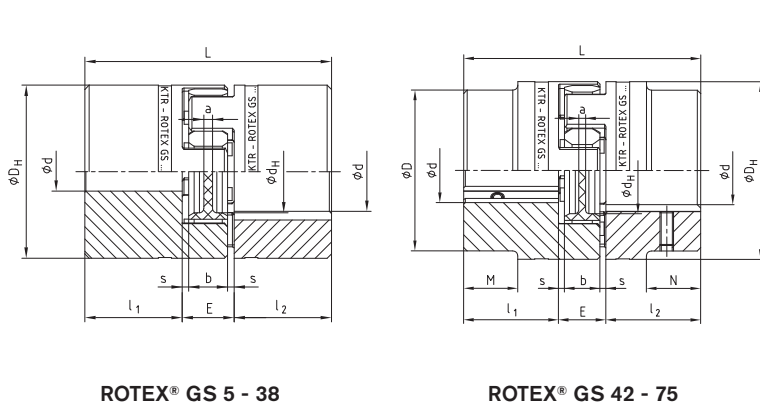


Standard types



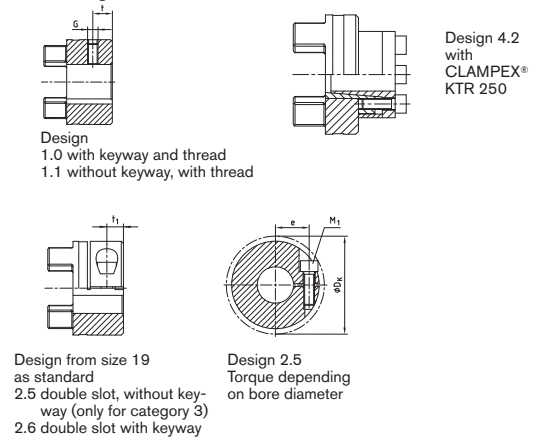
- Backlash-free shaft connection under prestress for spindle drives, elevating platforms, machine tool drives, etc.
- Small dimensions - low flywheel mass
- Maintenance-free, easy to check visually
- Finish bore acc. to ISO fit H7 (apart from clamping hub), keyway, from Ø 6 mm acc. to DIN 6885 sheet 1 - JS9
- Approved according to EC Standard 94/9/EC (only for hub design 1.0 and 2.1/2.6)



ROTEX® GS 5 - 38

ROTEX® GS 42 - 75

Hub designs: (see page 132)



Size	un-bored	Finish bores				Dimensions [mm]										Setscrew		Clamping screw				
		d _{min.}	1.0, 1.1 d _{max.}	2.5 d _{max.}	2.6 ¹⁾ d _{max.}	D	D _H	d _H	L	l _{1, l2}	M, N	E	b	s	a	G	t	M ₁	t ₁	e	ØD _K	T _A [Nm]
ROTEX® GS Aluminium (Al-H)																						
19	●	6	24	24	24	-	40	18	66	25	-	16	12	2,0	3,0	M5	10	M6	11,0	14,5	46	10,5
24	●	8	28	28	28	-	55	27	78	30	-	18	14	2,0	3,0	M5	10	M6	10,5	20,0	57,5	10,5
28	●	10	38	38	38	-	65	30	90	35	-	20	15	2,5	4,0	M8	15	M8	11,5	25,0	73	25
38	●	12	45	45	45	-	80	38	114	45	-	24	18	3,0	4,0	M8	15	M8	15,5	30,0	83,5	25
ROTEX® GS Steel																						
42	●	14	55	50	45	85	95	46	126	50	28	26	20	3,0	4,0	M8	20	M10	18	32,0	93,5	69
48	●	15	62	55	55	95	105	51	140	56	32	28	21	3,5	4,0	M8	20	M12	21	36,0	105	120
55	●	20	74	68	68	110	120	60	160	65	37	30	22	4,0	4,5	M10	20	M12	26	42,5	119,5	120
65	●	22	80	70	70	115	135	68	185	75	47	35	26	4,5	4,5	M10	20	M12	33	45,0	124	120
75	●	30	95	80	80	135	160	80	210	85	53	40	30	5,0	5,0	M10	25	M16	36	51,0	147,5	295

Bores and the corresponding transmittable torques of the clamping hub design 2.5 [Nm]																												
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
19	25	27	27	29	30	31	32	32	34	30 ²⁾	32 ²⁾																	
24		34	35	36	38	38	39	40	41	42	43	45	46															
28				80	81	81	84	85	87	89	91	92	97	99	102	105	109											
38					92	94	97	98	99	102	104	105	109	112	113	118	122	123	126	130								
42									232	238	244	246	255	260	266	274	283	288	294	301	309	315						
48												393	405	413	421	434	445	454	462	473	486	494	514					
55															473	486	498	507	514	526	539	547	567	587	608			
65																507	518	526	535	547	559	567	587	608	627	648		
75																			1102	1124	1148	1163	1201	1239	1278	1316	1354	1393

¹⁾ from Ø65 keyway opposite to the clamping screw

²⁾ clamping hub single slotted 2 x clamping screw M4 and dimension e=15

Order form:	ROTEX® GS 24	98 Sh A-GS	2.5 - Ø 24	1.0 - Ø 20
	Coupling size	Spider hardness	Hub design	Finish bore

Technical data

Size	Spider Shore-GS	Shore range	max. speed [rpm] for hub design				Torque [Nm]		Static torsion spring stiffness ¹⁾ [Nm/rad]	Dynamic torsion spring stiffness ¹⁾ [Nm/rad]	Radial stiffness C _r [N/mm]	Weight [kg]		Mass moment of inertia J [kgm ²]	
			2.0 / 2.1	1.0	6.0 ²⁾	6.0 P ²⁾	T _{KN}	T _{K max}				each hub	spider	each hub	spider
			2.5 / 2.6	1.1											
5	70	A	3800	47700			0,2	0,3	1,78	5	43	1 x 10 ⁻³	0,2 x 10 ⁻³	0,016 x 10 ⁻⁶	0,002 x 10 ⁻⁶
	80	A					0,3	0,6	3,15	10	82				
	92	A					0,5	1,0	5,16	16	154				
	98	A					0,9	1,7	8,3	25	296				
7	80	A	2700	34100			0,7	1,4	8,6	26	114	3 x 10 ⁻³	0,7 x 10 ⁻³	0,085 x 10 ⁻⁶	0,014 x 10 ⁻⁶
	92	A					1,2	2,4	14,3	43	219				
	98	A					2,0	4,0	22,9	69	421				
	64	D					2,4	4,8	34,3	103	630				
9	80	A	1900	23800			1,8	3,6	17,2	52	125	9 x 10 ⁻³	1,8 x 10 ⁻³	0,49 x 10 ⁻⁶	0,079 x 10 ⁻⁶
	92	A					3,0	6,0	31,5	95	262				
	98	A					5,0	10,0	51,6	155	518				
	64	D					6,0	12,0	74,6	224	739				
12	80	A	15200	19100			3,0	6,0	84,3	252	274	14 x 10 ⁻³	2,3 x 10 ⁻³	1,3 x 10 ⁻⁶	0,139 x 10 ⁻⁶
	92	A					5,0	10,0	160,4	482	470				
	98	A					9,0	18,0	240,7	718	846				
	64	D					12,0	24,0	327,9	982	1198				
14	80	A	12700	15900	25400	47700	4,0	8,0	60,2	180	153	20 x 10 ⁻³	4,6 x 10 ⁻³	2,8 x 10 ⁻⁶	0,457 x 10 ⁻⁶
	92	A					7,5	15,0	114,6	344	336				
	98	A					12,5	25,0	171,9	513	654				
	64	D					16,0	32,0	234,2	702	856				
19	80	A	9550	11900	19000	35800	4,9	9,8	618	1065	582	66 x 10 ⁻³	7 x 10 ⁻³	20,4 x 10 ⁻⁶	1,49 x 10 ⁻⁶
	92	A					10,0	20,0	1090	1815	1120				
	98	A					17,0	34,0	1512	2540	2010				
	64	D					21,0	42,0	2560	3810	2930				
24	92	A	6950	8650	13800	2600	35	70	2280	4010	1480	132 x 10 ⁻³	18 x 10 ⁻³	50,8 x 10 ⁻⁶	7,5 x 10 ⁻⁶
	98	A					60	120	3640	5980	2560				
	64	D					75	150	5030	10895	3696				
28	92	A	5850	7350	11700	22000	95	190	4080	6745	1780	253 x 10 ⁻³	29 x 10 ⁻³	200,3 x 10 ⁻⁶	16,5 x 10 ⁻⁶
	98	A					160	320	6410	9920	3200				
	64	D					200	400	10260	20177	4348				
38	92	A	4750	5950	9550	17900	190	380	6525	11050	2350	455 x 10 ⁻³	49 x 10 ⁻³	400,6 x 10 ⁻⁶	44,6 x 10 ⁻⁶
	98	A					325	650	11800	17160	4400				
	64	D					405	810	26300	42515	6474				
42	92	A	4000	5000	8050	15000	265	530	10870	15680	2430	1850 x 10 ⁻³	79 x 10 ⁻³	2246 x 10 ⁻⁶	100 x 10 ⁻⁶
	98	A					450	900	21594	37692	5570				
	64	D					560	1120	36860	62600	7270				
48	92	A	3600	4550	7200	13600	310	620	12968	18400	2580	2520 x 10 ⁻³	98 x 10 ⁻³	3786 x 10 ⁻⁶	200 x 10 ⁻⁶
	98	A					525	1050	25759	45620	5930				
	64	D					655	1310	57630	99750	8274				
55	92	A	3150	3950	6350	11900	410	820	15482	21375	2980	3800 x 10 ⁻³	115 x 10 ⁻³	7496 x 10 ⁻⁶	300 x 10 ⁻⁶
	98	A					685	1370	42117	61550	6686				
	64	D					825	1650	105730	130200	9248				
65	95	A	2800	3500	5650	11000	940	1880	48520	71660	6418	4500 x 10 ⁻³	210 x 10 ⁻³	12000 x 10 ⁻⁶	500 x 10 ⁻⁶
	64	D					1175	2350	118510	189189	8870				
75	95	A	2350	2950	4750	8950	1920	3840	79150	150450	8650	7180 x 10 ⁻³	340 x 10 ⁻³	26000 x 10 ⁻⁶	2000 x 10 ⁻⁶
	64	D					2400	4800	182320	316377	11923				

¹⁾ Static and dynamic torsional stiffness with 0,5 x T_{KN} ²⁾ Higher speeds on request
The size of the coupling has to be such that the permissible coupling load is not exceeded in any operating condition (see coupling selection on page 130).

1. Definitions and factors for coupling selection

Prestress: The flexible prestress varies depending on the coupling size, the spiders/spider material and the production tolerances. As a result there is the axial plug-in force varying from low as sliding seat or with a torsionally soft spider to heavy with a high amount of prestress or torsionally rigid spider.

T_{KN} Rated torque of coupling [Nm]

Torque which can be transmitted continuously over the entire permissible speed range, taking into account the operating factors (S_t, S_d).

T_{Kmax} Maximum torque of coupling [Nm]

Torque which can be transmitted during the full service life of the coupling as dynamic load ≥ 10⁵ or as alternating load 5 · 10⁴, taking into account the operating factors (S_t, S_d, S_A).

T_R Friction torque [Nm]

Torque which can be transmitted by the frictionally engaged shaft-hub-connection.

T_{AN} Constantly occurring driving torque as per the data indicated by the engine manufacturer

T_{AS} Maximum driving torque [Nm] as per the data indicated by the engine manufacturer

Peak torque in case of shock by the driving A. C. motor, for example during acceleration or breakdown torque of the A. C. motor.

T_S Peak torque [Nm]

Peak torque on the coupling, calculated from max. driving torque T_{AS}, rotational inertia coefficient m_A or m_L and operating factor S_A.

S_t Temperature factor

Factor considering the lower loading capacity or larger deformation of an elastomer part under load particularly in case of increased temperatures. In case of temperatures exceeding 80 °C we would recommend to use the RADEX®-NC (see page 152).

S_d Torsional stiffness factor

Factor considering the different demands on the torsional stiffness and fatigue strength of the coupling dependent on the application. In case of using the spider 64 Sh D-GS and reversing drive S_d has to be selected in case of couplings made of aluminium. For positioning drives with increased demand on torsional stiffness (e.g. gearbox with low transmission) we would recommend the use of the TOOLFLEX® or RADEX®-NC (see page 144 and 152).

S_A Operating factor

Factor considering the occurring shocks or starts each minute, depending on the use

m_{A(L)} Rotational inertia coefficient of driving side (load side)

Factor taking into account the distribution of masses in case of drive and load side shocks and vibration excitation.

Stock programme

		Finish bore [mm] according to ISO fit H7 / feather keyway with thread according to DIN 6885 sheet 1 - JS9																														
Size	Hub design	un-/pilot bored	Ø2	Ø3	Ø4	Ø5	Ø6	Ø6.35	Ø7	Ø8	Ø9	Ø9.5	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	
7	1.1	●			●	●	●	●	●																							
	2.0	●		●	●	●	●	●	●																							
9	1.0	●				●	●	●	●	●	●		●																			
	1.1	●			●	●	●	●	●	●	●		●																			
	2.0	●		●	●	●	●	●	●	●	●	●	●	●																		
12	2.1	●				●			●	●		●																				
	1.0	●												●																		
	1.1	●													●																	
14	2.0	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	2.1	●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	6.0									●			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	6.0 P															●																
19	1.0	●											●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	2.5	●				■			●		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	2.6	●							●				●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	6.0 light												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
24	6.0												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	P37.5																		●													
	6.0 P																				●											
	1.0	●												●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
28	2.5	●													●				●	●	●	●	●	●	●	●	●	●	●	●	●	●
	2.6	●																	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	6.0 light																			●	●	●	●	●	●	●	●	●	●	●	●	●
	6.0																			●	●	●	●	●	●	●	●	●	●	●	●	●
38	6.0 P																															
	1.0	●																			●			●	●	●	●	●	●	●	●	●
	2.5	●													■										●	●	●	●	●	●	●	●
42	6.0 light																															
	6.0																															
	6.0 P																															
48	6.0 light																															
	6.0																															
55	6.0																															
65	6.0																															
75	6.0																															

Taper bores for Fanuc motors: GS 19 1:10 Ø 11; GS 24 1:10 Ø 16

		Finish bores [mm]											
Size	Hub design	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60
42	6.0 light	●	●	●	●	●	●	●	●	●	●		
	6.0	●	●	●	●	●	●	●	●	●	●		
48	6.0 light			●	●	●	●	●	●	●			
	6.0			●	●	●	●	●	●	●			
55	6.0				●	●	●	●	●	●	●	●	●
65	6.0											●	●
75	6.0												

■ = Pilot bored clamping hubs ● = Standard bore
 Unbored hubs up to size 65 available from stock.
 Further dimensions on request