

 KTR Kupplungstechnik GmbH D-48407 Rheine	ROTEX® GS type P mounting instructions	KTR-N 45611 E sheet: 1 edition: 2
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The **ROTEX® GS type P**, is a high-precise plug-in shaft coupling for spindle drives in tool machinery. It corresponds to the DIN 69002.

General Hints

Please read through these mounting instructions carefully before you set the coupling into operation. Please pay special attention to the safety instructions!

The mounting instructions are part of your product. Please keep them carefully and close to the coupling.

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Safety and Advice Hints



DANGER ! Danger of injury to persons.



CAUTION ! Damages on the machine possible.



ATTENTION ! Pointing to important items.

General Hints to Danger



DANGER !
With assembly, operation and maintenance of the coupling it has to be made sure that the entire drive train is protected against unintentional engagement. You can be seriously hurt by rotating parts. Please make absolutely sure to read through and observe the following safety instructions.

- All operations on and with the coupling have to be performed taking into account "safety first".
- Please make sure to disengage the power pack before you perform your work.
- Protect the power pack against unintentional engagement, e. g. by providing hints at the place of engagement or removing the fuse for current supply.
- Do not touch the operation area of the coupling as long as it is in operation.
- Please protect the coupling against unintentional touch. Please provide for the necessary protection devices and caps.

Proper Use

You may only assemble, operate and maintain the coupling if you

- have carefully read through the mounting instructions and understood them
- and if you are authorized and have proper skills

The coupling may only be used in accordance with the technical data (see **ROTEX® GS type P** catalogue). Unauthorized modifications on the coupling design are not admissible. We do not take any warranty for resulting damages. To further develop the product we reserve the right for technical modifications.

The **ROTEX® GS type P** described in here corresponds to the technical status at the time of printing of these mounting instructions.

The coupling is generally delivered in parts. Before the assembly, the coupling has to be controlled regarding its completeness.

Schutzvermerk ISO 16016 beachten.	Gezeichnet: 22.11.99 Sha/Wb Geprüft: 23.11.99 Sha	Ersatz für: KTR-N v. 16.06.93 Ersetzt durch:
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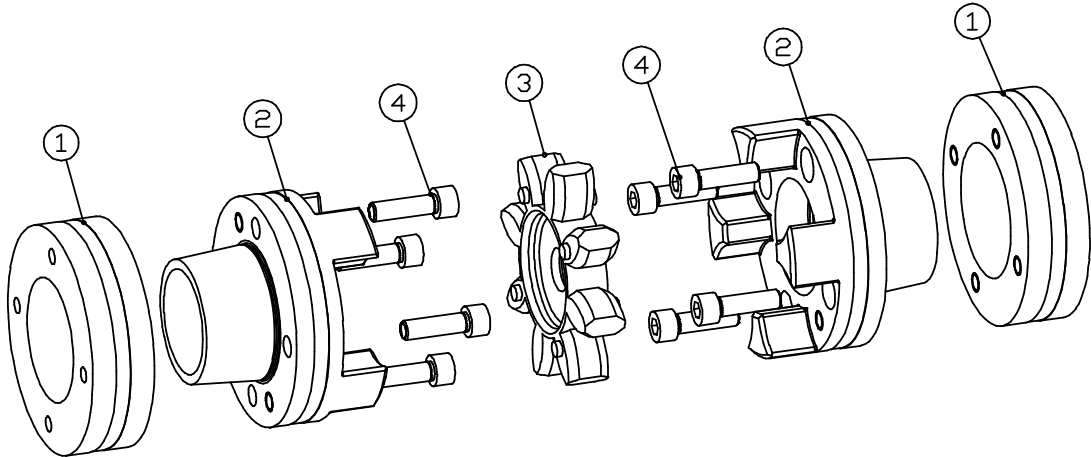


Components of ROTEX® GS type P, clamping ring hub

- 1) clamping ring (number: 2)
- 2) clamping ring hub (number: 2)
- 3) spider (number: 1)
- 4) cap screw DIN 912 (number: each clamping ring hub see table 1)

standard - spiders

hardness of spider (shore)	marking (colour)
98 ShA-GS	red
64 ShD-GS	green size 14 - 38 pale green size 42 - 55/70



picture 1: ROTEX® GS type P, clamping ring hub

Axial alignment



CAUTION !

Please observe the dimension E (table 1) during the assembly, so that the spider is axially movable in the insert.

In case of non-observance, the coupling can be damaged.

Displacements

The values of displacement indicated in table 1 offer safety in order to compensate external influences like e. g. thermal expansions or foundation sinkings.



CAUTION !

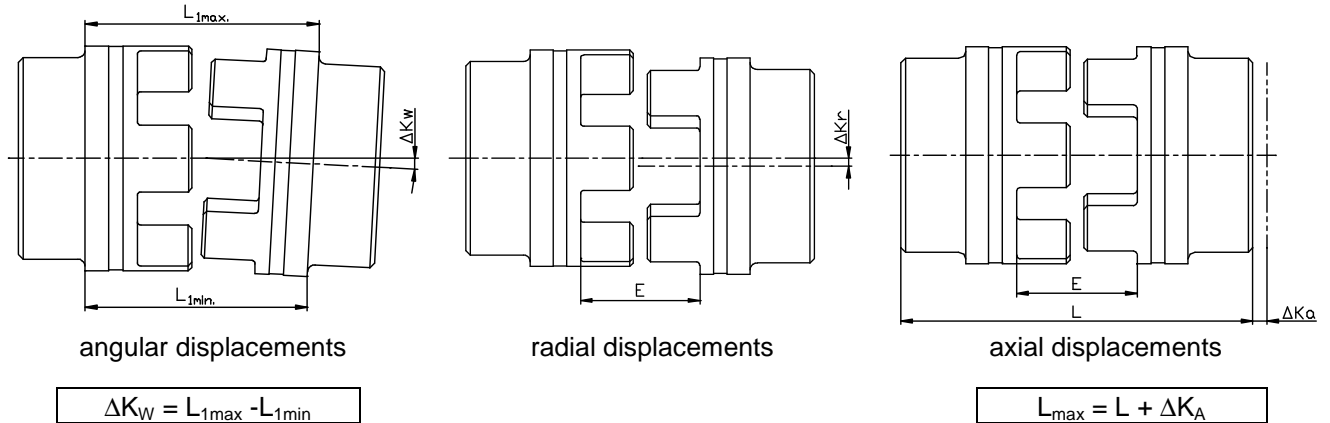
In order to ensure a long life of the coupling, the shaft ends have to be exactly aligned. Please absolutely observe the indicated values of displacement (see table 1). If you exceed the values, the coupling will be damaged.

Please note:

- The values of displacement indicated in table 1 are max. values which must not occur simultaneously. If the radial and the angular displacement occur simultaneously, the permitted values of displacement must only be used proportionally.
- Please control with a metering clockwork, a ruler or a feeler gauge if the permitted values of displacement indicated in table 1 are observed.

Displacements

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picture 2: displacements

Assembly of clamping ring hubs design 6.0

The power transmission of the ROTEX® GS type P clamping ring hub is effected frictionally engaged. The combination of fits shaft-clamping ring hubs is H6/j5 on. In case of a larger backlash of fits, the torques indicated in table 1 decrease.

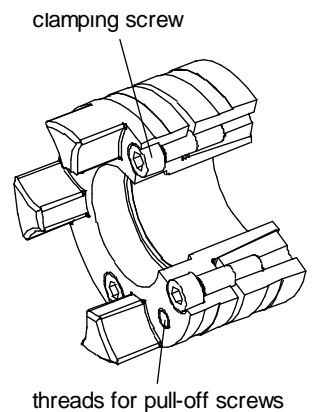
Please observe the following procedure during the assembly:

- Clean the hub bore and the shaft and oil them afterwards with liquid oil (e. g. with Castrol 4 in 1 or Klüber Quitsch EX).



CAUTION !
Do not use oil and grease with molybdenum disulphide or other high pressure additions as well as sliding grease pastes.

- Release the clamping screw slightly and pull off the clamping ring slightly from the hub, so that the clamping ring is released.
- Push the clamping ring hub onto the shaft.
- Tighten the clamping screws crosswise and evenly until the tightening torque indicated in table 1 is reached. Repeat this until all clamping screws reach this tightening torque.



picture 3: assembly clamping ring hub with clamping ring

Diassembly of clamping ring hubs design 6.0

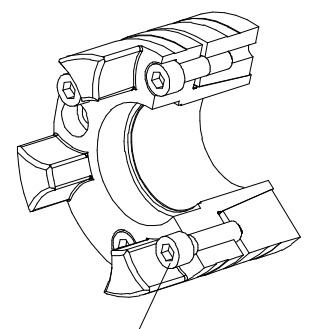
Release the clamping screws evenly one after the other. Every screw must be released only a half rotation each revolution. Unscrew all clamping screws 3 - 4 threads.

Elimiate the screw next to the threads for pull-off screws and screw them into the planned threads for pull-off screws.

You can release the clamping ring by an even and crosswise tightening of the screws in the threads for pull-off screws. Tighten the screws step by step.



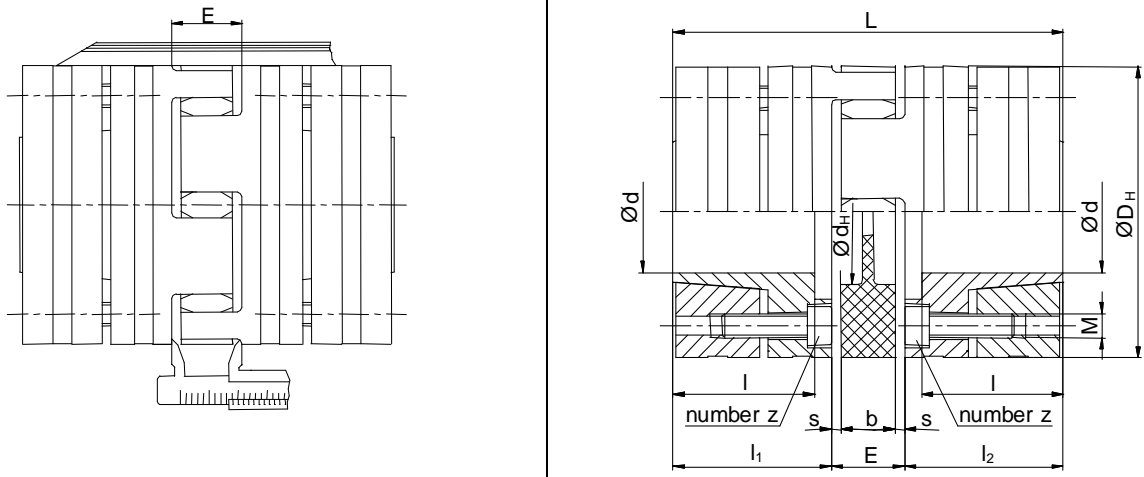
CAUTION !
In case of non-observance of these advices, the function of the coupling can be influenced.



picture 4: disassembly clamping ring hub with clamping ring

Technical Data

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picture 5: assembly of the coupling

Table 1:

ROTEX® GS size	14P	19/24P 37,5	19/24P	24/28P 50	24/28P	28/38P	38/45P	42/55P	48/60P	55/70P	
dimensions of assembly											
dimension d ¹⁾	14*	16*	19*	24*	25*	35*	40	42	45	50	
dimension d _H	10,5	18	18	27	27	30	38	46	51	60	
dimension D _H	32	37,5	40	50	55	65	80	95	105	120	
dimension L	50	66	66	78	78	90	114	126	140	160	
dimension l ₁ ; l ₂	18,5	25	25	30	30	35	45	50	56	65	
dimension l	15,5	21	21	25	25	30	40	45	50	58	
dimension b	10	12	12	14	14	15	18	20	21	22	
dimension s	1,5	2	2	2	2	2,5	3	3	3,5	4	
dimension E	13	16	16	18	18	20	24	26	28	30	
clamping screw M	M3	M4	M4	M5	M5	M5	M6	M8	M10	M10	
number z	4	6	6	4	4	8	8	4	4	4	
tightening torque T _A [Nm]	1,89	3,05	3,05	4,90	8,50	8,50	14	35	69	69	
transmittable torque of clamping ring hub at diameter Ød [Nm] ¹⁾	25	60	71	108	170	506	821	709	1340	1510	
torques of spider											
98 ShA-GS	T _{KN} [Nm]	12,5	14	17	43	60	160	325	450	525	625
	T _{K max.} [Nm]	25	28	34	86	120	320	650	900	1050	1250
64 ShD-GS	T _{KN} [Nm]	16	17	21	54	75	200	405	560	655	750
	T _{K max.} [Nm]	32	34	42	108	150	400	810	1120	1310	1500
displacements											
max. axial displacement ΔKa [mm]	1,0	1,2	1,2	1,4	1,4	1,5	1,8	2,0	2,1	2,2	
max. radial displacement with 98 ShA-GS ΔKr [mm]	0,09	0,06	0,06	0,10	0,10	0,11	0,12	0,14	0,16	0,17	
max. radial displacement with 64 ShD-GS ΔKr [mm]	0,06	0,04	0,04	0,07	0,07	0,08	0,09	0,10	0,11	0,12	
max. angular displacement with 98 ShA-GS ΔKw [degrees]	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	0,9	
max. angular displacement with 64 ShD-GS ΔKw [degrees]	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	0,8	

1) * standardized spindle shaft diameters