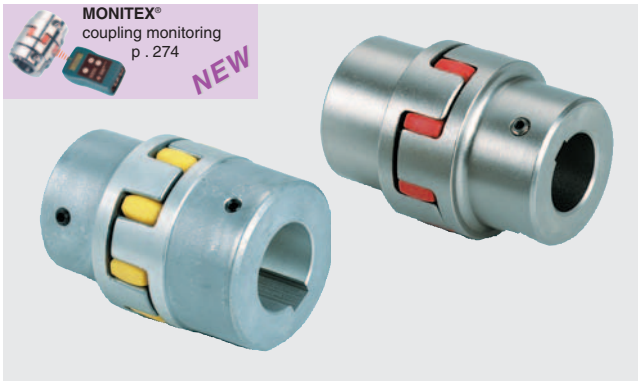

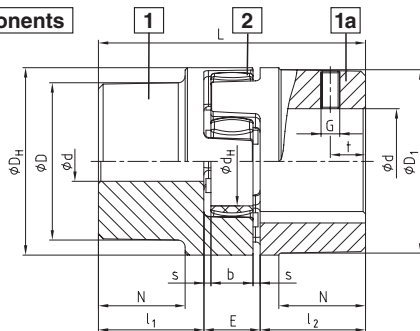


## Shaft coupling design No. 001 - casted materials

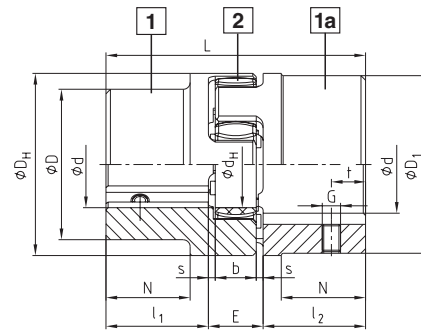


- Torsionally flexible, maintenance-free
- Damping vibrations
- Axial plug-in, fail-safe
- Allow machining – good dynamic properties
- Compact design/small flywheel effect
- Finish bore according to ISO fit H7, feather keyway according to DIN 6885 sheet 1 - JS9
- Basic programme/stock programme see pages 24 and 25
-  Approved according to EC Standard 94/9/EC (without aluminium AL-D)
- Mounting instructions under [www.ktr.com](http://www.ktr.com)

### Components



AL-D (thread opposite the keyway)



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

ROTEX® Aluminium diecast (AL-D)																	
Size	Component	Spider (part 2) <sup>1)</sup>			Finish bore d (min-max)	Dimensions [mm]										Thread for setscrews <sup>2)</sup>	
		Rated torque [Nm]				General										G	t
		92 Sh A	98 Sh A	64 Sh D		L	l <sub>1</sub> ; l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D; D <sub>1</sub>	N			
14 <sup>3)</sup>	1a	7,5	12,5	–	6-16	35	11	13	10	1,5	30	10	30	–	M4	5	1,5
19	1	10	17	–	6-19	66	25	16	12	2	41	18	32	20	M5	10	2
	1a				19-24								41				
24	1	35	60	–	9-24	78	30	18	14	2	56	27	40	24	M5	10	2
	1a				22-28								56				
28	1	95	160	–	10-28	90	35	20	15	2,5	66	30	48	28	M8	15	10
	1a				28-38								66				

ROTEX® Cast iron EN-GJL-250 (GG 25)																	
Size	Component	Spider (part 2) <sup>1)</sup>			Finish bore d (min-max)	Dimensions [mm]										Thread for setscrews <sup>2)</sup>	
		Rated torque [Nm]				General										G	t
		92 Sh A	98 Sh A	64 Sh D		L	l <sub>1</sub> ; l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D; D <sub>1</sub>	N			
38	1	190	325	405	12-38	114	45	24	18	3	80	38	66	37	M8	15	10
	1a				38-45								78				
	1b				12-45								62				
42	1	265	450	560	14-42	126	50	26	20	3	95	46	75	40	M8	20	10
	1a				42-55								94				
	1b				14-55								65				
48	1	310	525	655	15-48	140	56	28	21	3,5	105	51	85	45	M8	20	10
	1a				48-60								69				
	1b				15-60								69				
55	1	410	685	825	20-55	160	65	30	22	4	120	60	98	52	M10	20	17
	1a				55-70								118				
	1b				20-70								120				
65	1	625	940	1175	22-65	185	75	35	26	4,5	135	68	115	61	M10	20	17
	1a				65-80								135				
	1b				22-80								135				
75	1	1280	1920	2400	30-75	210	85	40	30	5	160	80	135	69	M10	25	17
	1a				75-95								160				
	1b				30-95								160				
90	1	2400	3600	4500	40-90	245	100	45	34	5,5	200	100	160	81	M12	30	40
	1a				90-110								200				
	1b				40-110								295				

ROTEX® Nodular iron EN-GJS-400-15 (GGG 40)																	
Size	Component	Spider (part 2) <sup>1)</sup>			Finish bore d (min-max)	Dimensions [mm]										Thread for setscrews <sup>2)</sup>	
		Rated torque [Nm]				General										G	t
		92 Sh A	98 Sh A	64 Sh D		L	l <sub>1</sub> ; l <sub>2</sub>	E	b	s	D <sub>H</sub>	d <sub>H</sub>	D; D <sub>1</sub>	N			
100	1	3300	4950	6185	50-115	270	110	50	38	6	225	113	180	89	M12	30	40
110	1	4800	7200	9000	60-125	295	120	55	42	6,5	255	127	200	96	M16	35	80
125	1	6650	10000	12500	60-145	340	140	60	46	7	290	147	230	112	M16	40	80
140	1	8550	12800	16000	60-160	375	155	65	50	7,5	320	165	255	124	M20	45	140
160	1	12800	19200	24000	80-185	425	175	75	57	9	370	190	290	140	M20	50	140
180	1	18650	28000	35000	85-200	475	195	85	64	10,5	420	220	325	156	M20	50	140

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

1) Maximum torque of the coupling T<sub>Kmax</sub> = rated torque of the coupling T<sub>KNenn</sub> · X 2.

2) From size 125 thread for setscrews on request.

3) Material AL-H.

## Technical data

ROTEX® sizes for all designs and materials	Max. speed [1/min]		Twisting angle with		Torque [Nm]			Damping power [W] with +30 °C P <sub>KW</sub>	Torsion spring stiffness C <sub>dyn</sub> [ Nm / rad ]			
	30 m/s	40 m/s	T <sub>KN</sub> φ	T <sub>K max</sub> φ	Rated T <sub>KN</sub>	Max T <sub>K max</sub>	Vibratory T <sub>KW</sub>		1,00 T <sub>KN</sub>	0,75 T <sub>KN</sub>	0,50 T <sub>KN</sub>	0,25 T <sub>KN</sub>
<b>Spider from polyurethane 92 Shore A; colour yellow</b>												
14	19000	–	6,4°	10°	7,5	15	2,0	–	0,38x10 <sup>3</sup>	0,31x10 <sup>3</sup>	0,24x10 <sup>3</sup>	0,14x10 <sup>3</sup>
19	14000	19000			10	20	2,6	4,8	1,28x10 <sup>3</sup>	1,05x10 <sup>3</sup>	0,80x10 <sup>3</sup>	0,47x10 <sup>3</sup>
24	10600	14000			35	70	9,1	6,6	4,86x10 <sup>3</sup>	3,98x10 <sup>3</sup>	3,01x10 <sup>3</sup>	1,79x10 <sup>3</sup>
28	8500	11800			95	190	25	8,4	10,90x10 <sup>3</sup>	8,94x10 <sup>3</sup>	6,76x10 <sup>3</sup>	4,01x10 <sup>3</sup>
38	7100	9500			190	380	49	10,2	21,05x10 <sup>3</sup>	17,26x10 <sup>3</sup>	13,05x10 <sup>3</sup>	7,74x10 <sup>3</sup>
42	6000	8000			265	530	69	12,0	23,74x10 <sup>3</sup>	19,47x10 <sup>3</sup>	14,72x10 <sup>3</sup>	8,73x10 <sup>3</sup>
48	5600	7100			310	620	81	13,8	36,70x10 <sup>3</sup>	30,09x10 <sup>3</sup>	22,75x10 <sup>3</sup>	13,49x10 <sup>3</sup>
55	4750	6300			410	820	107	15,6	50,72x10 <sup>3</sup>	41,59x10 <sup>3</sup>	31,45x10 <sup>3</sup>	18,64x10 <sup>3</sup>
65	4250	5600	3,2°	5°	625	1250	163	18,0	97,13x10 <sup>3</sup>	79,65x10 <sup>3</sup>	60,22x10 <sup>3</sup>	35,70x10 <sup>3</sup>
75	3550	4750			1280	2560	333	21,6	113,32x10 <sup>3</sup>	92,92x10 <sup>3</sup>	70,26x10 <sup>3</sup>	41,65x10 <sup>3</sup>
90	2800	3750			2400	4800	624	30,0	190,09x10 <sup>3</sup>	155,87x10 <sup>3</sup>	117,86x10 <sup>3</sup>	69,86x10 <sup>3</sup>
100	2500	3350			3300	6600	858	36,0	253,08x10 <sup>3</sup>	207,53x10 <sup>3</sup>	156,91x10 <sup>3</sup>	93,01x10 <sup>3</sup>
110	2240	3000			4800	9600	1248	42,0	311,61x10 <sup>3</sup>	255,52x10 <sup>3</sup>	193,20x10 <sup>3</sup>	114,52x10 <sup>3</sup>
125	2000	2650			6650	13300	1729	48,0	474,86x10 <sup>3</sup>	389,39x10 <sup>3</sup>	294,41x10 <sup>3</sup>	174,51x10 <sup>3</sup>
140	1800	2360			8550	17100	2223	54,6	660,49x10 <sup>3</sup>	541,60x10 <sup>3</sup>	409,50x10 <sup>3</sup>	242,73x10 <sup>3</sup>
160	1500	2000			12800	25600	3328	75,0	890,36x10 <sup>3</sup>	730,10x10 <sup>3</sup>	552,03x10 <sup>3</sup>	327,21x10 <sup>3</sup>
180	1400	1800			18650	37300	4849	78,0	2568,56x10 <sup>3</sup>	2106,22x10 <sup>3</sup>	1592,51x10 <sup>3</sup>	943,95x10 <sup>3</sup>
<b>Spider from polyurethane 98 Shore A; from size 65 95 Shore A; colour red</b>												
14	19000	–	6,4°	10°	12,5	25	3,3	–	0,56x10 <sup>3</sup>	0,46x10 <sup>3</sup>	0,35x10 <sup>3</sup>	0,21x10 <sup>3</sup>
19	14000	19000			17	34	4,4	4,8	2,92x10 <sup>3</sup>	2,39x10 <sup>3</sup>	1,81x10 <sup>3</sup>	1,07x10 <sup>3</sup>
24	10600	14000			60	120	16	6,6	9,93x10 <sup>3</sup>	8,14x10 <sup>3</sup>	6,16x10 <sup>3</sup>	3,65x10 <sup>3</sup>
28	8500	11800			160	320	42	8,4	26,77x10 <sup>3</sup>	21,95x10 <sup>3</sup>	16,60x10 <sup>3</sup>	9,84x10 <sup>3</sup>
38	7100	9500			325	650	85	10,2	48,57x10 <sup>3</sup>	39,83x10 <sup>3</sup>	30,11x10 <sup>3</sup>	17,85x10 <sup>3</sup>
42	6000	8000			450	900	117	12,0	54,50x10 <sup>3</sup>	44,69x10 <sup>3</sup>	33,79x10 <sup>3</sup>	20,03x10 <sup>3</sup>
48	5600	7100			525	1050	137	13,8	65,29x10 <sup>3</sup>	53,54x10 <sup>3</sup>	40,48x10 <sup>3</sup>	24,00x10 <sup>3</sup>
55	4750	6300			685	1370	178	15,6	94,97x10 <sup>3</sup>	77,88x10 <sup>3</sup>	58,88x10 <sup>3</sup>	34,90x10 <sup>3</sup>
65	4250	5600	3,2°	5°	940	1880	244	18,0	129,51x10 <sup>3</sup>	106,20x10 <sup>3</sup>	80,30x10 <sup>3</sup>	47,60x10 <sup>3</sup>
75	3550	4750			1920	3840	499	21,6	197,50x10 <sup>3</sup>	161,95x10 <sup>3</sup>	122,45x10 <sup>3</sup>	72,58x10 <sup>3</sup>
90	2800	3750			3600	7200	936	30,0	312,20x10 <sup>3</sup>	256,00x10 <sup>3</sup>	193,56x10 <sup>3</sup>	114,73x10 <sup>3</sup>
100	2500	3350			4950	9900	1287	36,0	383,26x10 <sup>3</sup>	314,27x10 <sup>3</sup>	237,62x10 <sup>3</sup>	140,85x10 <sup>3</sup>
110	2240	3000			7200	14400	1872	42,0	690,06x10 <sup>3</sup>	565,85x10 <sup>3</sup>	427,84x10 <sup>3</sup>	253,60x10 <sup>3</sup>
125	2000	2650			10000	20000	2600	48,0	1343,64x10 <sup>3</sup>	1101,79x10 <sup>3</sup>	833,06x10 <sup>3</sup>	493,79x10 <sup>3</sup>
140	1800	2360			12800	25600	3328	54,6	1424,58x10 <sup>3</sup>	1168,16x10 <sup>3</sup>	883,24x10 <sup>3</sup>	523,54x10 <sup>3</sup>
160	1500	2000			19200	38400	4992	75,0	2482,23x10 <sup>3</sup>	2035,43x10 <sup>3</sup>	1538,98x10 <sup>3</sup>	912,22x10 <sup>3</sup>
180	1400	1800			28000	56000	7280	78,0	3561,45x10 <sup>3</sup>	2920,40x10 <sup>3</sup>	2208,10x10 <sup>3</sup>	1308,84x10 <sup>3</sup>
<b>Spider from polyurethane 64 Shore D-F; colour natural white with green tooth marking <sup>1)</sup></b>												
14	19000	–	4,5°	7,0°	16	32	4,2	9,0	0,76x10 <sup>3</sup>	0,62x10 <sup>3</sup>	0,47x10 <sup>3</sup>	0,28x10 <sup>3</sup>
19	14000	19000			21	42	5,5	7,2	5,35x10 <sup>3</sup>	4,39x10 <sup>3</sup>	3,32x10 <sup>3</sup>	1,97x10 <sup>3</sup>
24	10600	14000			75	150	19,5	9,9	15,11x10 <sup>3</sup>	12,39x10 <sup>3</sup>	9,37x10 <sup>3</sup>	5,55x10 <sup>3</sup>
28	8500	11800			200	400	52	12,6	27,52x10 <sup>3</sup>	22,57x10 <sup>3</sup>	17,06x10 <sup>3</sup>	10,12x10 <sup>3</sup>
38	7100	9500			405	810	105	15,3	70,15x10 <sup>3</sup>	57,52x10 <sup>3</sup>	43,49x10 <sup>3</sup>	25,78x10 <sup>3</sup>
42	6000	8000			560	1120	146	18,0	79,86x10 <sup>3</sup>	65,49x10 <sup>3</sup>	49,52x10 <sup>3</sup>	29,35x10 <sup>3</sup>
48	5600	7100			655	1310	170	20,7	95,51x10 <sup>3</sup>	78,32x10 <sup>3</sup>	59,22x10 <sup>3</sup>	35,10x10 <sup>3</sup>
55	4750	6300			825	1650	215	23,4	107,92x10 <sup>3</sup>	88,50x10 <sup>3</sup>	66,91x10 <sup>3</sup>	39,66x10 <sup>3</sup>
65	4250	5600	2,5°	3,6°	1175	2350	306	27,0	151,09x10 <sup>3</sup>	123,90x10 <sup>3</sup>	93,68x10 <sup>3</sup>	55,53x10 <sup>3</sup>
75	3550	4750			2400	4800	624	32,4	248,22x10 <sup>3</sup>	203,54x10 <sup>3</sup>	153,90x10 <sup>3</sup>	91,22x10 <sup>3</sup>
90	2800	3750			4500	9000	1170	45,0	674,52x10 <sup>3</sup>	553,11x10 <sup>3</sup>	418,20x10 <sup>3</sup>	247,89x10 <sup>3</sup>
100	2500	3350			6185	12370	1608	54,0	861,17x10 <sup>3</sup>	706,16x10 <sup>3</sup>	533,93x10 <sup>3</sup>	316,48x10 <sup>3</sup>
110	2240	3000			9000	18000	2340	63,0	1138,59x10 <sup>3</sup>	933,64x10 <sup>3</sup>	705,92x10 <sup>3</sup>	418,43x10 <sup>3</sup>
125	2000	2650			12500	25000	3250	72,0	1435,38x10 <sup>3</sup>	1177,01x10 <sup>3</sup>	889,93x10 <sup>3</sup>	527,50x10 <sup>3</sup>
140	1800	2360			16000	32000	4160	81,9	1780,73x10 <sup>3</sup>	1460,20x10 <sup>3</sup>	1104,05x10 <sup>3</sup>	654,42x10 <sup>3</sup>
160	1500	2000			24000	48000	6240	112,5	3075,80x10 <sup>3</sup>	2522,16x10 <sup>3</sup>	1907,00x10 <sup>3</sup>	1130,36x10 <sup>3</sup>
180	1400	1800			35000	70000	9100	117,0	6011,30x10 <sup>3</sup>	4929,27x10 <sup>3</sup>	3727,01x10 <sup>3</sup>	2209,15x10 <sup>3</sup>

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

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

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