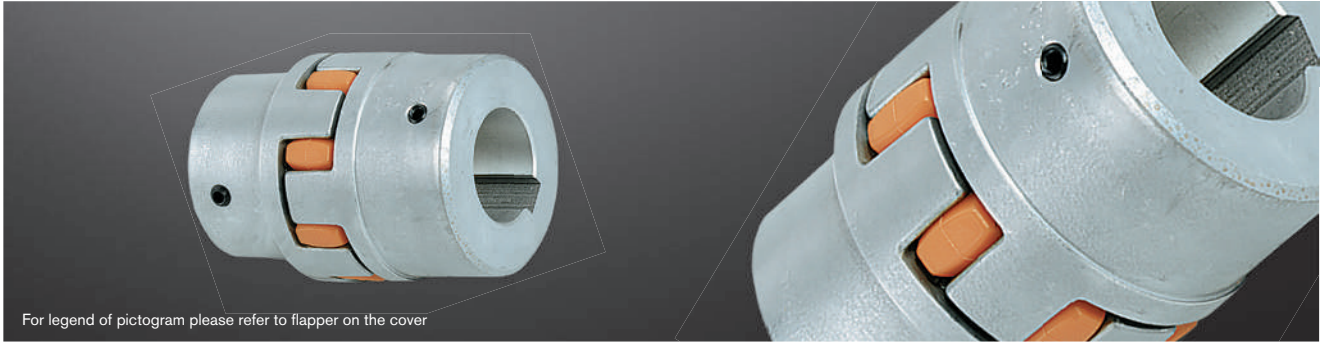
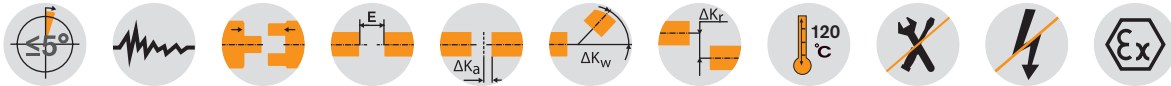


# ROTEX® Standard Flexible jaw couplings

Material aluminium + cast + powder metal



For legend of pictogram please refer to flapper on the cover



ROTEX® Powder metal steel (Sint)																			
Size	Component	Spider <sup>1)</sup> (component 2) Rated torque [Nm]			Finish bore d	Dimensions [mm]													
		92 ShA	98 ShA	64 ShD		General													
					L	l <sub>1</sub> , l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D	N	G	t	T <sub>A</sub> [Nm]			
14	1a	7.5	12.5	16	0-16	35	11	13	10	1.5	30	10	30	-	M4	5	1.5		
19	1a	10	17	21	0-24	66	25	16	12	2.0	40	18	40	-	M5	10	2		
24	1a	35	60	75	0-28	78	30	18	14	2.0	56	27	40	-	M5	10	2		

ROTEX® Aluminium diecast (Al-D)																			
Size	Component	Spider <sup>1)</sup> (component 2) Rated torque [Nm]			Finish bore d	Dimensions [mm]													
		92 ShA	98 ShA	64 ShD		General													
					L	l <sub>1</sub> , l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D	N	G	t	T <sub>A</sub> [Nm]			
19	1	10	17	-	6-19	66	25	16	12	2	41	18	32	20	M5	10	2		
	19-24				41														
24	1	35	60	-	9-24	78	30	18	14	2	56	27	40	24	M5	10	2		
	22-28				56														
28	1	95	160	-	10-28	90	35	20	15	2.5	66	30	48	28	M8	15	10		
	28-38				66														

ROTEX® Aluminium (Al-H)																			
Size	Component	Spider <sup>1)</sup> (component 2) Rated torque [Nm]			Finish bore d	Dimensions [mm]													
		92 ShA	98 ShA	64 ShD		General													
					L	l <sub>1</sub> , l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D	N	G	t	T <sub>A</sub> [Nm]			
5	1a	0.5	0.9	-	0-6	15	5	5	4	0.5	10	-	-	-	M2	2.5	-		
7	1a	1.2	2.0	2.4	0-7	22	7	8	6	1.0	14	-	-	-	M3	3.5	-		
9	1a	3.0	5.0	6.0	0-11	30	10	10	8	1.0	20	7.2	-	-	M4	5	1.5		
12	1a	5.0	9.0	12	0-12	34	11	12	10	1.0	25	8.5	-	-	M4	5	1.5		
14	1a	7.5	12.5	16	0-16	35	11	13	10	1.5	30	10.5	-	-	M4	5	1.5		
19	1a	10	17	26	0-24	66	25	16	12	2.0	40	18	-	-	M5	10	2		
24	1a	35	60	75	0-28	78	30	18	14	2.0	55	27	-	-	M5	10	2		
28	1a	95	160	200	0-38	90	35	20	15	2.5	65	30	-	-	M8	15	10		
38	1a	190	325	405	0-45	114	45	24	18	3.0	80	38	-	-	M8	15	10		
42	1a	265	450	560	0-55	126	50	26	20	3.0	95	46	-	-	M8	20	10		
48	1a	310	525	655	0-62	140	56	28	21	3.0	105	51	-	-	M8	20	10		

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

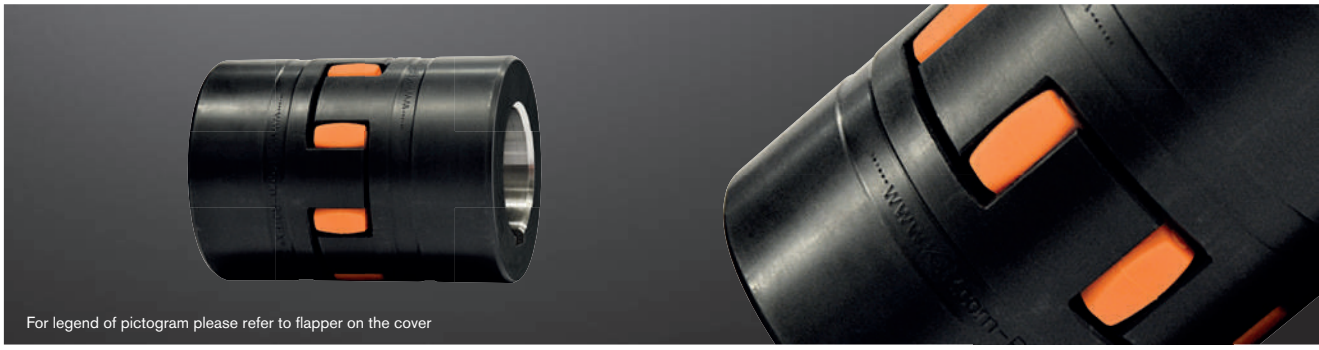
ROTEX® Cast iron (GJL)																			
Size	Component	Spider <sup>1)</sup> (component 2) Rated torque [Nm]			Finish bore d	Dimensions [mm]													
		92 ShA	98 ShA	64 ShD		General													
					L	l <sub>1</sub> , l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D	N	G	t	T <sub>A</sub> [Nm]			
38	1a	190	325	405	12-40	114	45	24	18	3	80	38	66	37	M8	15	10		
	38-48				78														
42	1b	265	450	560	12-48	126	50	26	20	3	95	46	75	40	M8	20	10		
	14-45				94														
48	1b	310	525	655	14-55	176	75	28	21	3.5	105	51	85	45	M8	20	10		
	15-52				104														
55	1	410	685	825	15-62	188	80	30	22	4	120	60	98	52	M10	20	17		
	20-60				118														
65	1	625	940	1175	22-70	185	75	35	26	4.5	135	68	115	61	M10	20	17		
75	1	1280	1920	2400	30-80	210	85	40	30	5	160	80	135	69	M10	25	17		
90	1	2400	3600	4500	40-100	245	100	45	34	5.5	200	100	160	81	M12	30	40		

ROTEX® Nodular iron (GJS)																			
Size	Component	Spider <sup>1)</sup> (component 2) Rated torque [Nm]			Finish bore d	Dimensions [mm]													
		92 ShA	98 ShA	64 ShD		General													
					L	l <sub>1</sub> , l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D	N	G	t	T <sub>A</sub> [Nm]			
100	1	3300	4950	6185	50-115	270	110	50	38	6	225	113	180	89	M12	30	40		
110	1	4800	7200	9000	60-125	295	120	55	42	6.5	255	127	200	96	M16	35	80		
125	1	6650	10000	12500	60-145	340	140	60	46	7	290	147	230	112	M16	40	80		
140	1	8550	12800	16000	60-160	375	155	65	50	7.5	320	165	255	124	M20	45	140		
160	1	12800	19200	24000	80-185	425	175	75	57	9	370	190	290	140	M20	50	140		
180	1	18650	28000	35000	85-200	475	195	85	64	10.5	420	220	325	156	M20	50	140		

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

<sup>1)</sup> Maximum torque of the coupling T<sub>K max</sub> = rated torque of the coupling T<sub>K rated</sub> x 2. For selection see page 14 et seqq.

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



For legend of pictogram please refer to flapper on the cover

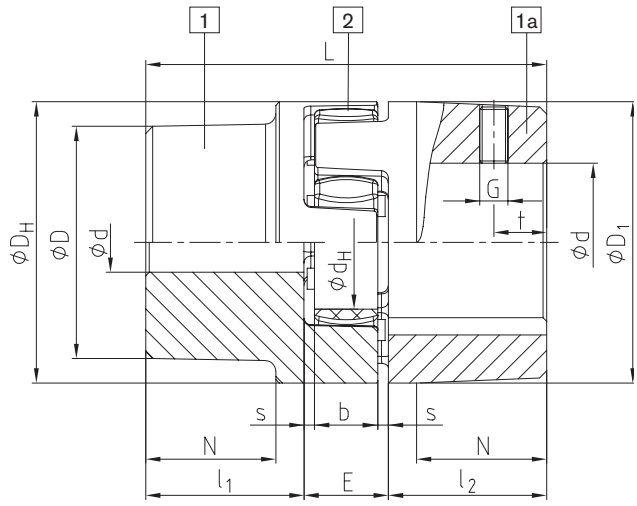


**ROTEX® with CDP coating <sup>1)</sup>**

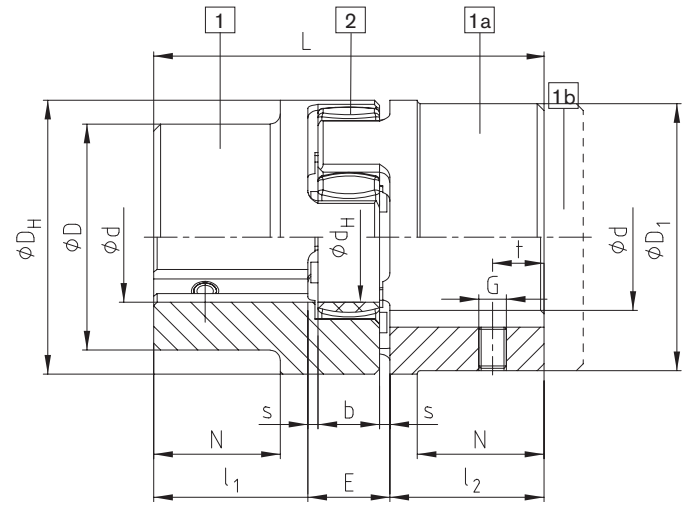
Size	Component	Spider (component 2) Rated torque [Nm]			Finish bore d (min. - max.)	Dimensions [mm]											Thread for setscrews		
		92 ShA	98 ShA	64 ShD		General											G	t	T <sub>A</sub> [Nm]
						L	l <sub>1</sub> , l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D	N					
19	1a	10	17	21	0-25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

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

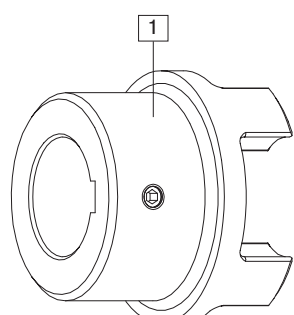
**Components**



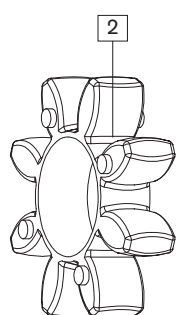
AI-D (thread opposite the keyway)



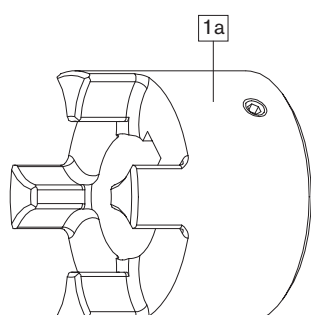
GJL / GJS (thread on the keyway)



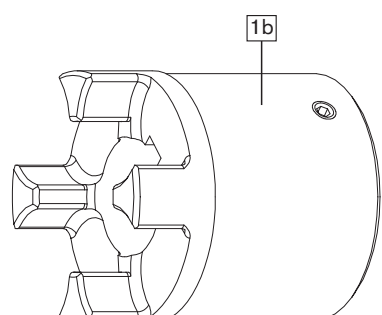
Standard hub



Spider



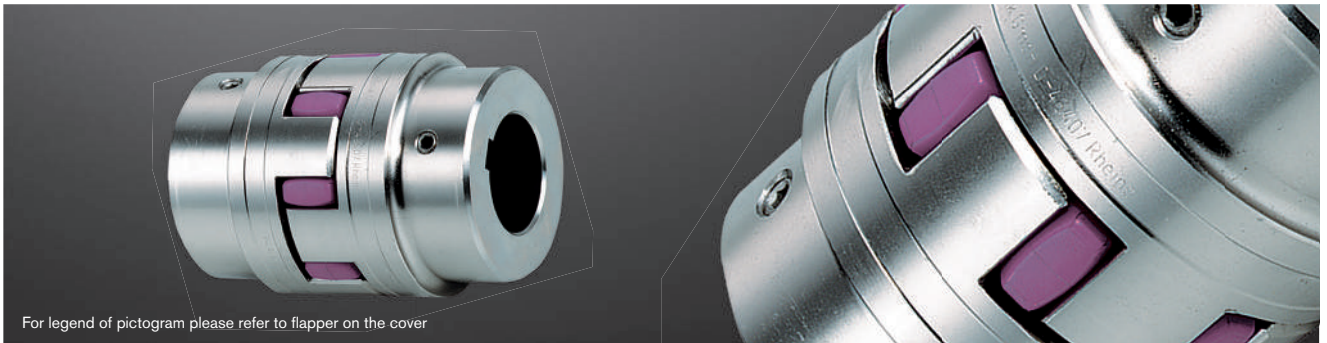
Large hub



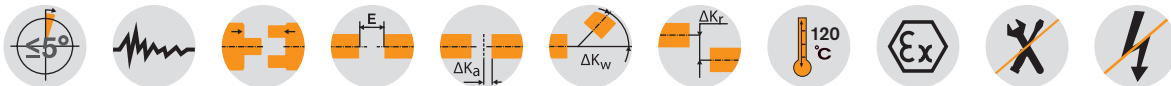
Large hub lengthened

# ROTEX® Standard Flexible jaw couplings

## Material steel/stainless steel



For legend of pictogram please refer to flapper on the cover



### ROTEX® Steel (St)

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

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

<sup>1)</sup> Maximum torque of the coupling T<sub>K max</sub> = rated torque of the coupling T<sub>K rated</sub> x 2. For selection see page 14 et seqq.

### ROTEX® Stainless steel

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

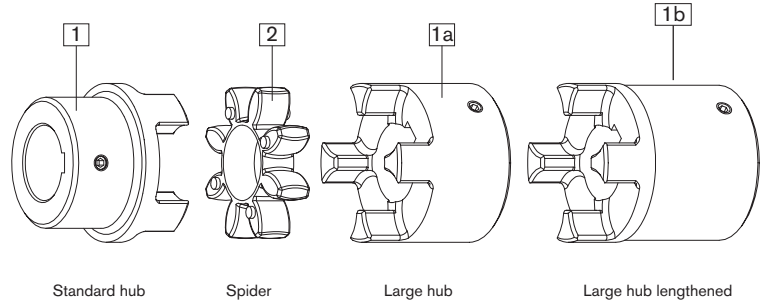
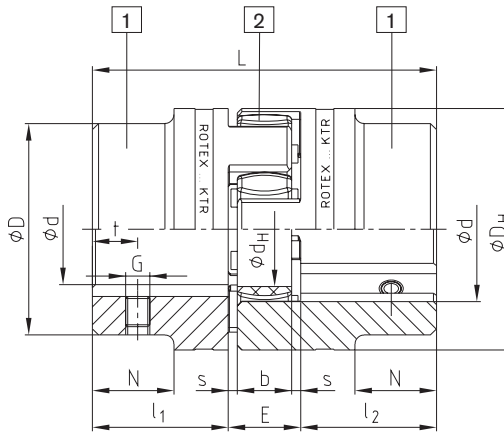
Ordering  
example:

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

# ROTEX® Flexible jaw couplings

## DIN EN 10204 - 3.1 and 3.2 material test certificate

### Components



Steel (thread on the keyway)

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

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

<sup>2)</sup> Notch impact strength with -40 °C

<sup>3)</sup> Notch impact strength with -20 °C

### Marine programme:

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



### UL



#### Use in fire pumps

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

Sizes available:



ROTEX® UL Listed								
Size	Component	Material	Spider (component 2) Rated torque [Nm] 92 ShA	Dimensions [mm]				
				Finish bore d (min. - max.)	L	l <sub>1,2</sub>	E	D <sub>H</sub>
42	1	St	265	18-55	126	50	26	95
55	1	St	410	24-74	160	65	30	120
65	1	St	625	24-80	185	75	35	135
75	1	St	1280	24-95	210	85	40	160
90	1	St	2400	30-110	245	100	45	200

\* for complete dimensions see table on page 36

# ROTEX® Flexible jaw couplings

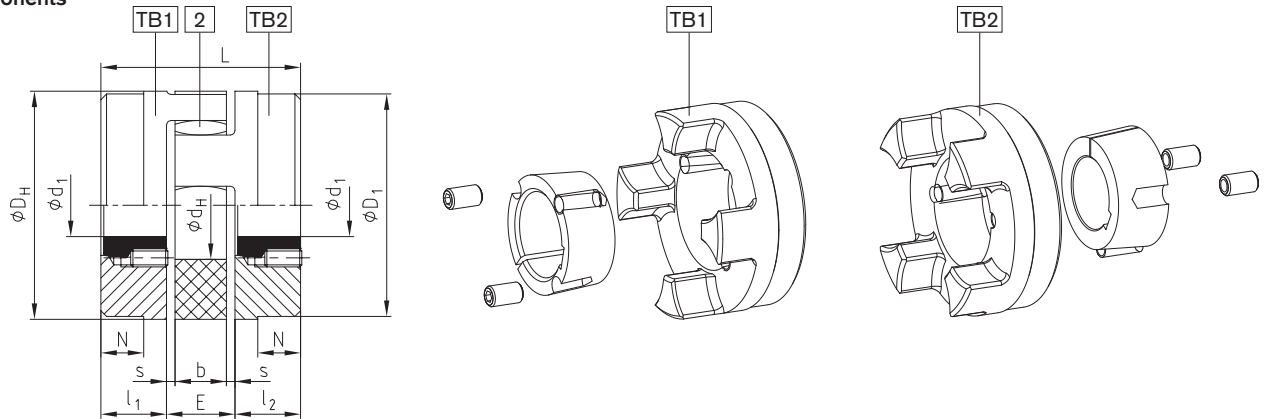
## Taper clamping sleeve



For legend of pictogram please refer to flapper on the cover



### Components



### ROTEX® Shaft coupling for taper clamping sleeve

Size	Taper clamping sleeve	Dimensions [mm]									Fastening screws for taper clamping sleeves			
		$l_1, l_2$	E	s	b	L	N	$D_H$	$D_1$	$d_H$	Size [Inch] <sup>1)</sup>	Length [mm]	Quantity	$T_A$ [Nm]
24	1008	22	18	2.0	14	62	–	55	55	27	1/4"	13	2	5.7
28	1108	23	20	2.5	15	66	–	65	65	30	1/4"	13	2	5.7
38	1108	23	24	3.0	18	70	15	80	78	38	1/4"	13	2	5.7
42	1610	26	26	3.0	20	78	16	95	94	46	3/8"	16	2	20
48	1615	39	28	3.5	21	106	28	105	104	51	3/8"	16	2	20
55	2012	33	30	4.0	22	96	20	120	118	60	7/16"	22	2	31
65	2012	33	35	4.5	26	101	19	135	115	68	7/16"	22	2	31
75	2517	52	40	5.0	30	144	36	160	158	80	1/2"	25	2	49
	• 3020										5/8"	32		92
90	3020	52	45	5.5	34	149	33	200	160	100	3/8"	32	2	92
100	3535	90	50	6	38	230	69	225	180	113	1/2"	49	3	113
125	4545	114	60	7.0	46	288	86	290	230	147	3/4"	49	3	192

### Taper clamping sleeve

Size	Summary of bore dimensions $d_1$ [mm], H7 fit- feather keyway acc. to DIN 6885 sheet 1																		
1008	Ø10	Ø11	Ø12	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25								
1108	Ø10	Ø11	Ø12	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28 <sup>2)</sup>							
1610	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42 <sup>2)</sup>				
1615	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42 <sup>2)</sup>				
2012	Ø14	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	
2517	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60
3020	Ø25	Ø28	Ø30	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75				
3535	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90				
4545	Ø55	Ø60	Ø65	Ø70	Ø75	Ø80	Ø85	Ø90	Ø95	Ø100	Ø105	Ø110							

• Available for type TB2 only

<sup>1)</sup> 1. BSW thread

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

Please order our separate dimension sheet (M373054).

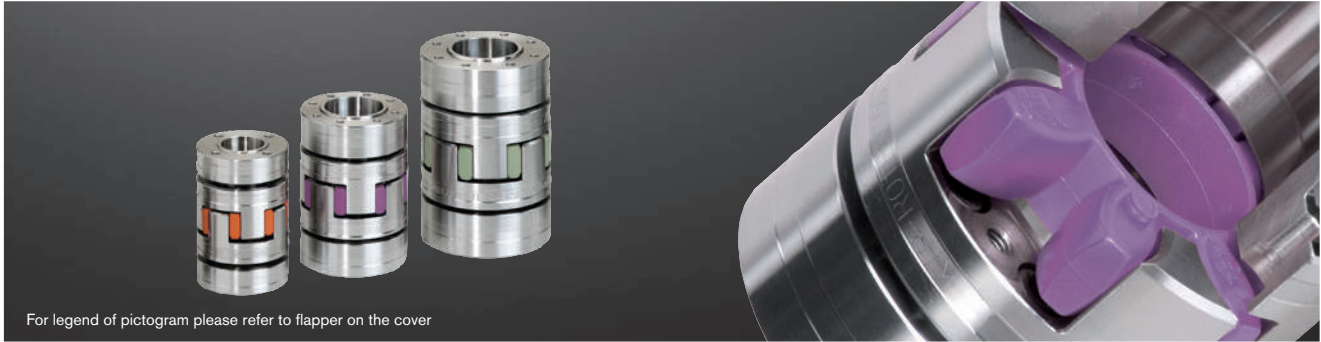
<sup>2)</sup> Bores with feather keyway (flat design) acc. to DIN 6885 sheet 3

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



# ROTEX® Flexible jaw couplings

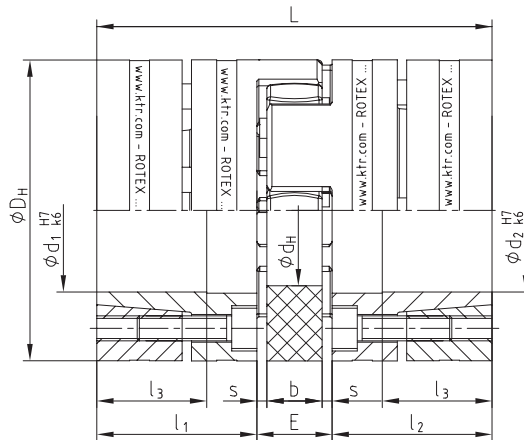
## Clamping ring hubs



For legend of pictogram please refer to flapper on the cover



### Components



Tack thread M1 between clamping screws.

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

Size	Bore d <sub>1</sub> /d <sub>2</sub> and the respective transmittable friction torques T <sub>R</sub> of clamping ring hub in [Nm] <sup>1)</sup>																											
	Ø10	Ø11	Ø14	Ø15	Ø16	Ø19	Ø20	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55*	Ø60*	Ø65*	Ø70*	Ø80*	Ø90*	Ø95*	Ø100*	Ø105*
19	27	32	69	84	57	94	110																					
24			70	87	56	97	114	116	133	192																		
28				108	131	207	148	253	285	315	382	330	433	503														
38							208	353	395	439	531	463	603	593	689	793	776											
42									445	495	595	526	678	671	775	718	872	1043	1061									
48											616	704	899	896	1030	962	1160	1379	1222	1543								
55													863	856	991	918	1119	1110	1247	1277	1665	1605	2008					
65															1446	1355	1637	1635	1827	1887	2429	2368	2930					
75																1710	2053	2059	2294	2384	3040	2983	3664	4293				
90																			3845	4249	4794	5858	5900	7036	8047	9247	9575	10845

<sup>1)</sup> For selection see page 14 et seqq.

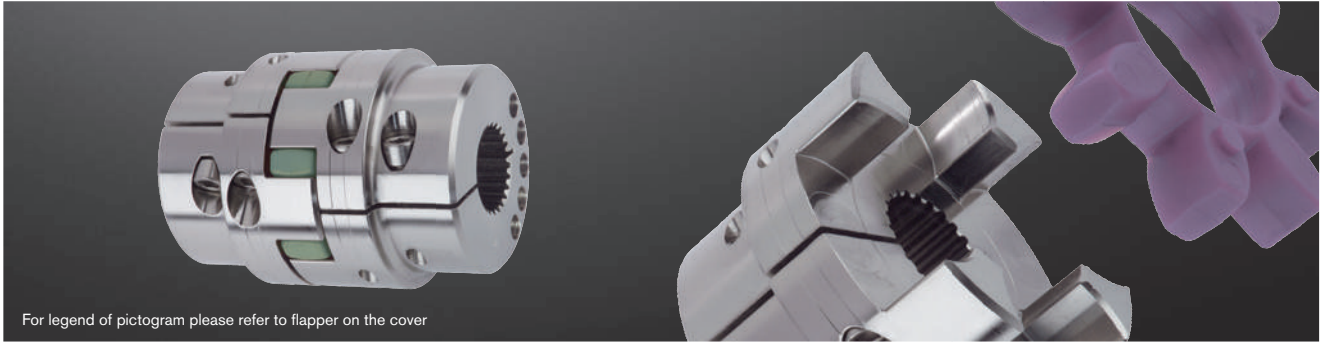
<sup>2)</sup> ØD<sub>H</sub> + 2 mm with high speeds for expansion of spider

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

Ordering example:	ROTEX® GS 24	98 ShA	6.0 steel	Ø24	6.0 steel	Ø20
	Coupling size	Spider hardness	Hub design	Finish bore	Hub design	Finish bore

# ROTEX® Flexible jaw couplings

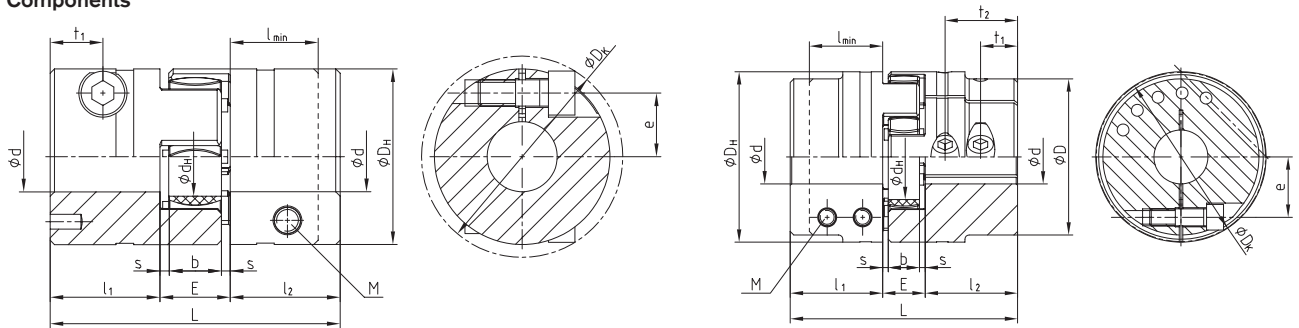
## Clamping hubs



For legend of pictogram please refer to flapper on the cover



### Components



ROTEX® 19 - 28

ROTEX® 38 - 90

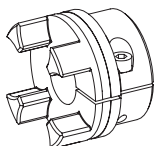
ROTEX® as clamping hubs																
Size	Dimensions [mm]														Screw DIN EN ISO 4762	
	Max. d	L	l <sub>1</sub> , l <sub>2</sub>	l <sub>min.</sub>	E	b	s	D <sub>H</sub>	D	d <sub>H</sub>	D <sub>K</sub>	t <sub>1</sub>	t <sub>2</sub>	e	M	T <sub>A</sub> [Nm]
19	20 <sup>1)</sup>	66	25	20	16	12	2.0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

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

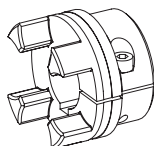
<sup>1)</sup> With type 2.1 d<sub>max.</sub> Ø17 mm

<sup>2)</sup> With reduced hubs dimension t<sub>1</sub> varies or the number of screws changes from 2-off to 1-off

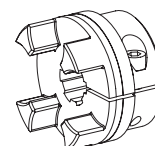
<sup>3)</sup> t<sub>1</sub> and t<sub>2</sub> have a different dimension e



**Type 2.0**  
Clamping hub single slot without feather keyway



**Type 2.1**  
Clamping hub single slot with feather keyway



**Type 2.3**  
Clamping hub with spline bore (For a selection of our programme of spline bores see page 32)

Ordering example:	ROTEX® 24	98 ShA	2.1	Ø24	2.0	Ø20
	Coupling size	Spider hardness	Hub design	Finish bore	Hub design	Finish bore

# Legend of pictograms



Torsionally rigid



Light-weight



Protected against corrosion



Torsionally flexible



Axial compensation



Electrically insulating



Highly flexible



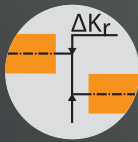
Angular compensation



Maximum speed



Damping vibrations



Radial compensation



No eddy current losses



Axial plug-in



Shiftable at standstill



Torque limiter slipping



Consider shaft distance



Double-cardanic



Torque limiter with synchronous ratcheting



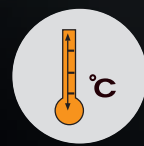
Relatively short shaft distance



Radial disassembly  
Ease of service



Torque limiter with idle rotation type



Maximum operating temperature



Standard drop-out center lengths available



Hardened surface



High speeds



Available in accordance with API



Accuracy X %



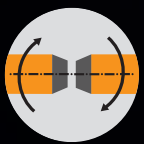
Backlash-free



Complying with ATEX  
For details refer to our ATEX leaflet



Consider axial displacement



Shear type, separating, slipping



Maintenance-free

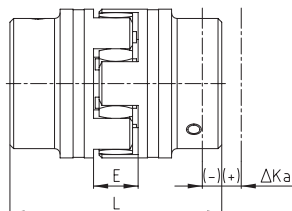


Additional features compared to standard version



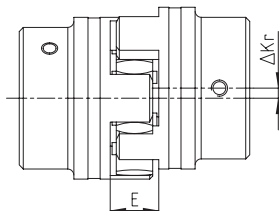
### Displacements

**Axial displacement  $\Delta K_a$**

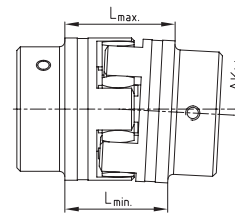


$$L_{\max.} = L + \Delta K_a$$

**Radial displacement  $\Delta K_r$**



**Angular displacement  $\Delta K_w$  [degree]**



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

**Displacements for spider 92 and 98 Shore A**

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

**Displacements of spider 64 Shore D**

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

**Displacements for spider PA, PEEK**

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

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

# ROTEX®

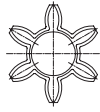
## Flexible jaw couplings

### Properties of standard spiders

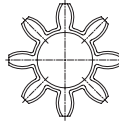
ROTEX® 14



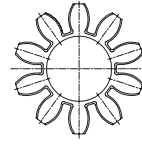
ROTEX® 19



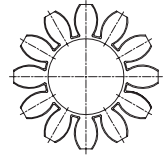
ROTEX® 24 - 65



ROTEX® 75 - 160







ROTEX® 180




#### Degree of hardness



Spider type (Shore hardness)	92 Shore A (T-PUR®)	92 Shore A
	 T-PUR®	
Size	14 to 180	14 to 90
Material	T-PUR®	Polyurethane (PUR)
Permissible temperature range		
Permanent temperature	-50 °C to +120 °C	-40 °C to +90 °C
Short-term temperature	-50 °C to +150 °C	-50 °C to +120 °C
Features	<ul style="list-style-type: none"> <li>- significantly higher service life expectancy</li> <li>- very good temperature resistance</li> <li>- improved damping of vibrations</li> <li>- good damping, average flexibility</li> <li>- suitable for all hub materials</li> </ul>	<ul style="list-style-type: none"> <li>- good damping, average flexibility</li> <li>- suitable for all hub materials</li> </ul>

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

Spider type (Shore hardness)	64 Shore D (T-PUR®)
	 T-PUR®
Size	14 to 180
Material	T-PUR®
Permissible temperature range	
Permanent temperature	-50 °C to +120 °C
Short-term temperature	-50 °C to +150 °C
Features	<ul style="list-style-type: none"> <li>- significantly higher service life expectancy</li> <li>- very good temperature resistance</li> <li>- improved damping of vibrations</li> <li>- transmission of very high torques with low damping</li> <li>- recommended hub material: steel and GJS</li> </ul>

Technical data of standard spiders

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

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

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

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



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

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

# ROTEX®

## Flexible jaw couplings

### Technical data and properties of special spiders

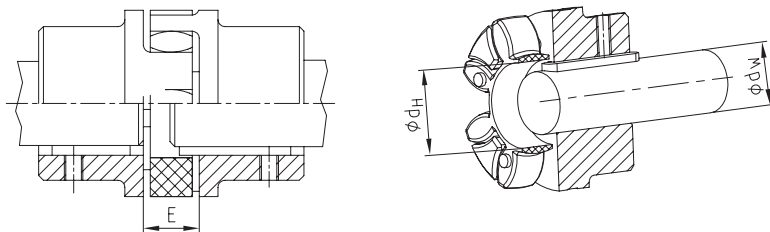
		
Designation	PA	PEEK
Material	Polyamide	Polyetheretherketone
Permissible temperature range		
Permanent temperature	-20 °C to +130 °C <sup>1)</sup>	up to +180 °C (ATEX up to +160 °C)
Short-term temperature	-30 °C to +150 °C <sup>1)</sup>	up to +250 °C
Features	<ul style="list-style-type: none"> <li>- small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

<sup>1)</sup> different properties depending on compound

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

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

### Installation of spider

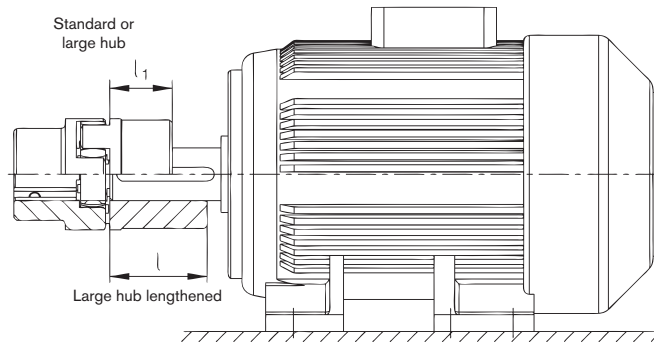


Shaft  $\phi d_H$  with feather key (acc. to DIN 6885 sheet 1) protruding into the spider  $\phi d_H$

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

<sup>2)</sup> If the shaft diameter is smaller than or equal to dimension d<sub>H</sub>, one shaft end or both shaft ends may protrude with the feather keyway into the spider.

## Selection of standard IEC motors



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

Size	A. C. motor 50 Hz		Motor power n=3000 rpm 2 poles		ROTEX® coupling size	Motor power n=1500 rpm 4 poles		ROTEX® coupling size	Motor power n=1000 rpm 6 poles		ROTEX® coupling size	Motor power n=750 rpm 8 poles		ROTEX® coupling size			
	Shaft end dxl [mm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]		Power P [kW]	Torque T [Nm]				
	2 poles	4, 6, 8 poles															
56	9 x 20		0.09	0.32	9 <sup>1)</sup>	0.06	0.43	9 <sup>1)</sup>	0.037	0.43	9 <sup>1)</sup>						
			0.12	0.41			0.09		0.64			0.045	0.52				
63	11 x 23		0.18	0.62	14	0.12	0.88	14	0.06	0.7	14						
			0.25	0.86			0.09		1.1								
71	14 x 30		0.37	1.3	14	0.25	1.8	14	0.18	2	14	0.09	1.4	14			
			0.55	1.9			0.25		2.8			0.12	1.8				
80	19 x 40		0.75	2.5	19	0.55	3.7	19	0.37	3.9	19	0.18	2.5	19			
			1.1	3.7			0.75		5.1			0.25	3.5				
90S	24 x 50		1.5	5	19	1.1	7.5	19	0.75	8	19	0.37	5.3	19			
90L				2.2		7.4			1.5	10			1.1		12		0.55
100L	28 x 60		3	9.8	24	2.2	15	24	1.5	15	24	0.75	11	24			
112M			4	13		3	20		2.2	22		1.5	21				
132S	38 x 80		5.5	18	28	5.5	36	28	3	30	28	2.2	30	28			
132M				7.5		25			7.5	49			4		40		3
160M	42 x 110		11	36	38	11	72	38	7.5	75	38	4	54	38			
			15	49			15		98			5.5	74				
160L			18.5	60		15	98		11	109		7.5	100				
180M	48 x 110		22	71	42	18.5	121	42	15	148	42	11	145	42			
180L				30		97			22	144			18.5		181		15
200L	55 x 110		37	120	42	30	196	42	22	215	42						
225S	55 x 110					37	240	48				18.5	244	48			
225M			60 x 140	45	145		45	292	55	30	293	55	22	290	55		
250M	60 x 140	65 x 140	55	177	48	55	356	55	37	361	65 <sup>2)</sup>	30	392	65			
280S	75 x 140		75	241	55	75	484	65 <sup>2)</sup>	45	438	65 <sup>2)</sup>	37	483	65 <sup>2)</sup>			
280M				90		289			90	581			55		535		45
315S	80 x 170		110	353	65	110	707	75	75	727	75	55	712	75			
315M				132		423			132	849			90		873		75
315L	65 x 140		160	513	75	160	1030	90	110	1070	90	90	1170	90			
			200	641			200		1290			132	1280			110	1420
315	85 x 170		250	802	90	250	1600	100	160	1550	100	132	1710	100			
			315	1010			315		2020			200	1930			160	2070
355	75 x 140		355	1140	90	355	2280	110	250	2410	110	200	2580	110			
			400	1280			400		2570			315	3040			250	3220
			500	1600			500		3210			400	3850			315	4060
400	80 x 170		560	1790	100	560	3580	125	450	4330	125	355	4570	125			
			630	2020			630		4030			500	4810			400	5150
			710	2270			710		4540			560	5390			450	5790
450	90 x 170		800	2560	110	800	5120	140	630	6060	140	500	6420	140			
			900	2880			900		5760			710	6830			560	7190
			1000	3200			1000		6400			800	7690			630	8090

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

<sup>1)</sup> For dimensions see ROTEK® GS series

<sup>2)</sup> For motor hub made of steel see page 40



### Cylindrical bores and spline bores

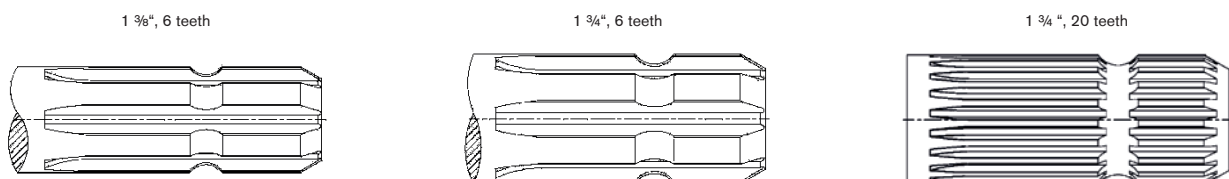
ROTEX® size		Stock programme of cylindrical finish bores [mm] H7 feather keyway acc. to DIN 6885 sheet 1 [JS9] and thread for setscrews																																				
Material	Un-bored	Ø6	Ø8	Ø9	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø26	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65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

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

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

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

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



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

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

<sup>2)</sup> Profile correction different from DIN

<sup>3)</sup> Similar to code PA-S



**Morskate®**



Any questions? Please contact us.

**Morskate Aandrijvingen BV**

Oosterveldsingel 47A  
7558 PJ Hengelo (Ov)  
The Netherlands

NL

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

DE

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

EN

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