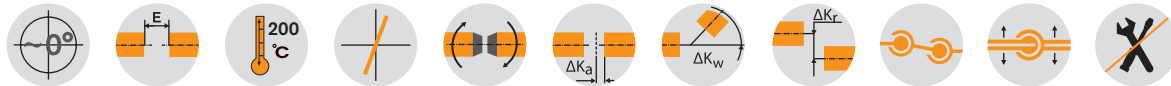


Material of intermediate pipe aluminium



TOOLFLEX® type ZR / shell clamping hubs Hub material aluminium/bellow material stainless steel

Size	Finish bore		Dimensions [mm]												
	d _{min.}	d _{max.}	General										Cap screws DIN 912		
			D _H	L	l ₃	L _R		L _{ZR} =L _R +2•l ₃		d _R	D _K	t ₁	e	M	T _A [Nm]
min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
20	8	20	40	40	12,5	80	2975	105	3000	40	41,2	5,5	14,5	M4	5
30	10	28	55	58,5	17,0	114	3466	148	3500	50	58,0	7,5	19	M6	15
38	12	38	65	61	21,0	129	3958	171	4000	60	72,6	9,5	25	M8	40
45	14	45	83	78,5	25,0	149	3950	199	4000	80	89,0	11,0	30	M10	70

Technical data of TOOLFLEX® ZR

Size	Torque of bellow T _{KN} [Nm] ¹⁾	Moment of inertia [10 ⁻³ kgm ²]		Static torsion spring stiffness [Nm ² /rad]
		Z _R -hub ²⁾	Pipe/meter	
20	15	0,024378	0,329	1935
30	35	0,121256	0,673	3800
38	65	0,253162	1,199	7240
45	170	0,961451	4,560	23183

¹⁾ For selection see page 18 et seqq.

²⁾ With d_{max.}

³⁾ Torsion spring stiffness with a length of 1 m of intermediate pipe with L_{pipe} = L_{ZR} - 2 • L

With inquiries and orders please specify the shaft distance dimension L_R along with the maximum speed to review the critical bending speed.

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

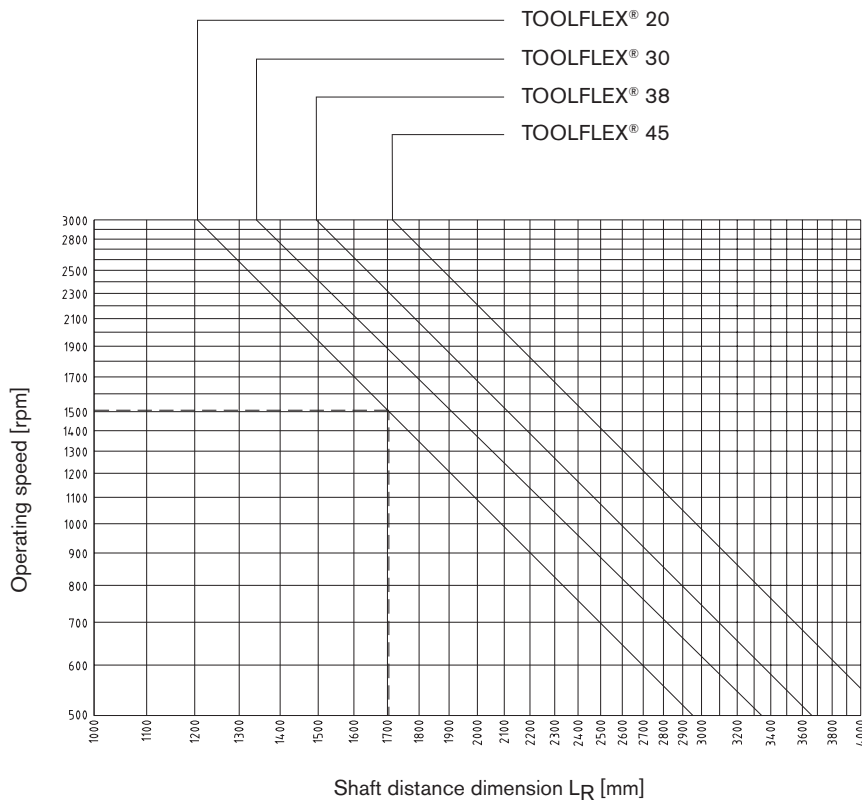
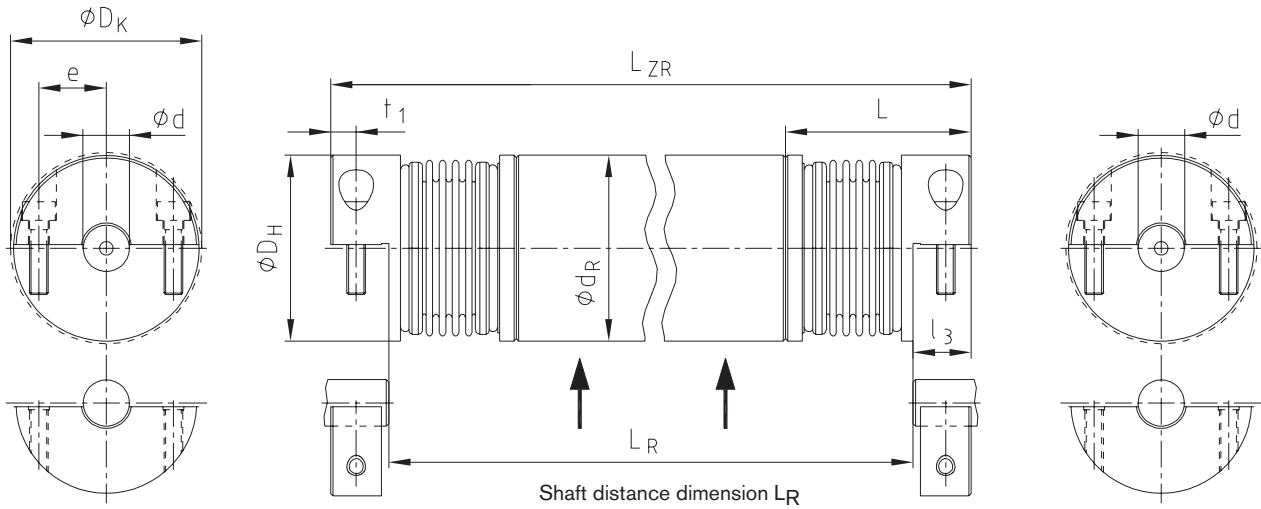
Review of shaft-hub-connection: Friction torques for hub type 2.5 for Ød1/Ød2

Size	Ø8	Ø9	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø18	Ø19	Ø20	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	
20	12,5	14,1	15,7	17,2	18,8	21,9	23,5	25,1	28,2	29,8	31,3											
30			31,8	35,0	38,2	44,5	47,7	50,9	57,3	60,4	63,6	76,3	79,5	89,1								
38					74,9	87,4	93,7	99,9	112,4	118,6	124,9	149,9	156,1	174,8	187,3	199,8	218,5	237,3				
45						123,4	132,2	141,0	158,6	167,4	176,2	211,5	220,3	246,7	264,4	282,0	308,4	334,9	352,5	370,1	396,5	

Ordering example:

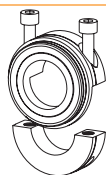
TOOLFLEX® 30	ZR	1200 mm	7.5 - Ø24		7.6 - Ø24	
Size and type of coupling	Type	Shaft distance dimension (L _R)	Hub type	Finish bore	Hub type	Finish bore

TOOLFLEX® ZR



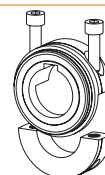
Hub types

Type 7.5



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

Type 7.6



Clamping hub type DH with feather keyway for double-cardanic connection (on request)

ROTEX® GS

TOOLFLEX®

RADEX®-NC

COUNTEX®

Backlash-free servo couplings