

# ROTEX® GS ZR3

## Backlash-free intermediate shaft couplings

### Intermediate shaft coupling with aluminium pipe bonded



For legend of pictogram please refer to flapper on the cover



#### ROTEX® GS Type ZR3 - Hub material aluminium/intermediate pipe material aluminium

Size	Dimensions [mm]														Cap screw DIN EN ISO 4762	
	d <sub>max.</sub>	D <sub>H</sub>	l <sub>1</sub>	L	l <sub>3</sub>	E	L <sub>R</sub>		L <sub>ZR</sub> = L <sub>R</sub> + 2 • l <sub>3</sub>		d <sub>R</sub>	D <sub>K</sub>	t <sub>1</sub>	e	M	T <sub>A</sub> [Nm]
							Min.	Max.	Min.	Max.					M	T <sub>A</sub> [Nm]
14	15	30	18.5	36.0	14.5	13	72	2971	101	3000	28	33.3	7.5	10.5	M4	2.9
19	20	40	25	49.0	17.5	16	98	2965	133	3000	40	46	8.0	14.5	M6	10
24	28	55	30	59.0	22.0	18	121	3456	165	3500	50	57.5	10.5	20	M6	10
28	38	65	35	67.0	25.0	20	137	3950	187	4000	60	73	11.5	25	M8	25
38	45	80	45	83.5	33.0	24	169	3934	235	4000	70	83.5	15.5	30	M8	25
42	50	95	50	93.0	36.5	26	180	3927	253	4000	80	93.5	18.0	32	M10	49
48	55	105	56	100.0	39.5	28	202	3921	281	4000	100	105	18.5	36	M12	86

#### Technical data of type ZR3

Size	Spider GS <sup>1)</sup> torque T <sub>KN</sub> [Nm]		Moment of inertia [10 <sup>-3</sup> kgm <sup>2</sup> ]			Static torsion spring stiffness [Nm/rad]
	98 ShA	64 ShD	Hub <sup>2)</sup>	ZR hub	Pipe/meter	
14	12.5	16.0	0.00362	0.00238	0.088	858
19	21.0	26.0	0.02002	0.01304	0.329	3243.6
24	60.0	75.0	0.07625	0.04481	0.673	6631.8
28	160	200	0.17629	0.10950	1.199	11814.1
38	325	405	0.50385	0.2572	2.972	29290.4
42	450	560	1.12166	0.5523	4.560	44929.7
48	525	655	1.87044	1.1834	9.251	91158.2

<sup>1)</sup> For selections see page 22 et seqq/other spiders see page 123 and following

<sup>2)</sup> With d<sub>max.</sub>

<sup>3)</sup> Torsion spring stiffness with a length of 1 m of intermediate pipe with L<sub>pipe</sub> = L<sub>ZR</sub> - 2 • L

For inquiries and orders please specify the shaft distance dimension L<sub>R</sub> along with the maximum speed to review the critical bending speed. See diagramme on page 127.

The intermediate pipe can be combined with other hub designs, but in that case it can no longer be radially disassembled. Please specify the shaft distance dimension required in your order.

With vertical application a support washer has to be used (please specify in your order).

Insertion dimension of shaft l<sub>3</sub>, to make sure that the coupling can be assembled/disassembled radially.

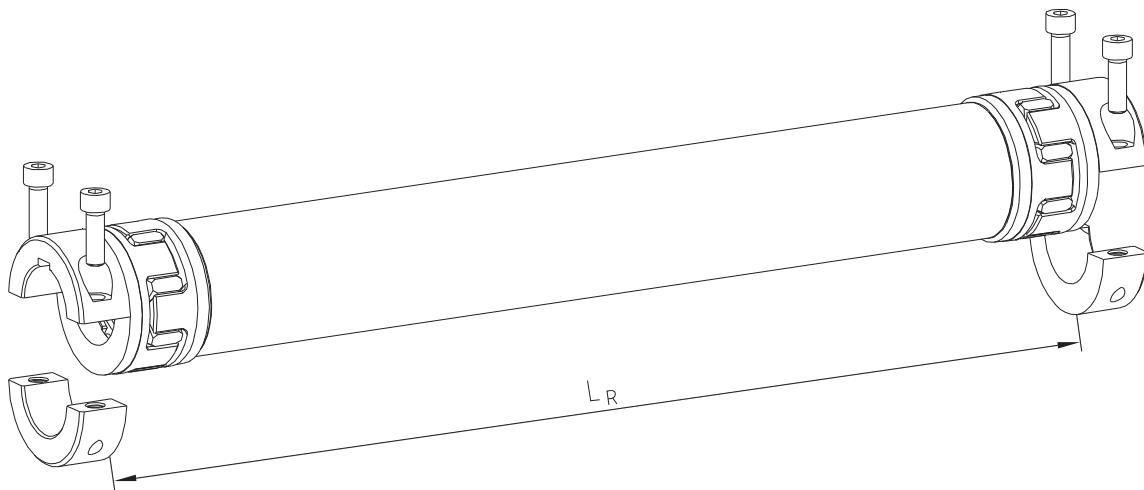
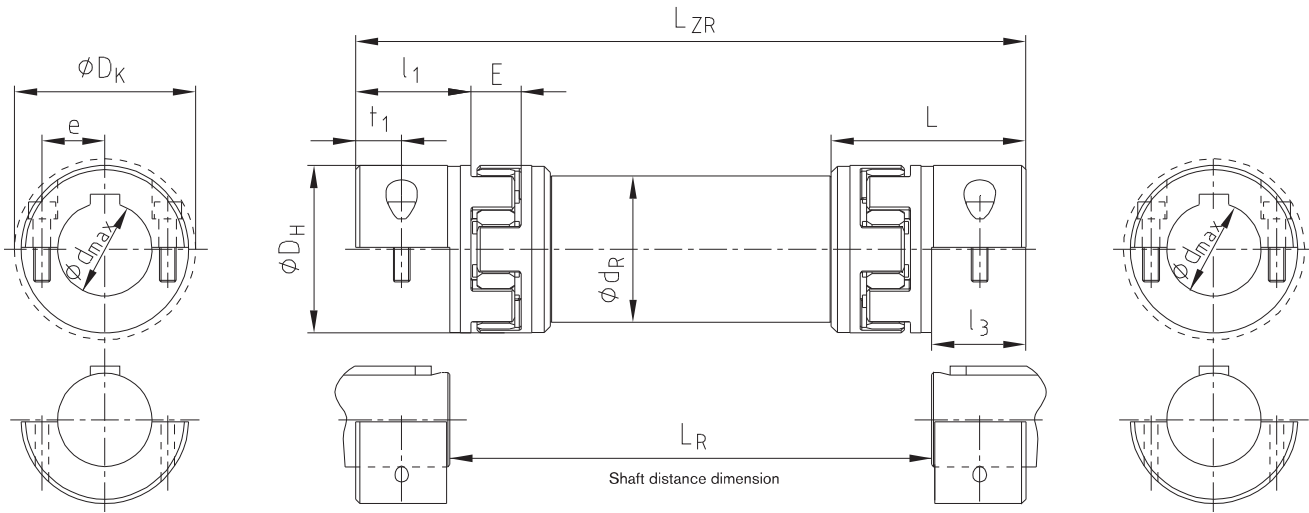
Straightness/concentricity of pipes according to DIN EN 755-1.

#### Review of shaft-hub-connection: Friction torques T<sub>R</sub> [Nm] for hub design 7.5

Size	Ø5	Ø6	Ø8	Ø10	Ø11	Ø14	Ø15	Ø16	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø46	Ø48	Ø50	Ø55
14	4.6	5.5	7.4	9.2	10.1	12.9	13.8																			
19			17	21	23	30	32	34	38	40	42															
24				21	23	30	32	34	38	40	42	47	51	53	59											
28						54	58	62	70	74	78	86	93	97	109	117	124	136	148							
38									70	74	78	86	93	97	109	117	124	136	148	156	163	175				
42												136	149	155	174	186	198	217	235	248	260	279	285	297	310	
48												199	217	226	253	271	290	317	344	362	380	407	416	434	452	498

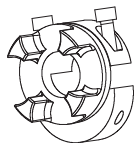
Ordering  
example:

ROTEX® GS 24	ZR3	1200 mm	98 ShA-GS	7.5 - Ø24		7.5 - Ø24	
Coupling size	Type	Shaft distance dimension (L <sub>R</sub> )	Spider hardness	Hub design	Finish bore	Hub design	Finish bore



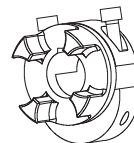
## Types of hubs

Type 7.5



Clamping hub type DH without feather keyway for double-cardanic connections

Type 7.6



Clamping hub type DH with feather keyway for double-cardanic connections