.10	0.14	0.83	2x5/32	13,423	M12	761	M12	761		8.54	7.48	M16	0.47	0.08	1.1
55	2.91	2.76	4.72	2.56	1.97	1.18	0.16	0.87	2-1/8x5/32	21,600	M12	1,062	M12	1,062		9.53	8.66	M16	0.47	0.09	1.1
65	3.15	3.15	5.31	2.95	2.36	1.38	0.18	1.02	2-1/2x3/16	37,212	M12	1,062	M12	1,062		11.06	9.84	M16	0.47	0.10	1.2
75	3.74	3.54	6.30	3.35	2.66	1.57	0.20	1.18	3x2 1/16	58,817	M16	2,611	M16	2,611		12.52	11.22	M16	0.47	0.12	1.2

¹⁾ Please provide the shaft distance dimension L_W or L_R in all inquiries and orders along with the maximum speed to review the critical whipping speed.

²⁾ Torsion spring stiffness when the intermediate tube is 39 in

Inch bores machined to AGMA Class 1, Metric bores machined to H7

Friction torques of clamping hub have to be observed.



Order form:	ROTEX® 38	ZR	1200	St / GJL	98 Sh-A-GS	7.5	—	Ø 38	7.5	—	Ø 30
	Coupling size	Type	Shaft distance	Material	Spider hardness	Component		Bore	Component		Bore

- Same advantages as the standard ROTEX® in addition:
- Shaft coupling BTAN designed to be mounted to external brake drums with brake discs to DIN 5431/15435
 - Shaft coupling BTAN with disc for brake calipers
 - Each coupling design can be combined with several sizes of brake drums (see dimension "N")
 - The brake drum or brake disc must be mounted onto the shaft with the highest mass moment of inertia
 - The maximum brake torque must not exceed the maximum coupling torque
 - Installation instructions available at www.ktr.com

Technical drawing of a multi-layered cylindrical component in cross-section. The drawing shows five layers labeled at the top: 1a, 1, 2, 7N, and 1Nd. Dimensions are indicated with various symbols: outer diameters (ϕD_H , ϕD_1 , ϕD_2 , ϕD_0), inner diameters (ϕd), and lengths (L , l_1 , F , l_2 , C , M). A note specifies $\phi d_L z = \text{number}$. The bottom of the drawing is labeled B.

Disc brake design SBAN

ROTEX® type BTAN (No. 011) and SBAN (No. 013)																	
Size	Pilot bore Ø _d ; ØD ØD ₁	Bore max.d ₁		Dimensions [in]													
		EN-GJS-400-15	Steel	D _H	D ₂	D ₄	d _H	z	pitch ¹⁾	M	T _A [lb·in]	I ₁ ; I ₂	E	L	P	N _{SBAN}	
38	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	—	1.313	3.15	1.97	2.60	1.50	8	8x45°	M8	363	1.77	0.94	4.49	0.30	1.48	
42		—	1.563	3.74	2.36	3.15	1.81	12	16x22.5°	M8	363	1.97	1.02	4.96	0.37	1.59	
48		—	1.813	4.13	2.68	3.54	2.01	12		M8	363	2.20	1.10	5.51	0.41	1.79	
55		—	2.125	4.72	3.07	4.02	2.36	8	8x45°	M10	735	2.56	1.18	6.30	0.49	2.07	
65		—	2.500	5.31	3.62	4.57	2.68	12	16x22.5°	M10	735	2.95	1.38	7.28	0.53	2.42	
75		—	2.813	6.30	4.17	5.35	3.15	15		M12	1062	3.35	1.57	8.27	0.61	2.74	
90		—	3.875	7.87	5.51	6.77	3.94	15	20x18°	M16	2611	3.94	1.77	9.65	0.73	3.21	
100		3.875	—	8.86	6.14	7.68	4.45	15		M16	2611	4.33	1.97	10.63	0.81	3.52	
110		4.250	—	10.04	6.93	8.58	5.00	15		M20	5133	4.72	2.17	11.61	0.93	3.80	
125			5.000	—	11.42	8.03	9.92	5.79	15		M20	5133	5.51	2.36	13.39	1.08	4.43

¹⁾ Thread in the hub between the jaws

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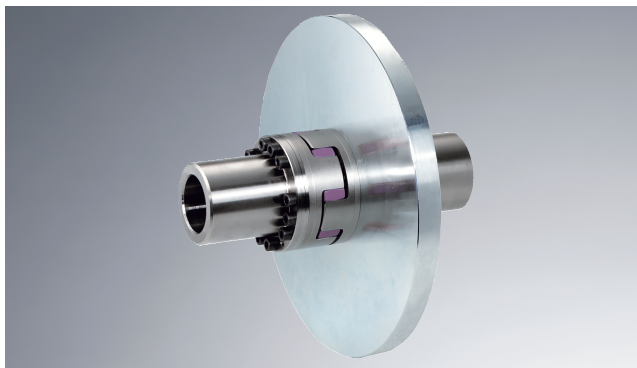
Other sizes available, request sheets:

BTAN: M 380821
SBAN straight: M380822; offset: M370065
FNN hub: M380823

Inch bores machined to AGMA Class 1, Metric bores machined to H7

Order form:	ROTEX® 38	BTAN	Ø200x75	92 Sh A	1Nd — Ø 38	1 — Ø 30
	Coupling size	Design	Ø Brake drum x width of brake drum	Spider hardness	Component Bore	Component Bore

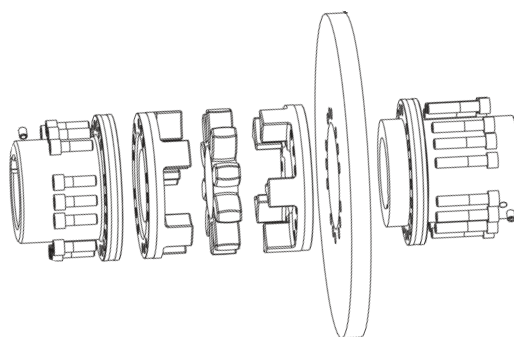
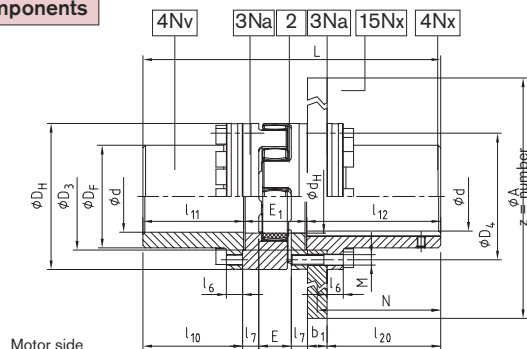
Design AFN-SB special with brake disc



Same advantages as the standard ROTEX® in addition:

- Shaft coupling AFN-SB special with brake disc for brake calipers
- The brake disc must be mounted onto the shaft with the highest mass moment of inertia
- The maximum brake torque must not exceed the maximum coupling torque
- Installation instructions available at www.ktr.com

Components



ROTEX® Design AFN-SB special												
Size	Bore Ød		Dimensions [in]									
	min.	max.	D _H	D _F	D ₃ ^{H7/h7}	D ₄	d _H	E	E ₁	M	z	Pitch
65	0.875	2.500	5.31	3.70	3.78	4.57	2.68	1.38	2.56	M10	12	16x22,5°
75	1.188	2.813	6.30	4.25	4.41	5.35	3.15	1.57	2.95	M12	15	
90	1.625	3.875	7.87	5.59	5.71	6.77	3.94	1.77	3.23	M16	15	
100	1.813	4.250	8.86	6.22	6.50	7.68	4.45	1.97	3.82	M16	15	
110	2.375	4.813	10.04	7.01	7.09	8.58	5.00	2.17	4.06	M20	15	20x18°
125	2.375	5.563	11.42	8.11	8.46	9.92	5.79	2.36	4.57	M20	15	
140	2.375	6.375	12.60	9.25	9.65	11.10	6.50	2.56	5.04	M20	15	
160	3.188	7.313	14.57	10.63	11.02	12.80	7.48	2.95	5.75	M24	15	

ROTEX® Design AFN-SB special												
Size	Torque ¹⁾ w/ 95Sh-A		Max. speed [rpm]	Max. ²⁾ brake torque [lb-in]	Dimensions [in]							
	T _{KN}	T _{Kmax}			l ₆	l ₇	l ₁₀	l ₁₁	l ₁₂	l ₂₀	N	L
65	8,310	16,630	3,450	16,630	0.59	0.63	4.43	4.47	6.54	5.31	5.91	13.56
75	16,990	33,980	3,250	33,980	0.79	0.75	5.18	5.24	6.56	5.31	5.91	14.74
90	31,860	63,720	3,000	63,720	0.79	0.79	6.46	6.52	8.13	6.89	7.48	17.87
100	43,800	87,610	2,800	87,610	0.98	0.98	6.04	6.10	8.13	6.89	7.48	18.05
110	63,720	127,440	2,600	127,440	0.98	1.02	7.93	8.01	8.35	7.09	7.68	20.41
125	88,500	177,000	2,250	177,000	1.18	1.18	7.81	7.89	8.35	7.09	7.68	20.81
140	113,280	226,560	1,800	226,560	1.18	1.34	9.63	9.72	9.94	8.66	9.25	24.70
										8.27 ³⁾	9.06 ³⁾	
160	169,920	339,840	1,500	339,840	1.34	1.50	8.92	9.02	9.94	8.66	9.25	24.70
										8.27 ³⁾	9.06 ³⁾	

Selection of ROTEX® coupling/ brake disc											
Size	Brake disc ØA x b ₁										
	355x30	400x30	450x30	500x30	560x30	630x30	710x30	800x30	900x30	900x40	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	x
160							x	x	x	x	x

¹⁾ For selection, please see pages 20/21. ²⁾ The max. braking torque must not exceed the maximum torque of the coupling. ³⁾ Dimensions for a brake disc width b₁ = 1.57 in.

Order form:		ROTEX® 90	AFN-SB special	Ø450x30	95 Sh A	4Nv — Ø 90	4Nx — Ø 90
		Coupling size	Design	Disc brake width of disc	Spider Hardness	Component Bore	Component Bore

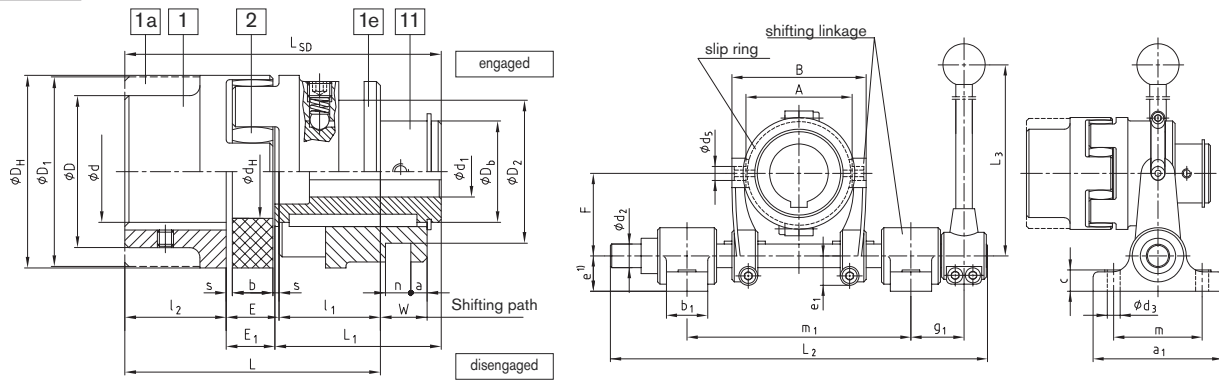
Design SD (shiftable at standstill)



Same advantages as the standard ROTEX® in addition:

- Shiftable coupling for all applications in general industry
- Easy to engage and disengage drive and driven at standstill
- Optional shiftable linkage kit available to ease installation
- Spring and ball detent locking mechanism
- Other sizes on request according to M 370266
- Installation instructions available at www.ktr.com

Components



ROTEX® design SD (No. 015)

Size	$\frac{\phi d}{\phi D}$ $\frac{\phi D_1}{\phi D}$	Bore d_1		Dimensions [in]																Shifting force set in [lbf]	Slip ring size	Shiftable linkage size
		min.	max.	D_H	$D_2 \pm 0,1$	D_b	d_H	l_1, l_2	E	s	b	E_1	L	L_1	W	a	$n \pm 0,1$	L_{SD}				
24	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	0.375	0.688	2.17	1.61	1.18	1.06	1.18	0.71	0.08	0.55	0.65	3.07	2.03	0.63	0.24	0.24	3.86	25	—	—	
28		0.438	0.875	2.56	2.28	1.42	1.18	1.38	0.79	0.10	0.59	0.71	3.54	2.36	0.69	0.31	0.31	4.45	29	—	—	
38		0.500	1.125	3.15	2.78	1.77	1.50	1.77	0.94	0.12	0.71	0.87	4.49	2.87	0.83	0.31	0.49	5.51	34	1.1	1	
42		0.563	1.250	3.74	2.78	1.97	1.81	1.97	1.02	0.12	0.79	0.94	4.96	3.23	0.91	0.31	0.49	6.14	41	1.1	1	
48		0.625	1.500	4.13	3.52	2.36	2.01	2.20	1.10	0.14	0.83	1.00	5.51	3.56	0.96	0.24	0.69	6.77	45	2.2	2	
55		0.750	1.813	4.72	4.43	2.76	2.36	2.56	1.18	0.16	0.87	1.06	6.30	4.06	1.02	0.24	0.71	7.68	56	3.3	3	
65		0.813	2.125	5.31	4.43	3.15	2.68	2.95	1.38	0.18	1.02	1.26	7.28	4.72	1.20	0.28	0.71	8.94	63	3.3	3	
75		1.000	2.500	6.30	5.14	3.74	3.15	3.35	1.57	0.20	1.18	1.46	8.27	5.31	1.38	0.24	0.81	10.12	79	4.4	3	
90		1.125	2.813	7.87	6.48	4.33	3.94	3.94	1.77	0.22	1.34	1.61	9.65	5.98	1.56	0.31	1.00	11.54	79	5.5	4	
100		1.188	3.000	8.86	6.48	4.53	4.45	4.33	1.97	0.24	1.50	1.81	10.63	6.65	1.73	0.55	1.00	12.80	86	5.5	4	
110	1.438	3.250	10.04	6.48	4.92	5.00	4.72	2.17	0.26	1.65	2.03	11.61	7.24	1.91	0.73	1.00	13.98	101	5.5	4		
125	1.625	3.875	11.42	8.29	5.71	5.79	5.51	2.36	0.28	1.81	2.19	13.39	8.21	2.09	0.73	1.20	15.91	113	6.6	5		

slip ring and shiftable linkage

Size	Shiftable linkage size	Dimensions [in]																	Max. speed n for slip ring [rpm]		
		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	4.33	1.38	0.71	0.79	0.43	0.47	1.18	0.98	2.76	2.17	12.60	15.75	2.95	7.09	7.48	3.54	4.49	3,280		
42	1																				
48	2				0.98				1.06	3.84	2.36	16.93	17.72		9.45	10.63	4.37	5.94	2,550		
55	3	5.51	2.36											3.94							
65	3				1.18		0.67	1.57		1.28	4.72	2.76	19.29		23.62		11.02	12.20	5.51	7.09	2,120
75	3																		6.69	8.27	1,710
90	4			0.98		0.53															
100	4	6.30	2.36			1.38		0.83	1.97	1.48	5.81	2.76	22.24	29.53	4.72	12.64	14.37	7.87	9.61	1,360	
110	4																				
125	5				1.57		0.98		1.81	7.48	3.15	24.80	42.05		14.37	16.14	9.84	11.81	855		

¹⁾ In case of an extended base plate the dimension "e" of the shiftable linkage size 5 has to be increased by at least 0.4 in.

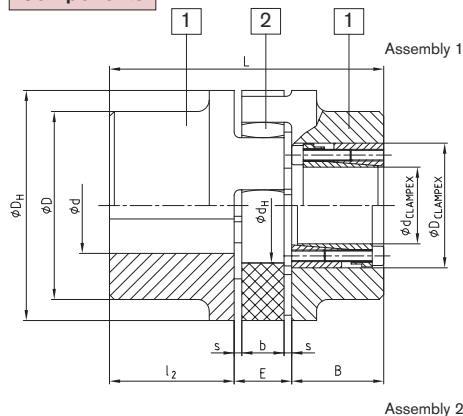
Inch bores machined to AGMA Class 1, Metric bores machined to H7

Order form:

ROTEX® 38	SD	with 1,1 and 1	92 Sh A	1 —	Ø 38	11 —	Ø 28
Coupling size	Design	with slip ring 1,1 and shiftable linkage 1	Spider hardness	Component	Bore	Component	Bore

Additional designs

Components



ROTEX® design No. 001 with clamping unit CLAMPEX® KTR 200

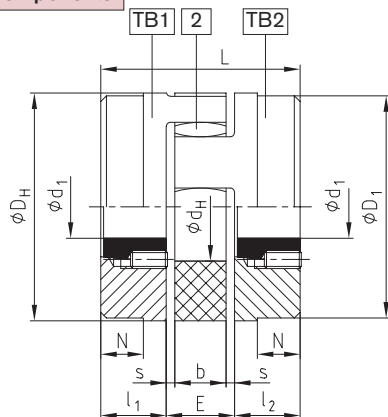
Size	ϕd ϕD ϕD_1	Hub material	CLAMPEX® KTR 200		B	Dimensions [in]									
			Largest poss KTR clamping set ϕdD	Transmittable torques and force T [lb-in] F _{AX} [lbf]		l_2	E	s	b	D _H	D	d _H	L		
42	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	Steel	30x55	6,800 11,460	1.89	1.97	1.02	0.12	0.79	3.74	—	1.81			
48			35x60	10,590 15,280	1.89	2.20	1.10	0.14	0.83	4.13	—	2.01			
55			45x75	18,870 21,350	2.32	2.56	1.18	0.16	0.87	4.72	—	2.36			
65			45x75	18,870 21,350	2.32	2.95	1.38	0.18	1.02	5.31	4.53	2.68			
75			50x80	27,960 28,320	2.32	3.35	1.57	0.20	1.18	6.30	5.31	3.15			
90			65x95	36,350 28,320	2.32	3.94	1.77	0.22	1.34	7.87	6.30	3.94			
100			65x95	36,350 28,320	2.32	4.33	1.97	0.24	1.50	8.86	7.09	4.45			
110			70x110	62,160 45,180	2.76	4.72	2.17	0.26	1.65	10.04	7.87	5.00			
125			80x120	71,030 45,180	2.76	5.51	2.36	0.28	1.81	11.42	9.06	5.79			
140			95x135	100,660 53,720	2.76	6.10	2.56	0.30	1.97	12.60	10.04	6.50			
160	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	EN-GJS400-15	110x155	142,210 65,640	3.15	6.89	2.95	0.35	2.24	14.57	11.42	7.48			
180			120x165	193,920 82,050	3.15	7.68	3.35	0.41	2.52	16.54	12.80	8.66			

ROTEX® design No. 001 with clamping unit CLAMPEX® KTR 200

KTR 200 Size	Length	Transmittable torque and axial force	Clamping screw DIN EN ISO 4762 – 12.9	KTR 200 Size	Length	Transmittable torque and axial force	Clamping screw DIN EN ISO 4762 – 12.9	KTR 200 Size	Length	Transmittable torque and axial force	Clamping screw DIN EN ISO 4762 – 12.9
ϕdD	B	T [lb-in] F _{ax} [lbf]	zxM T _A [lb-in]	ϕdD	B	T [lb-in] F _{ax} [lbf]	zxM T _A [lb-in]	ϕdD	B	T [lb-in] F _{ax} [lbf]	zxM T _A [lb-in]
20x47	1.89	4,540 11,460	6xM6 150	38x65	1.89	11,490 15,280	8xM6 150	65x95	2.32	36,340 28,320	8xM8 363
22x47	1.89	4,990 11,460	6xM6 150	40x65	1.89	12,100 15,280	8xM6 150	70x110	2.76	62,150 45,180	8xM10 735
24x50	1.89	5,450 11,460	6xM6 150	42x75	2.32	17,610 21,350	6xM8 363	75x115	2.76	66,580 45,180	8xM10 735
25x50	1.89	5,670 11,460	6xM6 150	45x75	2.32	18,860 21,350	6xM8 363	80x120	2.76	71,030 45,180	8xM10 735
28x50	1.89	6,350 11,460	6xM6 150	48x80	2.32	26,840 28,320	8xM8 363	85x125	2.76	94,330 56,420	10xM10 735
30x55	1.89	6,800 11,460	6xM6 150	50x80	2.32	27,950 28,320	8xM8 363	90x130	2.76	99,880 56,420	10xM10 735
32x60	1.89	9,680 15,280	8xM6 150	55x85	2.32	30,750 28,320	8xM8 363	95x135	2.60	100,650 53,720	10xM10 735
35x60	1.89	10,590 15,280	8xM6 150	60x90	2.32	33,550 28,320	8xM8 363				

For further details please see CLAMPEX® catalog

Components



ROTEX® design No. 001 with Taper Clamp Bushing

Size	Taper-Clamp Bushing	Dimensions [in]										Set screw for taper clamp bushing			
		l_1, l_2	E	s	b	L	N	D _H	D ₁	d _H		Size [Inch]	Length [in]	Number	T _A [lb-in]
24	1108	0.91	0.71	0.08	0.55	2.52	—	2.17	2.17	1.06		1/4"	1/2"	2	50
28	1108	0.91	0.79	0.10	0.59	2.60	—	2.56	2.56	1.18		1/4"	1/2"	2	50
38	1108	0.91	0.94	0.12	0.71	2.76	0.59	3.15	3.07	1.50		1/4"	1/2"	2	50
42	1610	1.02	1.02	0.12	0.79	3.07	0.63	3.74	3.70	1.81		3/8"	5/8"	2	177
48	1615	1.54	1.10	0.14	0.83	4.17	1.10	4.13	4.09	2.01		3/8"	5/8"	2	177
55	2012	1.30	1.18	0.16	0.87	3.78	0.79	4.72	4.65	2.36		7/16"	7/8"	2	274
65	—	1.30	1.38	0.18	1.02	3.98	0.75	5.31	4.53	2.68		1/2"	7/8"	2	274
75	2517	2.05	1.57	0.20	1.18	5.67	1.42	6.30	5.31	3.15		1/2"	1"	2	434
	3020		1.57	0.20	1.18	5.67	1.42	6.30	5.31	3.15		5/8"	1 1/4"	2	814
90	3020	2.05	1.77	0.22	1.34	5.87	1.30	7.87	6.30	3.94		5/8"	1 1/4"	2	814
125	3535	3.54	2.36	0.28	1.81	11.34	3.39	9.06	11.42	5.79		1/2"	1 7/8"	2	1000
	4545	4.49	2.36	0.28	1.81	11.34	3.39	9.06	11.42	5.79		3/4"	1 7/8"	3	1699

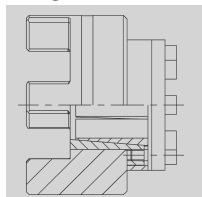
* On125y available for design TB 2

* 1. BSW thread

Coupling design TB 1/1; TB 2/2; TB 1/2 possible

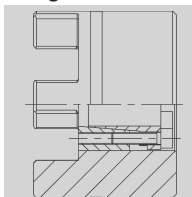
* Please request sheet M373054.

Design 4.2 with CLAMPEX® clamping set KTR 250



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

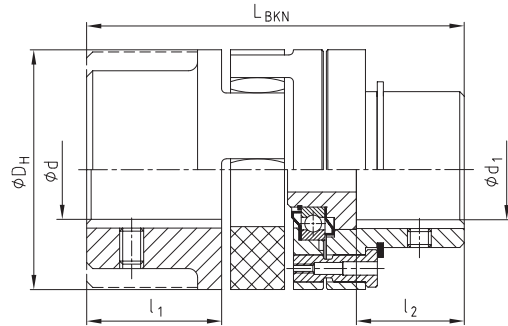
Design 4.3 with CLAMPEX® clamping set KTR 400



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 CLAMPEX® catalog.

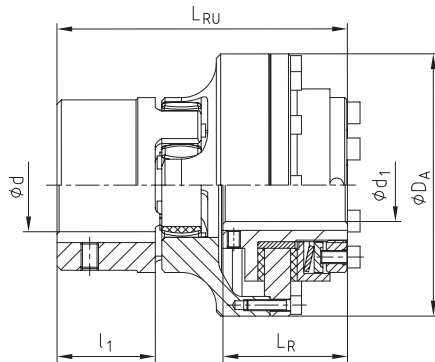
Additional designs with torque limiter

Due to the many applications of ROTEX® in several different mounting situations, this coupling system is available with various hub designs. These designs are available for either keyed or frictionally engaged connections. Installation for gear shafts with integrated jaws or similar applications are also available.



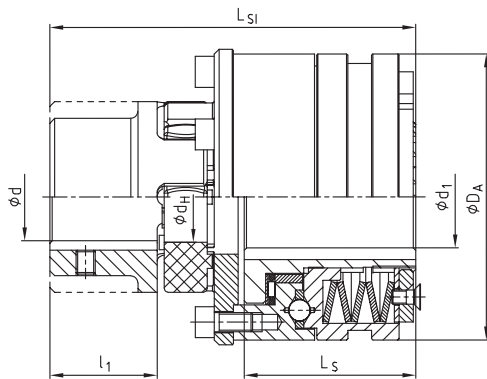
ROTEX® BKN - shear pin coupling, design BKN No. 009							
Size	Ød	Max. Ød ₁	l ₁	l ₂	L _{BKN}	D _H	Min. fracture torque [lb-in]
28	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	1.125	1.38	0.98	3.98	2.56	880
38		1.438	1.77	1.38	4.92	3.15	1,680
42		1.563	1.97	1.57	5.47	3.74	2,210
48		1.813	2.20	1.81	6.02	4.13	2,650
55		2.125	2.56	2.17	6.97	4.72	3,540
65		2.500	2.95	2.56	7.95	5.31	4,420
75		2.813	3.35	2.76	9.06	6.30	5,310
90		3.875	3.94	3.35	10.47	7.87	6,190

Shear torques required with your order.
Request sheet 5020/000/009-7603

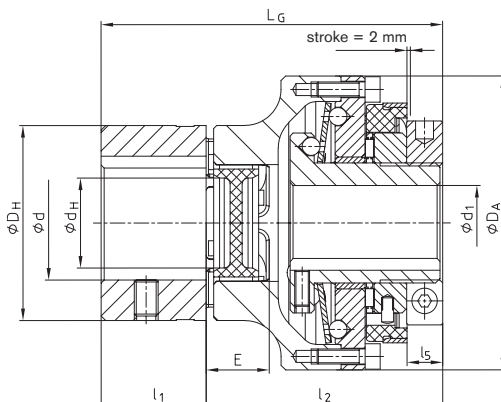


ROTEX® - RUFLEX® - coupling with torque limiter, design No. 070								
ROTEX® Size	RUFLEX® Size	Slip torques [lb-in]	Ød	Ød ₁ max.	D _A	l ₁	L _R	L _{RU}
14	00	4 — 44	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	0.375	1.73	0.43	1.22	2.32
19	0	18 — 170		0.750	2.48	0.98	1.30	3.07
24	01	44 — 610		0.875	3.15	1.18	1.77	3.86
28	1	170 — 1,770		1.000	3.86	1.38	2.05	4.45
38	2	220 — 3,540		1.313	4.72	1.77	2.24	5.24
48	3	440 — 7,080		1.688	6.38	2.20	2.68	6.54
75	4	790 — 14,160		2.125	7.28	3.35	3.07	8.07

¹⁾ Shallow key required for shafts above Ø.75.



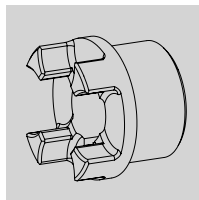
ROTEX® - KTR-SI - coupling with torque limiter, design No. 070									
ROTEX® Size	KTR-SI design	KTR-SI Size	Ratchet torque [lb-in]	Ød	max. Ød ₁	D _A	l ₁	L _S	L _{SI}
28	DK	2	100 - 1,770	Maximum bore size dependent on hub style and material, refer to design No. 001 for details	1.313	3.94	1.38	2.20	4.88
	SR/SGR	0	44 - 350		0.813	2.17		1.36	4.02
38	DK	3	220 - 3,980		1.688	4.72	1.77	2.87	6.10
	SR/SGR	1	100 - 880		1.000	3.23		1.89	5.10
48	DK	4	440 - 8,850		2.125	5.75	2.20	3.68	7.64
	SR/SGR	2	220 - 1,770		1.313	3.94		2.20	6.10
55	DK	5	750 - 17,700		2.500	6.93	2.56	4.21	8.76
	SR/SGR	3	440 - 3,980		1.688	4.72		2.87	7.32
75	DK	—	—		—	—	3.35	—	—
	SR/SGR	4	880 - 17,700		2.125	5.75		3.68	9.51
90	DK	—	—		—	—	3.94	—	—
	SR/SGR	5	1500-30,090		2.500	6.93		4.21	10.85



SYNTAX® - zero-backlash, torsionally rigid overload coupling with ROTEX® - GS															
ROTEX® Size	SYNTAX® Size	SYNTAX® torque range disc spring [lb-in]				Max. bore		D _A	D _H	d _H	E	L	L _G	l ₁	l ₂
		DK ₁	DK ₂	SK ₁	SK ₂	d	d ₁								
24	20	50-170	130-260	80-170	170-570	1.313	0.813	3.15	2.17	1.06	0.71	1.77	3.94	1.18	2.76
28	25	170-530	390-790	220-570	350-880	1.500	1.000	3.86	2.56	1.18	0.79	1.97	4.45	1.38	3.07
38	35	220-700	660-1,320	260-880	610-1,590	1.813	1.313	4.72	3.15	1.50	0.94	2.36	5.35	1.77	3.58
48	50	530-1,590	1,540-2,650	700-2,470	1,410-3,540	2.125	1.875	6.38	4.13	2.01	1.10	2.76	6.57	2.20	4.37

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.



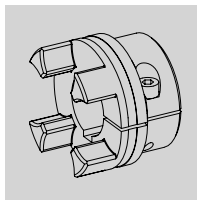
Design 1.0 hub with keyway and fixing screw

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

Design 1.1 hub without keyway with fixing

Non-positive torque transmission for crimped and glued connections (no ATEX release).

Design 1.3 hub with spline bore



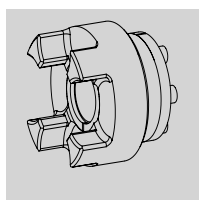
Design 2.0 clamping hub single slotted, without keyway

Positive torque transmission for pressed or glued connections. (No ATEX certification available)

Design 2.1 clamping hub, single slotted, with keyway

Positive locking power transmission with additional frictionally engaged condition. The frictionally engaged condition prevents or reduces reverse backlash, respectively. Surface pressure of the feather key connection is prevented.

Design 2.3 clamping hub with spline bore (page 33)



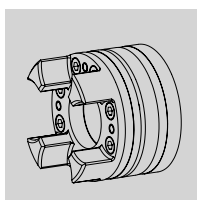
Design 4.2 with CLAMPEX® clamping set KTR 250

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

Design 4.1 with CLAMPEX® clamping set KTR 200

Design 4.3 with CLAMPEX® clamping set KTR 400

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



Design 6.0 clamping ring hub

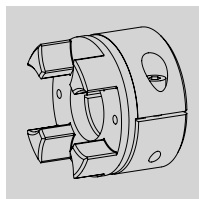
(see ROTEX® GS series)

Integrated frictionally engaged shaft-hub-connection for the transmission of higher torques. Screwing on elastomer side. For details about torque and dimensions see page 33. Suitable for high speeds.

Design 6.5 clamping ringhub

(see Rotex GS series)

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

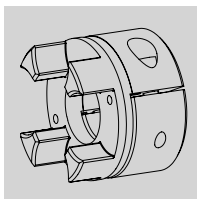


Design 7.5 shell clamping hub without feather key for a double-cardanic connection

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

Design 7.6 shell clamping hub with feather key for a double-cardanic connection

Positive locking power transmission with additional frictionally engaged condition for radial assembly of coupling. The frictionally engaged condition prevents or reduces reverse backlash, respectively. Surface pressure of the feather key connection is prevented.

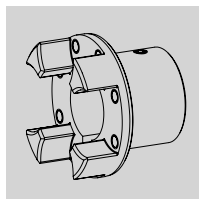


Design 7.8 shell clamping hub without feather key

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

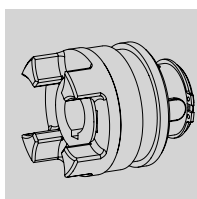
Design 7.9 shell clamping hub with feather key

Positive locking power transmission with additional backlash for radial assembly of coupling. The frictionally engaged condition prevents or reduces reverse backlash, respectively. Surface pressure of the feather key connection is prevented.



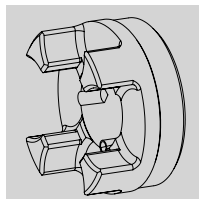
FNN hub

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



SD hub shifting hub

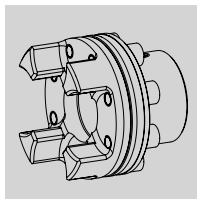
Coupling hub for separating or switching on the driving/driven machine with standstill of the machine. Can be combined with slip ring and shiftable linkage.



TB1/TB2 Hub

Coupling hub for taper clamping bushes.

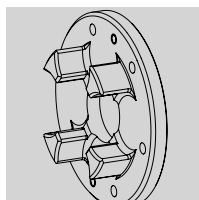
TB1 screwed on cam side. TB2 screwed externally.



Design 3Na + 4N

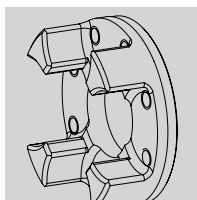
Driving flange with coupling flange

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.



Driving flange design 3b

Driving flange to connect to customer's component. For dimensions see page 36.

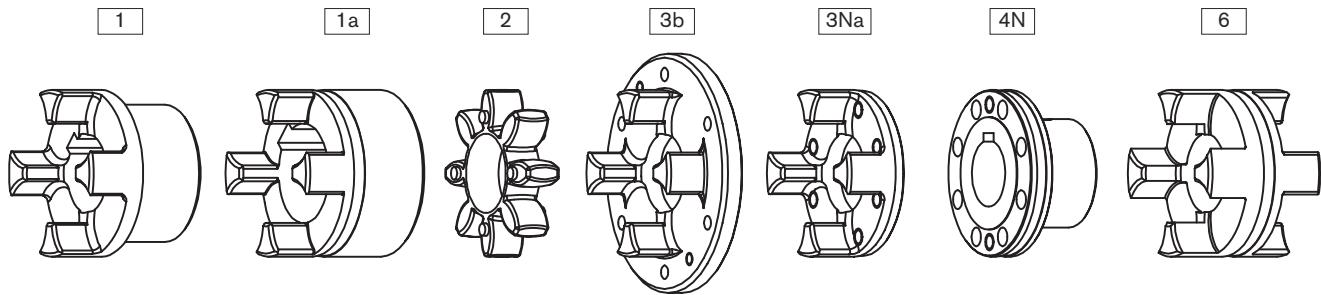


Driving flange design 3Na

Driving flange to connect to customer's component. For dimensions see page 36.

Weights and mass moment of inertia

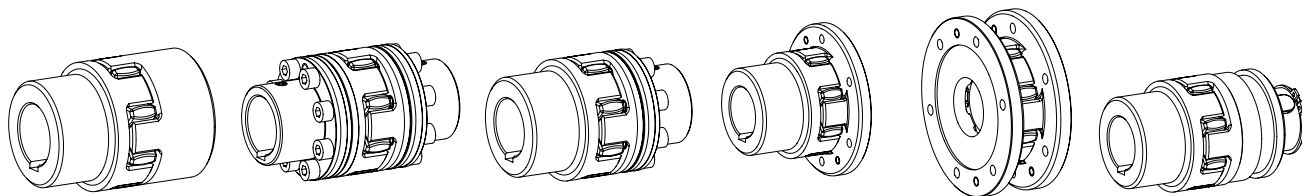
Components



ROTEX® component values													
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
	Alu [lbs] [lb-in-sec ²]	EN-GJL-250 [lbs] [lb-in-sec ²]	EN-GJS-400-15 [lbs] [lb-in-sec ²]	St [lbs] [lb-in-sec ²]	Alu [lbs] [lb-in-sec ²]	EN-GJL-250 [lbs] [lb-in-sec ²]	St [lbs] [lb-in-sec ²]	Polyurethane (Vulkollan) [lbs] [lb-in-sec ²]	EN-GJS-400-15 [lbs] [lb-in-sec ²]	St [lbs] [lb-in-sec ²]	EN-GJS-400-15 [lbs] [lb-in-sec ²]	St [lbs] [lb-in-sec ²]	Alu [lbs] [lb-in-sec ²]
14	—	—	—	—	0.0441	—	—	0.0097	—	—	—	—	—
	—	—	—	—	0.0000266	—	—	0.0000044	—	—	—	—	—
19	0.141	—	—	—	0.163	—	0.551	0.012	—	—	—	—	—
	0.000089	—	—	—	0.000177	—	0.000531	0.000009	—	—	—	—	—
24	0.271	—	—	—	0.384	—	1.213	0.031	0.062	0.320	—	0.662	0.309
	0.000354	—	—	—	0.000708	—	0.002036	0.000053	0.002036	0.000620	—	0.000797	0.000531
28	0.441	—	—	—	0.582	—	1.962	0.053	1.191	0.512	—	1.080	0.485
	0.000885	—	—	—	0.001682	—	0.004691	0.000089	0.006195	0.001505	—	0.001770	0.001151
38	0.970	2.56	—	3.31	1.04	2.91	2.80	0.093	1.61	—	0.690	1.92	0.772
	0.002921	0.007611	—	0.010709	0.004071	0.011948	0.012390	0.000266	0.008850	—	0.003363	0.004425	0.003098
42	1.52	3.86	—	5.56	1.70	4.52	4.06	0.143	2.78	—	1.34	3.09	1.04
	0.005930	0.015753	—	0.025046	0.009824	0.025754	0.015045	0.000620	0.028320	—	0.007877	0.009735	0.006018
48	1.76	5.38	—	7.36	2.23	6.13	6.04	0.190	3.20	—	1.66	4.23	1.37
	0.097350	0.027258	—	0.041861	0.015399	0.042834	0.046020	0.001151	0.038055	—	0.012018	0.015930	0.009735
55	—	8.11	—	11.14	—	9.00	8.67	0.243	5.69	—	2.74	6.46	1.98
	—	0.054428	—	0.083898	—	0.081951	0.088500	0.002036	0.092925	—	0.025842	0.032745	0.018585
65	—	12.50	—	14.97	—	13.32	12.90	0.375	6.84	—	3.61	9.61	2.89
	—	0.109740	—	0.134166	—	0.158327	0.168150	0.003717	0.131865	—	0.043285	0.061065	0.034515
75	—	19.23	—	23.22	—	21.01	19.98	0.706	9.83	—	5.54	14.99	4.34
	—	0.233994	—	0.289661	—	0.349221	0.354000	0.010266	0.248685	—	0.092925	0.133635	0.072570
90	—	32.63	—	41.23	—	40.13	37.49	1.26	15.30	—	9.15	28.31	7.61
	—	0.595605	—	0.773667	—	1.335111	1.035450	0.028586	0.576135	—	0.240986	0.396480	0.198240
100	—	—	43.44	—	—	—	—	1.79	22.49	—	14.00	35.63	—
	—	—	1.034919	—	—	—	—	0.052038	1.031025	—	0.466661	0.706230	—
110	—	—	60.42	—	—	—	—	2.62	—	—	18.91	47.08	—
	—	—	1.811153	—	—	—	—	0.097085	—	—	0.807209	2.499240	—
125	—	—	93.27	—	—	—	—	3.59	—	—	27.78	75.70	—
	—	—	3.604340	—	—	—	—	0.174522	—	—	1.546007	2.857665	—
140	—	—	128.1	—	—	—	—	4.65	—	—	38.08	107.4	—
	—	—	5.994902	—	—	—	—	0.276917	—	—	2.588360	4.351545	—
160	—	—	185.7	—	—	—	—	7.08	—	—	58.00	156.7	—
	—	—	11.658017	—	—	—	—	5.595678	—	—	5.260086	8.578305	—
180	—	—	261.3	—	—	—	—	11.58	—	—	72.93	241.3	—
	—	—	20.428898	—	—	—	—	1.220327	—	—	8.619369	17.390250	—

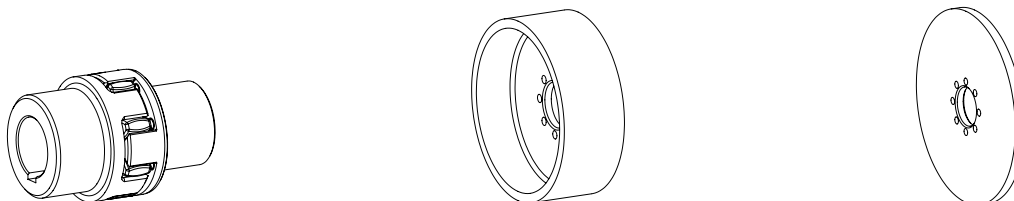
Weight and mass moment of inertia each refer to the mid-range bore without keyway.

Weights and mass moment of inertia



ROTEX® complete coupling values

Size	Standard		AFN		BFN		CF		DF		SD	
	Weight [lb]	Mass moment of inertia J [lb-in-sec ²]	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]
19	1.12	0.00107	—	—	—	—	0.97	0.00142	0.84	0.00177	0.93	0.00071
24	2.43	0.00412	2.16	0.00319	2.43	0.00363	1.85	0.00416	1.26	0.00416	2.43	0.00407
28	3.97	0.00947	3.53	0.00735	3.75	0.00841	3.31	0.01098	2.43	0.01248	4.19	0.00938
38	5.51	0.01514	6.17	0.01850	5.73	0.01708	4.19	0.01921	3.31	0.02292	6.62	0.03850
42	8.60	0.04213	9.92	0.04178	9.04	0.03709	6.84	0.04541	5.73	0.05859	9.70	0.07116
48	11.69	0.07125	13.0	0.06514	12.1	0.06054	8.60	0.06683	6.62	0.07798	13.7	0.01974
55	17.42	0.13843	19.6	0.13099	18.3	0.12117	14.1	0.14976	11.7	0.18861	21.6	0.14693
65	26.24	0.27181	28.4	0.23544	27.1	0.22924	19.6	0.24606	14.1	0.02688	32.9	0.28854
75	41.01	0.59355	45.4	0.53195	42.6	0.50628	29.8	0.49300	20.3	0.50814	51.2	0.62488
90	74.09	1.95952	83.3	1.52060	75.4	1.37279	49.2	1.20020	32.0	1.17984	89.3	1.67372
100	88.64	2.12212	109	2.71549	99.7	2.42252	68.1	2.12513	46.7	2.11893	103	2.18354
110	123.48	3.71981	149	4.76626	136	4.24228	94.6	3.82717	65.7	3.93515	136	3.70503
125	190.07	7.38404	226	9.28027	208	8.33145	142	7.24631	93	7.10824	213	7.52069
140	260.85	12.26811	311	15.42729	286	13.84296	199	12.58701	138	12.90476	282	12.10817
160	378.38	23.87832	464	31.12897	421	27.50006	281	22.91524	184	21.95491	420	24.10127
180	534.16	42.08199	676	58.25728	605	50.16747	386	39.36925	238	36.65199	578	42.57331



BTAN/SBAN without drum/disc

Size	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]
28	1.98	0.0035
38	4.63	0.0124
42	7.14	0.0274
48	9.72	0.0469
55	14.55	0.0929
65	22.27	0.1850
75	33.96	0.3912
90	60.86	1.0834
100	81.36	1.8357
110	112.23	3.2439
125	174.42	6.5046
140	240.35	10.8796
160	356.99	21.7460
180	513.54	39.8003

Drum for BTAN ²⁾

Brake disc $\varnothing D_B \times B$	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]
160 x 60	4.67	0.0885
200 x 75	7.61	0.2655
250 x 95	15.1	0.7081
315 x 118	33.0	2.4783
400 x 150	68.8	7.8774
500 x 190	132	23.8977
630 x 236	247	70.8965
710 x 265	355	131.8799
800 x 300	445	240.7472

Disc for SBAN ²⁾

Brake disc $\varnothing A \times G_S$	Weight [lbs]	Mass moment of inertia J [lb-in-sec ²]
200x12.5	6.46	0.13601
250x12.5	10.28	0.33266
315x16	19.00	0.9898
400x16	33.58	2.78989
500x16	52.84	6.81494
630x20	105.2	21.47570
710x20	134.4	34.65255
800x25	209.3	69.73701
900x25	262.3	111.60305
1000x25	326.9	170.24846

Weights and mass moments of inertia refer to standard hub with mid-range bore without keyway.

¹⁾ Weights and mass moments of inertia without intermediate shaft.

²⁾ Selection of ROTEX® brake drum - disc brake see page 40.

Technical data

ROTEX® sizes for all designs and materials	Max. speed (rpm) with V =		Twisting angle with		Torque [lb-in]			Damping power [W] with +86 °F P _{KW}	Torsion stiffness C _{dyn} [x10³ lb-in rad]				
	115 ft/s iron	131 ft/s steel	T _{KN} w	T _K max w	Rated T _{KN}	Max T _K max	Vibratory T _{KW}		1.00 T _{KN}	0.75 T _{KN}	0.50 T _{KN}	0.25 T _{KN}	
Spider 92 Shore A; made from T-PUR® and PUR													
	14	22,200	25,400	6.4°	10°	66	130	18	–	3.4	2.7	2.1	1.2
	19	16,700	19,000			89	170	23	4.8	11.3	9.3	7.1	4.2
4	24	12,100	13,800			300	610	81	6.6	43.0	35.2	26.6	15.8
	28	10,100	11,500			840	1,680	220	8.4	96.5	79.1	59.8	35.5
	38	8,300	9,500			1,680	3,360	430	10.2	186.3	152.8	115.5	68.5
	42	7,000	8,000			2,340	4,690	610	12.0	210.1	172.3	130.3	77.3
	48	6,350	7,250			2,740	5,480	710	13.8	324.8	266.3	201.4	119.4
	55	5,550	6,350			3,620	7,250	940	15.6	448.9	368.1	278.4	165.0
	65	4,950	5,650	3.2°	5°	5,530	11,060	1,440	18.0	859.7	705.0	533.0	316.0
	75	4,150	4,750			11,320	22,650	2,940	21.6	1,003.0	822.4	621.9	368.6
	90	3,300	3,800			21,240	42,480	5,520	30.0	1,682.5	1,379.6	1,043.2	618.3
	100	2,950	3,350			29,200	58,410	7,590	36.0	2,240.0	1,836.8	1,388.8	823.2
	110	2,600	2,950			42,480	849,600	11,040	42.0	2,758.1	2,261.6	1,710.0	1,013.6
	125	2,300	2,600			58,850	117,710	15,300	48.0	4,203.0	3,446.5	2,605.8	1,544.6
	140	2,050	2,350			75,670	151,350	19,670	54.6	5,846.0	4,793.7	3,624.5	2,148.4
	160	1,800	2,050			113,290	226,580	29,450	75.0	7,880.6	6,462.1	4,886.0	2,896.1
	180	1,550	1,800			165,070	330,140	42,910	78.0	22,734.3	18,642.2	14,095.3	8,354.9
Spider 95/98 Shore A; made from T-PUR® and PUR													
	14	22,200	25,400	6.4°	10°	110	220	29	–	5.0	4.1	3.1	1.9
	19	16,700	19,000			150	300	39	4.8	25.8	21.2	16.0	9.5
	24	12,100	13,800			530	1,060	140	6.6	87.9	72.0	54.5	32.3
	28	10,100	11,500			1,410	2,830	370	8.4	236.9	194.3	146.9	87.1
	38	8,300	9,500			2,870	5,750	750	10.2	429.9	352.5	266.5	158.0
	42	7,000	8,000			3,980	7,960	1,030	12.0	482.4	395.6	299.1	177.3
	48	6,350	7,250			4,640	9,290	1,210	13.8	577.9	473.9	358.3	212.4
	55	5,550	6,350	3.2°	5°	6,060	12,120	1,570	15.6	840.6	689.3	521.1	308.9
	65	4,950	5,650			8,310	16,630	2,150	18.0	1,146.3	940.0	710.7	421.3
	75	4,150	4,750			16,990	33,980	4,410	21.6	1,748.1	1,433.4	1,083.8	642.4
	90	3,300	3,800			31,860	63,720	8,280	30.0	2,763.3	2,265.9	1,713.2	1,015.5
	100	2,950	3,350			43,810	87,620	11,390	36.0	3,392.2	2,781.6	2,103.2	1,246.7
	110	2,600	2,950			63,720	127,450	16,560	42.0	6,107.7	5,008.3	3,786.8	2,244.6
	125	2,300	2,600			88,510	177,020	23,010	48.0	11,892.6	9,751.9	7,373.4	4,370.5
	140	2,050	2,350			113,290	226,580	29,450	54.6	12,609.0	10,339.4	7,817.6	4,633.9
	160	1,800	2,050			169,930	339,870	44,180	75.0	21,970.2	18,015.6	13,621.5	8,074.1
	180	1,550	1,800			247,820	495,650	64,430	78.0	31,522.4	25,848.5	19,543.9	11,584.5
Spider 64 Shore D; made from T-PUR® and PUR													
	14	22,200	25,400	4.5°	7.0°	140	280	37	9.0	6.7	5.5	4.2	2.5
	19	16,700	19,000			180	370	49	7.2	47.4	38.9	29.4	17.4
	24	12,100	13,800			660	1,320	170	9.9	133.7	109.7	82.9	49.1
	28	10,100	11,500			1,770	3,540	460	12.6	243.6	199.8	151.0	89.6
	38	8,300	9,500			3,580	7,160	920	15.3	620.9	509.1	384.9	228.2
	42	7,000	8,000			4,950	9,910	1,290	18.0	706.8	579.7	438.3	259.8
	48	6,350	7,250			5,790	11,590	1,500	20.7	845.4	693.2	524.2	310.7
	55	5,550	6,350	2.5°	3.6°	7,300	14,600	1,900	23.4	955.2	783.3	592.2	351.0
	65	4,950	5,650			10,390	20,790	2,700	27.0	1,337.3	1,096.6	829.2	491.5
	75	4,150	4,750			21,240	42,480	5,520	32.4	2,197.0	1,801.5	1,362.2	807.4
	90	3,300	3,800			39,820	79,650	10,350	45.0	5,970.2	4,895.6	3,701.5	2,194.1
	100	2,950	3,350			54,740	109,480	14,230	54.0	7,622.2	6,250.2	4,725.8	2,801.2
	110	2,600	2,950			79,650	159,310	20,710	63.0	10,077.7	8,263.6	6,248.1	3,703.5
	125	2,300	2,600			110,630	221,270	28,760	72.0	12,704.5	10,417.7	7,876.8	4,668.9
	140	2,050	2,350			141,610	283,230	36,820	81.9	15,761.2	12,924.2	9,771.9	5,792.3
	160	1,800	2,050			212,420	424,840	55,230	113	27,223.9	22,323.6	16,878.9	10,004.8
	180	1,550	1,800			309,780	619,570	80,540	117	53,206.0	43,629.0	32,987.8	19,553.2
Temperature Factor S _t													
		-58°F	-22°F 86°F		+104°F	+122°F	+140°F	+158°F	+176°F	+194°F	+212°F	+230°F	+248°F
	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 specified, Shore hardness 92 Sh-A T-PUR. For circumferential speeds exceeding V = 98 ft/sec dynamic balancing is necessary.

For circumferential speeds exceeding V = 115 ft/sec only steel or nodular iron.

For peripheral speeds exceeding V = 115 ft/sec dynamic balancing of steel or nodular iron hubs is required.

¹⁾ at +86°F