Properties of gear couplings

		
Product	**BoWex®**	**GEARex®**
Type	Curved-tooth gear coupling®	All-steel gear coupling
Features		
AGMA		●
Torsionally stiff	●	●
Damping vibrations	HEW Compact	
Maintenance-free	●	
Axial plug-in	●	
Compensating for misalignment	●	●
Fail-safe		●
Shear type	●	
Electrical insulation	●	O
Special features		
Variation	very high extensive basic programme available from stock while customised solutions can be realized	average extensive basic programme available from stock while customised solutions can be realized
Applications / core industries	pump drives, general engineering & hydraulics, food industry, …	heavy engineering transport, logistics, cement industry, …
Torque range T_{KN} [Nm]		
Max.	2,500	2,750,000
Speed range n [rpm] *		
Max.	14,000	8,500
Hub materials available		
Nylon	●	
Quality steel (C45)	Size 65 - 125	up to size 85
Alloyed Q & T steel (42CrMo4V)		from size 90
Powder metal steel » subject to mould	Size 14 - 65	
Stainless steel	●	
Other special materials possible	●	●
Corrosion-protected types	O	O
Sleeve (standard and special)		
Material	polyamide, polyamide with carbon fibre share	–
natural rubber	highly flexible	–
Temperature range [°C] min./max.		
Standard	-25/+100	-20/+80
Special	-50/+120	-40/+120

● ≈ Standard
O ≈ On request
* ≈ Depending on size

In KTR's Power Transmission Center the performance of our products is subjected to testing. Great emphasis is put on quality assurance.

GEAR COUPLINGS
TYPES AND OPERATING DESCRIPTION

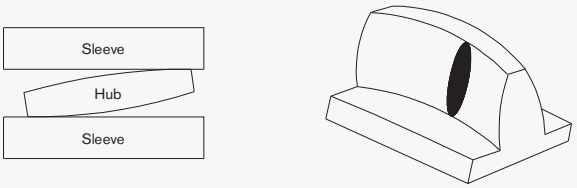
Product finder of gear couplings

		
Product	BoWex®	GEARex®
Type	Curved-tooth gear coupling*	All-steel gear coupling
Geometries		
Design	compact	short/compact
Mass moment of inertia	low	average
Shaft distance dimension	very low	very low
Types (extract)		
Shiftable coupling type	SD, SD-1, SD-D, SD-D3	SD
Flange type	-	FA, FB, FAB, FH, FR
Cover type	-	DA, DB, DAB, DH, DR
Suitable for horizontal assembly	Standard	Standard
Suitable for vertical assembly	Standard	VD
Sleeve can be disassembled radially » with no need of displacing driving/driven side	GT	–
Intermediate shaft types » bridging larger shaft distances	ZR	FH, DH
Single-cardanic	HEW Compact	FR, DR
Double-cardanic » compensating for big displacements » lower restoring forces	Standard	Standard
Certifications/type examinations		
ATEX	●	●
DNV/GL	●	●
Bureau Veritas	●	
ABS		●
GOST R/GOST TR	●	
Curved-tooth gear principle	●	●

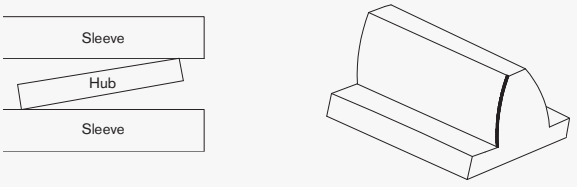
● ≈ Standard

Details on spline

Hub with crowned spline (BoWex® and GEARex®)



Hub with spur toothing



Based on the operating principle of the renowned crowned gear, edge pressure in the spline is avoided with angular and radial displacements.

BoWex®:
The smooth and hard surface of the BoWex® sleeve (crystalline structure) and the high thermal stability and resistance to lubricants, fuels, hydraulic liquids, solvents, etc. make polyamide an ideal material for components stressed by sliding, particularly for coupling manufacture.

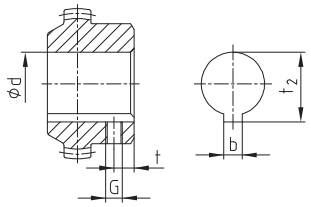
GEARex®:
In order to ensure regular and controlled lubrication in assembled condition, two connections for hydraulics are arranged opposite to each other radially on each coupling sleeve. Accordingly a complete GEARex® coupling has four connections being offset to each other by 90°.

Technical data

Power, torque and speed							
Type and size		Power P [kW] / n [rpm]		Torque [Nm]			Max. speed [rpm]
		Rated	Max.	T_{KN}	$T_{K\,max.}$	T_{KW}	
Type plug-in coupling/ junior M	junior 14 / M-14	0.0005	0.010	5	10	2.5	
	junior 19 / M-19	0.0008	0.0017	8	16	4	6000
	junior 24 / M-24	0.0013	0.0025	12	24	6	
Type M I AS Spec.-I SG SSR	14	0.0010	0.003	10	30	5	14000
	19	0.0017	0.005	16	48	8	11800
	24	0.0021	0.006	20	60	10	10600
	28	0.0047	0.014	45	135	23	8500
	32	0.0063	0.019	60	180	30	7500
	38	0.0084	0.025	80	240	40	6700
	42	0.010	0.031	100	300	50	6000
	45 / 48	0.015	0.044	140	420	70	5600
	65	0.040	0.119	380	1140	190	4000
	80	0.073	0.22	700	2100	350	3150
	100	0.13	0.38	1200	3600	600	3000
	125	0.26	0.78	2500	7500	1250	2120
Type M...C GT	14	0.0015	0.0047	15	45	7.5	14000
	19	0.0025	0.0075	24	72	12	11800
	24	0.003	0.009	30	90	15	10600
	28	0.007	0.022	70	210	35	8500
	32	0.009	0.028	90	270	45	7500
	38	0.013	0.038	120	360	60	6700
	48	0.021	0.063	200	600	100	5600
	65	0.058	0.18	560	1680	280	4000
	80	0.105	0.311	1000	3000	500	3150
Type HEW Compact	T50 Sh	0.0236	0.0471	200	400	50	
	42-130 T65 Sh	0.0283	0.0565	270	540	68	7300
	T70 Sh	0.0330	0.0660	320	640	80	
	T50 Sh	0.0628	0.1257	550	1100	138	5500
	65-180 T65 Sh	0.0785	0.1571	740	1500	185	
	T70 Sh	0.0890	0.1780	860	1700	215	5500
	T50 Sh	0.1414	0.2827	1250	2500	313	
	80-225 T65 Sh	0.1728	0.3455	1600	3200	400	4400
	T70 Sh	0.2042	0.4084	1900	3800	475	
	T50 Sh	0.3141	0.6283	2750	5500	688	
	100-305 T65 Sh	0.4084	0.8168	3900	7800	975	3200
	T70 Sh	0.4712	0.9424	4500	9000	1125	
	T50 Sh	0.6283	1.2565	5500	11000	1375	
	125-365 T65 Sh	0.7853	1.5707	7500	15000	1875	2900
	T70 Sh	0.8901	1.7801	8400	16800	2100	

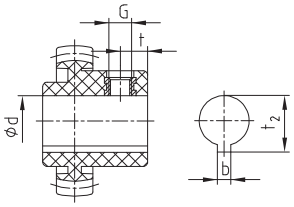
Setscrews

Thread dimensions for setscrews, BoWex® coupling hubs with cylindrical bore.



Position of the setscrew BoWex® M-14 to M-24 opposite the keyway

BoWex® M-28 to I-125 on the keyway



Position of thread with BoWex® junior plug-in coupling and junior M coupling

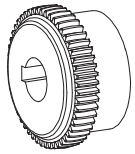
BoWex® coupling hubs							
Size Dimensions	14 19 24	28 32 38	42 45 48	65	80	100	125
Thread G	M5	M8		M10	M10	M12	M16
Distance t	6	10		15 [1] 20	20	30	40
Tightening torque T_A [Nm]	2	10		17	17	40	80

BoWex® junior coupling hubs			
Size Dimensions	14	19	24
Thread G	M5	M5	M5
Hub 1b - Distance t	6	6	6
Plug-in sleeve 2b - Distance t	8	10	10
Tightening torque T_A [Nm]	1.4	1.4	1.4

[1] Length of hub 55 mm t = 15 mm, 70 mm t = 20 mm

BoWex®
Curved-tooth gear coupling®

Types of hubs



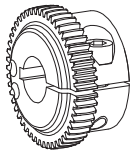
Type 1.0 hub
with feather keyway and setscrew

Positive-locking power transmission, permissible torque depending on the permissible surface pressure. Not suitable for backlash-free power transmission with heavily reversing operation.

Type 1.1 hub
without feather keyway, with setscrew

Non-positive torque transmission for crimp connections and adhesive bonds. (No ATEX approval)

Type 1.3 hub
with spline bore (see page 107)



Type 2.0 clamping hub
single slot without feather keyway

Frictionally engaged, backlash-free shaft-hub-connection. Transmittable torques depending on bore diameter.

Type 2.1 clamping hub
single slot with feather keyway

Positive-locking power transmission with additional friction fit. The friction fit avoids or reduces reverse backlash. Surface pressure of the keyway connection is reduced.

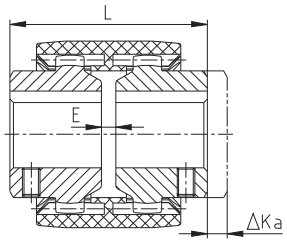
Type 2.3 clamping hub
with spline bore (see page 107)

Other hub types on request.

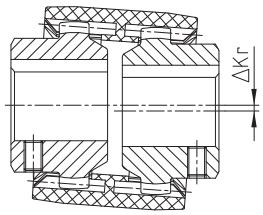
Displacements

BoWex® couplings are double-cardanic compensating for axial, radial and angular shaft displacements in addition to transmitting the power so that damage on the driving or driven machine is prevented.

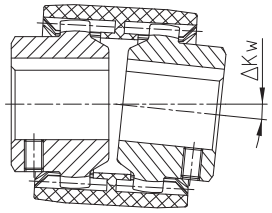
Axial displacement



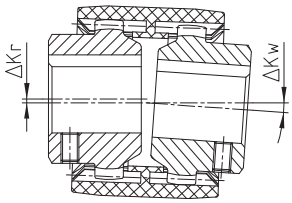
Radial displacement



Angular displacement



Radial and angular displacement



Displacements – type junior couplings						
BoWex® size	Type junior plug-in coupling			Type junior M		
	14	19	24	14	19	24
Max. axial displacement ΔK_a [mm]	± 1	± 1	± 1	± 1	± 1	± 1
Max. radial displacement with n=1500 rpm ΔK_r [mm]	± 0.1	± 0.1	± 0.1	± 0.3	± 0.3	± 0.4
Max. radial displacement with n=3000 rpm ΔK_r [mm]	± 0.1	± 0.1	± 0.1	± 0.3	± 0.3	± 0.4
Max. angular displacement with n=1500 rpm ΔK_w [degree]	± 1.0	± 1.0	± 0.9	± 1.0	± 1.0	± 0.9
Max. angular displacement with n=3000 rpm ΔK_w [degree]	± 0.7	± 0.7	± 0.6	± 0.7	± 0.7	± 0.6

Displacements – type M, M..C, I, AS, Spec.-I, SG and SSR												
BoWex® size	14	19	24	28	32	38	42	48	65	80	100	125
Max. axial displacement ΔK_a [mm]	± 1	± 1	± 1	± 1	± 1	± 1	± 1	± 1	± 1	± 1	± 1	± 1
Max. radial displacement with n=1500 rpm ΔK_r [mm]	± 0.30	± 0.30	± 0.35	± 0.35	± 0.35	± 0.40	± 0.40	± 0.40	± 0.45	± 0.45	± 0.45	± 0.45
Max. radial displacement with n=3000 rpm ΔK_r [mm]	± 0.20	± 0.20	± 0.23	± 0.23	± 0.23	± 0.25	± 0.25	± 0.25	± 0.28	± 0.28	± 0.28	± 0.28
Max. angular displacement with n=1500 rpm ΔK_w [degree]	± 1.0	± 1.0	± 0.9	± 0.9	± 0.9	± 0.9	± 0.9	± 0.9	± 0.7	± 0.6	± 0.6	± 0.4
Max. angular displacement with n=3000 rpm ΔK_w [degree]	± 0.7	± 0.7	± 0.6	± 0.6	± 0.6	± 0.6	± 0.6	± 0.6	± 0.5	± 0.4	± 0.4	± 0.3

	Displacements – type GT				Displacements – type HEW Compact													
BoWex® size	28	38	48	65	42-130			65-180			80-225			100-305			125-365	
					T50	T65	T70	T50	T65	T70	T50	T65	T70	T50	T65	T70	T40	T52	T65
Max. axial displacement ΔK_a [mm]	± 1	± 1	± 1	± 1	± 2			± 2			± 2			± 2			± 2		
Max. radial displacement with n=1500 rpm ΔK_r [mm]	± 1	± 1	± 1.4	± 1.4	± 1.1	± 1	± 0.5	± 1.6	± 1.5	± 0.7	± 1.8	± 1.7	± 2.2	± 2.2	± 2	± 1	± 2.5	± 2.3	± 1.1
Max. radial displacement with n=3000 rpm ΔK_r [mm]	± 0.6	± 0.6	± 1	± 1	± 0.55	± 0.5	± 0.25	± 0.8	± 0.75	± 0.35	± 0.9	± 0.85	± 1.1	± 1.1	± 1	± 0.5	± 1.25	± 1.15	± 0.55
Max. angular displacement with n=1500 rpm ΔK_w [degree]	± 1	± 1	± 0.9	± 0.9	± 1	± 0.75	± 0.5	± 1	± 0.75	± 0.5	± 1	± 0.75	± 1	± 1	± 0.75	± 0.5	± 1	± 0.75	± 0.5
Max. angular displacement with n=3000 rpm ΔK_w [degree]	± 0.7	± 0.7	± 0.6	± 0.6	± 0.5	± 0.4	± 0.25	± 0.5	± 0.4	± 0.25	± 0.5	± 0.4	± 0.25	± 0.5	± 0.25	± 0.25	± 0.5	± 0.4	± 0.25

The permissible displacement figures of the BoWex® couplings specified are general standard values taking into account the load of the coupling up to the rated torque T_{KN} of the coupling.
With different operating conditions please order our data sheet for displacements of BoWex® KTR-N 20140.
The displacement figures may only be used one by one, if they appear simultaneously, they must be limited in proportion. Care should be taken to maintain the distance dimension E accurately in order to allow for axial clearance of the coupling while in operation. Detailed mounting instructions are shown on our homepage www.ktr.com.

BoWex®
Curved-tooth gear coupling®

For cylindrical bores, taper/inch bores see selection of standard IEC motors

Stock programme of cylindrical finish bores [mm] H7 feather keyway acc. to DIN 6885 sheet 1 [JS9] and setscrew

BoWex® Size	un/pilot bored	Ø8	Ø10	Ø11	Ø12	Ø14	Ø15	Ø16	Ø17	Ø18	Ø19	Ø20	Ø22	Ø24	Ø25	Ø28	Ø30	Ø32	Ø35	Ø38	Ø40	Ø42	Ø45	Ø48	Ø50	Ø55	Ø60	Ø65	Ø70	Ø75
14	●■	●	●	●	●	●	●																							
19	●■		●	●	●	●	●	●	●	●	●■	●																		
24	●■		●	●	●	●■	●	●	●	●	●■	●■	●	●■	●															
28	●■				●	●	●	●	●	●	●	●	●	●	●	●■															
32	●■							●		●	●	●	●	●	●	●	●	●													
38	●■							●		●	●	●	●	●	●	●	●	●	●	●■											
42	●■									●	●	●	●	●	●	●	●	●	●	●	●	●									
48	●■											●			●	●	●	●	●	●	●	●■	●	●■							
65	●■																●■	●	●■	●	●■	●■	●■	●■	●■	●■	●■	●■			
80	●																						●		●	●	●	●	●	●	●

● Standard length ■ Standard lengthened

Stock programme of taper and inch bores

	Taper 1:5					Taper 1:8					Inch bores								
Code d +0,05 b JS9 t +0.2	**A-10** 9.85 2	**B-17** 16.85 3	**C-20** 19.85 4	**D-25** 24.85 5	**E-30** 29.85 6	**N/1** 9.7 2.4	**N1d** 14 3	**N/2** 17.28 3.2	**N/2a** 17.28 4	**N/3** 22 3.99	**Ta** 12.7 3.17 14.3	**DNC** 13.45 3.17 14.9	**Ed** 15.87 4.75 18.1	**A** 19.05 4.78 21.3	**G** 22.22 4.75 24.7	**F** 22.22 6.38 25.2	**Bs** 25.38 6.37 28.3	**Hs** 25.4 6.35 28.7	**K** 31.75 7.93 35.4
14	●					●							●						
19		●				●							●						
24	●	●				●		●	●		●			●	●				
28	●	●				●	●	●	●	●				●					
32		●																●	
38		●						●	●					●					
42		●		●				●	●	●				●		●	●		
48																			
65																			●

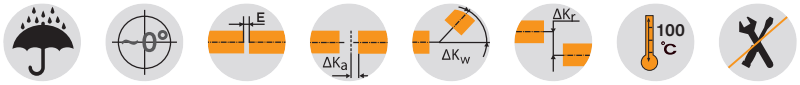
Other dimensions on request.

BoWex® couplings for standard IEC motors, protection class IP 54/IP 55

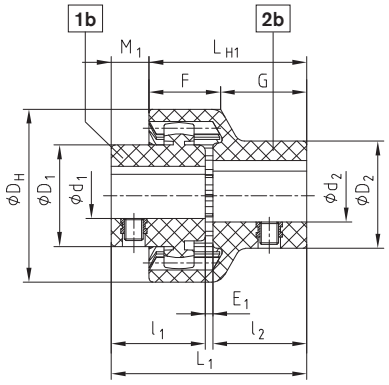
A. C. motor Size	Motor power with 50 Hz n = 3000 [rpm]			Motor power with 50 Hz n = 1500 [rpm]			Motor power with 50 Hz n = 1000 [rpm]			Cylindrical shaft ends d x l [mm]	
	kW	T [Nm]	BoWex® coupling	kW	T [Nm]	BoWex® coupling	kW	T [Nm]	BoWex® coupling	3000 ≤ 1500	
56	0.09	0.32		0.06	0.43		0.037	0.43		9 x 20	
	0.12	0.41		0.09	0.64		0.045	0.52			
63	0.18	0.62	14	0.12	0.88	14	0.06	0.72	14	11 x 23	
	0.25	0.86		0.18	1.3		0.09	1.1			
71	0.37	1.3		0.25	1.8		0.18	2.0		14 x 30	
	0.55	1.9		0.37	2.5		0.25	2.7			
80	0.75	2.5	19	0.55	3.7	19	0.37	3.9	19		
	1.1	3.7		0.75	5.1		0.55	5.8		19 x 40	
90 S	1.5	5.0	24	1.1	7.5	24	0.75	8.0	24	24 x 50	
90 L	2.2	7.4		1.5	10		1.1	12			
100 L	3	9.8	28	2.2	15	28	1.5	15	28	28 x 60	
				3	20						
112 M	4	13		4	27		2.2	22			
132 S	5.5	18	38	5.5	36	38	3	30	38	38 x 80	
	7.5	25									
132 M				7.5	49		4	40			
							5.5	55			
160 M	11	36	42	11	72	42	7.5	75	42	42 x 110	
	15	49									
160 L	18.5	60		15	98		11	108			
180 M	22	71	48	18.5	121	48			48	48 x 110	
180 L				22	144		15	148			
200 L	30	97		30	196		18.5	181		55 x 110	
	37	120					22	215			
225 S				37	240	65			65	55 x 110	60 x 140
225 M	45	145	65	45	292		30	293			
250 M	55	177		55	356		37	361		60 x 140	65 x 140
280 S	75	241		75	484		45	438			75 x 140
280 M	90	289		90	581	80	55	535	80		
315 S	110	353		110	707		75	727			
315 M	132	423		132	849		90	873			80 x 170
315 L	160	513	80	160	1030	100	110	1070	100	65 x 140	
	200	641		200	1290		132	1280			
							160	1550			
315	250	801		250	1610		200	1930	125		85 x 170
	315	1010	100	315	2020	125	250	2420			
355	355	1140		355	2280		315	3040	-	75 x 140	95 x 170
	400	1280	125	400	2560						

Torque T ≙ rated torque according to Siemens catalogue.

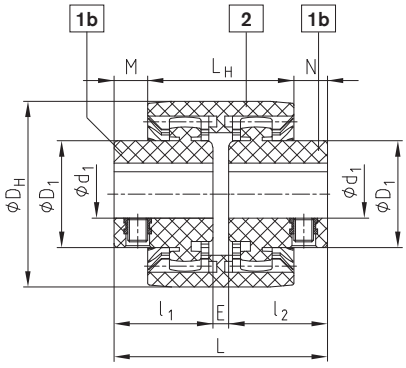
Plug-in coupling made of nylon (two-part and three-part)



Components



Type junior plug-in coupling (two-part)



Type junior M coupling (three-part)

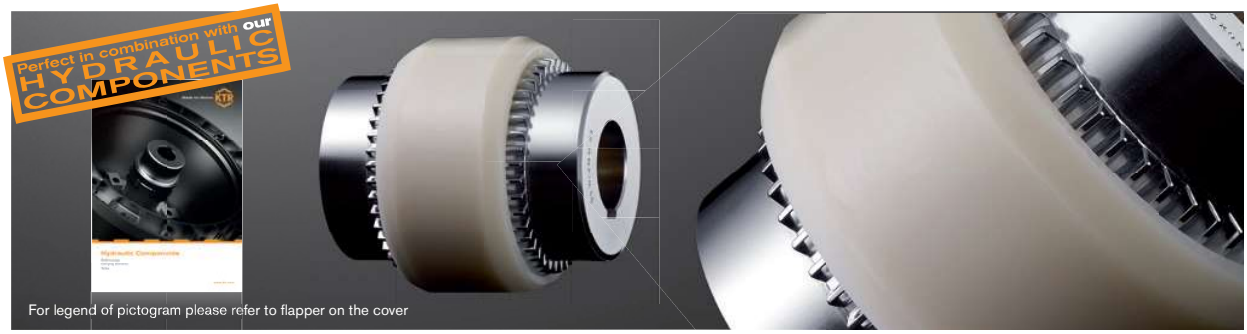
BoWex® junior plug-in coupling (two-part) and BoWex® junior M (three-part)																			
Size	Torque [Nm]		Finish bore				Dimensions [mm]												Max. speed [rpm]
			Hub Component 1b [1]		Plug-in sleeve Component 2b [1]		D_H	l_1, l_2	E_1	L_1	L_{H1}	M_1	F	G	E	L	L_H	M, N	
	T_{KN}	T_K max.	d_1 [1]	D_1	d_2 [1]	D_2													
14 M-14	5	10	Ø6, Ø7, Ø8, Ø9	22	Ø6, Ø7, Ø8	22	40	23	2	48	40	8	18.5	21.5	4	50	37	6.5	6000
			Ø10, Ø11	25	Ø10, Ø11	25													
			Ø12, Ø14	26	Ø12, Ø14	26													
19 M-19	8	16	Ø10, Ø11, Ø12, Ø14	27	Ø12, Ø14,	29	47	25	2	52	42	10	19.0	23.0	4	54	37	8.5	6000
			Ø15, Ø16	30	Ø15, Ø16														
			Ø19	32	Ø19	35													
24 M-24	12	24	Ø10, Ø11, Ø12	26	Ø14, Ø16	32	53	26	2	54	45	9	21.5	23.5	4	56	41	7.5	6000
			Ø14, Ø15, Ø16	32															
			Ø18, Ø19, Ø20	36	Ø19, Ø20	36													
			Ø24	38	Ø24	40													

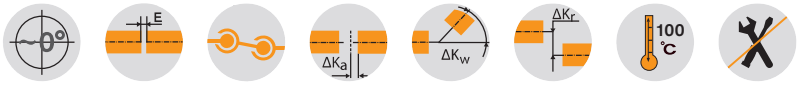
[1] Finish bore with tolerance +0.05/-0.1; feather keyway ±0.08

Ordering example:	BoWex® junior 19	d_1 Ø19	d_2 Ø14
	Coupling size two-part type or BoWex® junior M-19 three-part type	Finish bore	Finish bore

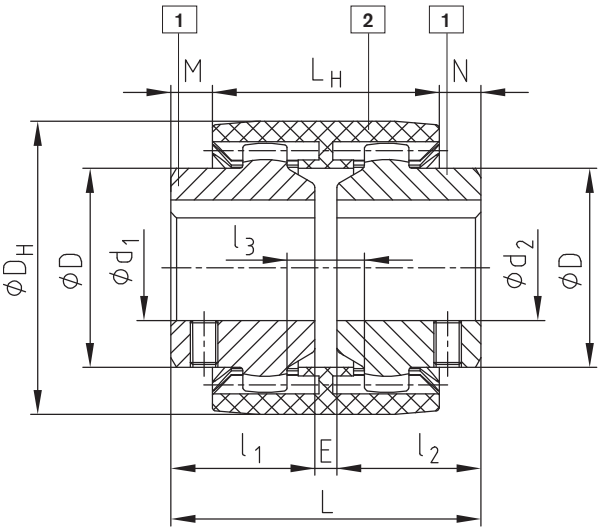
BoWex® M, I
Curved-tooth gear coupling®

Compact and maintenance-free

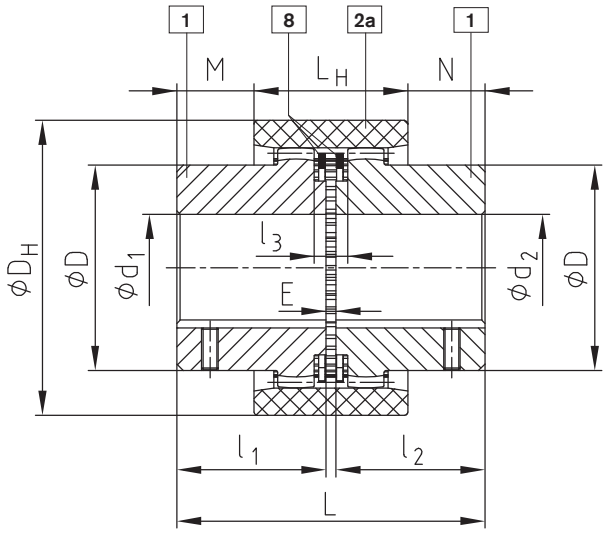




Components



Type M



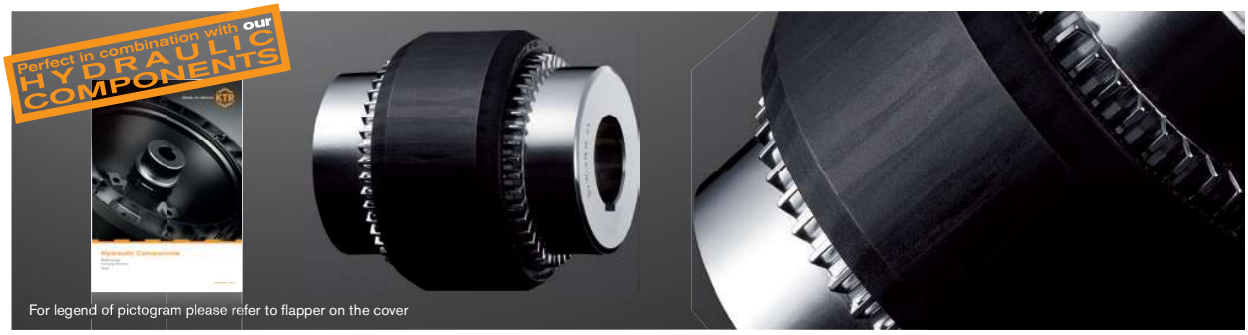
Type I

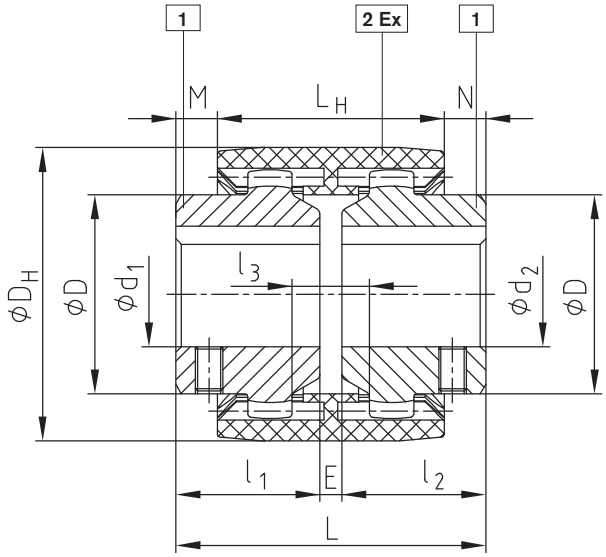
BoWex® type M, type I																							
Size	Torque [Nm]			Finish bore d1, d2		Dimensions [mm]											Weight with max. bore [kg]			Mass moment of inertia J with max. bore [kgcm²]		
	T_{KN}	$T_{K\ max.}$	T_{KW}	Pilot bored	Max.	l_1, l_2	E	L	L_H	M, N	l_3	D	D_H	Tip circle $ØD_Z$ hub	Number of teeth	Hub lengthened max. l_1, l_2	Sleeve	Hub	Total	Sleeve	Hub	Total
M-14	10	30	5	-	15	23	4	50	37	6.5	10	25	40	33	20	40	0.03	0.07	0.1	0.08	0.09	0.26
M-19	16	48	8	-	20	25	4	54	37	8.5	10	32	47	39	24	40	0.03	0.1	0.23	0.15	0.16	0.47
M-24	20	60	10	-	24	26	4	56	41	7.5	14	36	53	45	28	50	0.04	0.14	0.32	0.21	0.36	0.93
M-28	45	135	23	-	28	40	4	84	46	19	13	44	65	54	34	55	0.08	0.33	0.74	0.65	1.22	3.09
M-32	60	180	30	-	32	40	4	84	48	18	13	50	75	63	40	55	0.09	0.43	0.95	1.14	2.17	5.48
M-38	80	240	40	-	38	40	4	84	48	18	13	58	83	69	44	60	0.13	0.55	1.23	1.58	3.55	8.68
M-42	100	300	50	-	42	42	4	88	50	19	13	65	92	78	50	60	0.14	0.68	1.5	2.32	5.98	14.28
M-48	140	420	70	-	48	50	4	104	50	27	13	68	95	78	50	60	0.23	0.79	1.81	3.9	7.22	18.34
M-65	380	1140	190	21	65	55	4	114	68	23	16	96	132	110	42	70	0.55	1.9	4.35	21.2	31.8	84.8
I-80	700	2100	350	31	90	90	6	186	93	46.5	20	124	178	145	46	-	1.13	5.2	11.53	68.9	150.8	370.5
I-100	1200	3600	600	38	100	110	8	228	102	63	22	152	210	176	48	-	1.78	9.37	20.52	158.6	401.3	961.2
I-125	2500	7500	1250	45	125	140	10	290	134	78	30	192	270	225	54	-	3.88	19.44	42.76	562.9	1362.3	3287.5

Ordering example:	BoWex® M-28	d_1 Ø20	d_2 Ø28
	Size and type of coupling	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

BoWex® M...C
Curved-tooth gear coupling®

Compact and maintenance-free





Type M...C Ex

BoWex® Type M...C Ex

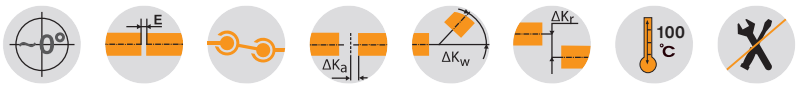
Size	Torque [Nm]			Finish bore d1, d2		Dimensions [mm]											Weight with max. bore [kg]			Mass moment of inertia J with max. bore [kgcm²]		
	T_{KN}	$T_{K\ max.}$	T_{KW}	Pilot bored	Max.	l_1, l_2	E	L	L_H	M, N	l_3	D	D_H	Tip circle $ØD_Z$ hub	Number of teeth	Hub lengthened max. l_1, l_2	Sleeve	Hub	Total	Sleeve	Hub	Total
M-14C	15	45	7.5	-	15	23	4	50	37	6.5	10	25	40	33	20	40	0.03	0.07	0.1	0.08	0.09	0.26
M-19C	24	72	12	-	20	25	4	54	37	8.5	10	32	47	39	24	40	0.03	0.1	0.23	0.15	0.16	0.47
M-24C	30	90	15	-	24	26	4	56	41	7.5	14	36	53	45	28	50	0.04	0.14	0.32	0.21	0.36	0.93
M-28C	70	210	35	-	28	40	4	84	46	19	13	44	65	54	34	55	0.08	0.33	0.74	0.65	1.22	3.09
M-32C	90	270	45	-	32	40	4	84	48	18	13	50	75	63	40	55	0.09	0.43	0.95	1.14	2.17	5.48
M-38C	120	360	60	-	38	40	4	84	48	18	13	58	83	69	44	60	0.13	0.55	1.23	1.58	3.55	8.68
M-48C	200	600	100	-	48	50	4	104	50	27	13	68	95	78	50	60	0.23	0.79	1.81	3.9	7.22	18.34
M-65C	560	1680	280	21	65	55	4	114	68	23	16	96	132	110	42	70	0.55	1.9	4.35	21.2	31.8	84.8
M-80C	1000	3000	500	31	90	90	6	186	93	46.5	20	124	178	145	46	-	1.13	5.2	11.53	68.9	150.8	370.5

Ordering example:

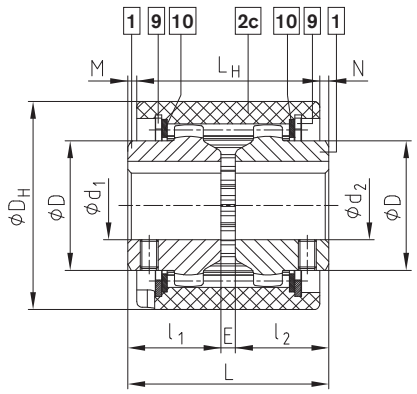
BoWex® M-28C	d_1 Ø20	d_2 Ø28
Size and type of coupling	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

BoWex® AS and Spec.-I
Curved-tooth gear coupling®

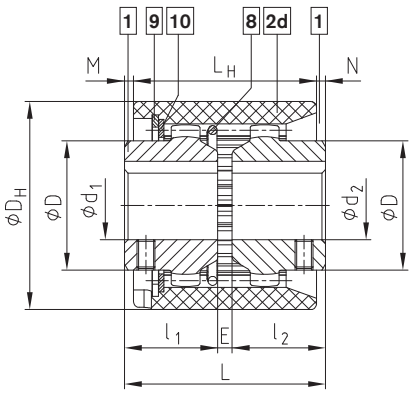
Compact and maintenance-free



Components



Type AS



Type Spec.-I

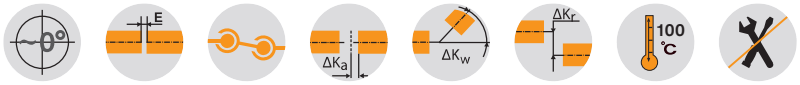
BoWex® Type AS and type Spec.-I																		
Size	Pilot bore		Finish bore d_1, d_2		Dimensions [mm]								Weight with max. bore [kg]			Mass moment of inertia J with max. bore [kgcm²]		
	Unbored	Pilot bored		Max.	l_1, l_2	E	L	L_H	M, N	D	D_H	Hub length. max. l_1, l_2	Sleeve	Hub	Total	Sleeve	Hub	Total
24	x	-	For finish bores see stock programme	24	26	4	56	51	2.5	36	58	50	0.11	0.14	0.39	0.38	0.36	1.10
28	x	-		28	40	4	84	56	14	44	70	55	0.16	0.33	0.82	1.54	1.22	3.98
32	x	-		32	40	4	84	58	13	50	84	55	0.21	0.43	1.07	2.75	2.17	7.09
45	x	-		45	42	4	88	60	14	65	100	60	0.27	0.63	1.53	5.49	5.66	16.81
65	-	21		65	55	4	114	84	15	96	140	70	0.84	2.10	5.00	29.83	43.96	117.8
80	-	31		90	90	6	186	93	46.5	124	178	-	1.30	5.20	11.70	83.20	150.8	384.8
100	-	38		100	110	8	228	102	63	152	210	-	2.05	9.40	20.80	184.4	401.3	987.0
125	-	45		125	140	10	290	134	78	192	270	-	4.32	19.44	43.10	620.0	1362.3	3344.6

For performance data see page 88.

Ordering example:	BoWex® 32 AS	d_1 Ø32	d_2 Ø32
	Size and type of coupling AS or Spec.-I	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

BoWex® SG, SSR and Spec.-I/CD
Curved-tooth gear coupling®

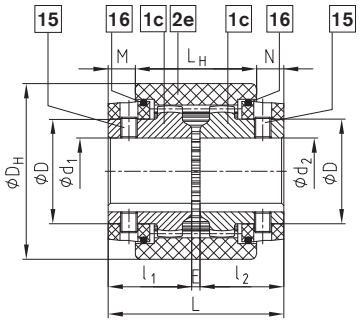
Type with dust protection



BoWex® Type SG with dust protection circlips

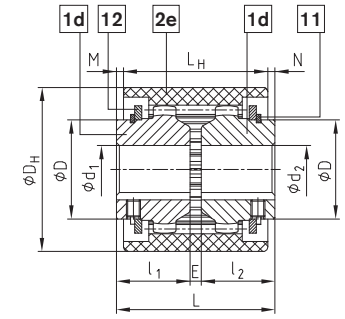
Size	Pilot bore		Finish bore		Dimensions [mm]							
	Unbored	Pilot bored	Min.	Max.	l_1, l_2	E	L	L_H	M, N	D	D_H	Hub length. max. l_1, l_2
24 SG	x	-	10	24	36	4	76	51	12.5	36	58	50
28 SG	x	-	10	28	40	4	84	56	14	44	70	55
32 SG	x	-	12	32	40	4	84	58	13	50	84	55
45 SG	x	-	20	45	42	4	88	60	14	65	100	60
65 SG	-	21	30	65	70	4	144	84	30	96	140	-
80 SG	-	31	35	90	90	6	186	93	46.5	122	175	-
100 SG	-	38	40	100	110	8	228	102	63	150	210	-
125 SG	-	45	50	125	140	10	290	134	78	190	270	-

Setscrews with finish bored hubs only.



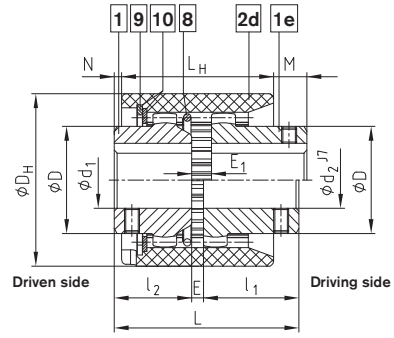
BoWex® Type SSR with Seeger circlips

Size	Pilot bore		Finish bore		Dimensions [mm]							
	Unbored	Pilot bored	Min.	Max.	l_1, l_2	E	L	L_H	M, N	D	D_H	Hub length. max. l_1, l_2
24 SSR	x	-	10	22	26	4	56	51	2.5	35	58	50
28 SSR	x	-	10	26	40	4	84	56	14	42	70	55
32 SSR	x	-	12	30	40	4	84	58	13	48	84	55
45 SSR	x	-	20	42	42	4	88	60	14	63	100	60
65 SSR	-	21	30	65	55	4	114	84	15	95	140	70
80 SSR	-	31	35	90	90	6	186	93	46.5	120	175	-
100 SSR	-	38	40	100	110	8	228	102	63	150	210	-
125 SSR	-	45	50	125	140	10	290	134	78	190	270	-



BoWex® Type Spec.-I/CD

Size	Pilot bore		Finish bore		Dimensions [mm]										
	Un-bored	Pilot bored	Min.	Max.	L	L_1	L_H	E	E_1	l_2	l_1	D_H	D	M	N
24 CD	x	-	10	24	70	73.5	51	4	9.0	26	40	58	36	20	2.5
28 CD	x	-	10	28	94.5	98	56	4	8.5	40	50.5	70	44	28	14
32 CD	x	-	12	32	94.5	-	58	4	8.5	40	50.5	84	50	27	13
45 CD	x	-	20	45	101.5	-	60	4	8.5	42	55.5	100	65	32	14
65 CD	-	21	30	65	123	-	84	4	10	55	64	140	96	28.5	15
80 CD	-	31	35	90	179	-	93	6	13	90	83	178	124	44	46.5



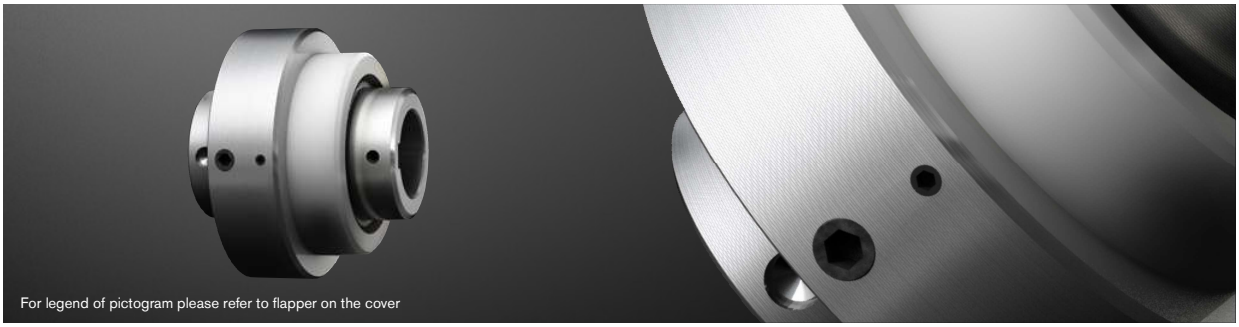
Please order dimension sheet for type Spec.-I/CDB with safety pins.
For performance data see page 88.

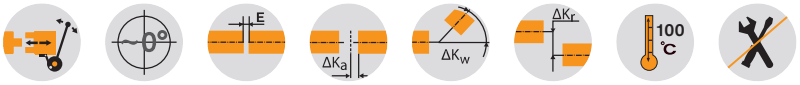
Ordering example:

BoWex® 45 SG	d_1 Ø22	d_2 Ø40
Size and type of coupling SG, SSR or Spec.-I/CD	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

BoWex® SD/SD-D
Curved-tooth gear coupling®

Shiftable coupling (at standstill)





BoWex® Type SD

Size	Pilot bore		Finish bore d_1, d_2			Dimensions [mm]												Weight with max. bore [kg]		Mass moment of inertia J with max. bore [kgcm²]		Shifting force [N]
	Un-bored	Pilot bored	d_1	d_1 max.	d_2 max.	E	l_1	l_2	L	L_H	l_3	M	W	N	D	D_H	D_A	Shifting hub with sleeve	Driving hub	Shifting hub with sleeve	Driving hub	
24 SD	x	-	For finish bores see stock programme on page 86	24	24	4	26	50	80	52	31	10	19	18	36	58	78	1.08	0.14	8.23	0.36	140
28 SD	x	-		28	28	4	40	55	99	57	33	21.5	21.5	20.5	44	70	88	1.50	0.33	15.62	1.22	180
32 SD	x	-		32	32	4	40	55	99	58	33	20.5	21.5	20.5	50	84	100	1.85	0.43	22.87	2.17	180
45 SD	x	-		45	45	4	42	60	106	63	37	21.5	22.5	21.5	65	100	125	2.56	0.68	46.07	5.66	250
				48			50		114			29.5							0.79			
65 SD	-	21		65	65	4	55	70	129	77	37	28	25	24	95	140	156	5.07	2.30	158.99	43.96	350
80 SD	-	31		90	90	6	90	90	186	96	47	56	35	34	124	175	195	10.60	5.20	523.7	150.8	350
100 SD	-	38		100	100	8	110	110	228	113	55	72	43	43	152	210	235	18.87	9.37	1350	401.3	400
125 SD	-	45		125	125	10	140	140	290	149	70	89	52	52	192	270	298	40.40	9.44	4919	1362.3	450

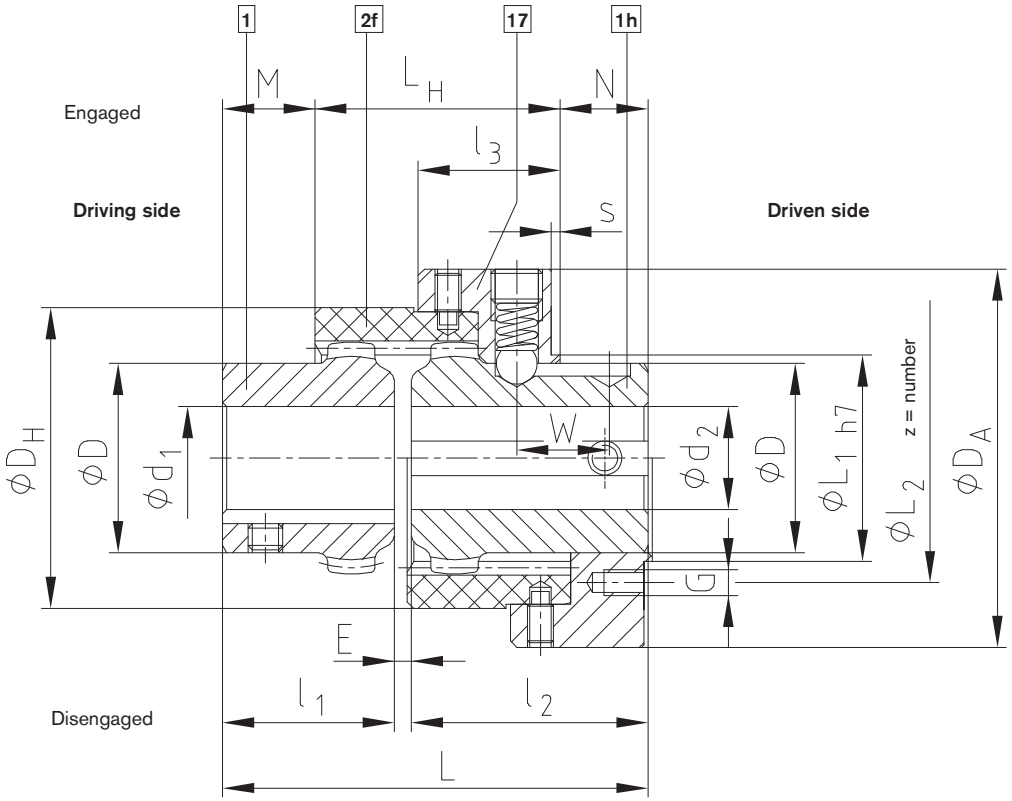
Connection dimensions of BoWex® SD shifting ring (comp. 17) for mounting of: slip ring SD1 (s. catalogue on p. 89), shifting disk etc.

Size	Dimensions [mm]			
	L_1	L_2	z x G	s
24 SD	48	58	4 x M6	2
28 SD	48	58	4 x M6	2
32 SD	64	75	4 x M6	2
45 SD	75	90	4 x M8	2
65 SD	100	114	4 x M8	2
80 SD	130	145	4 x M8	3
100 SD	180	196	6 x M10	4
125 SD	220	236	6 x M10	4

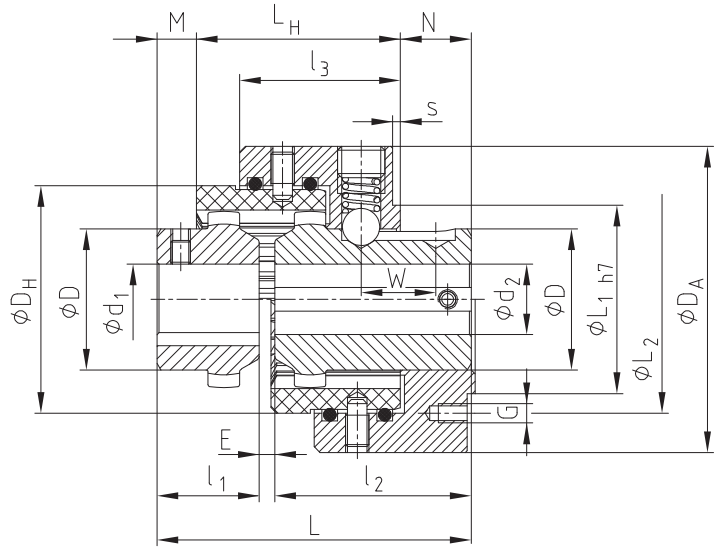
Performance data/torques see type M (on page 88), max. circumferential speed v = 20 m/s, referring to $ØD_A$
Other sizes on request

Ordering example:	BoWex® 32 SD	d_1 Ø32	d_2 Ø32
	Size and type of coupling	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

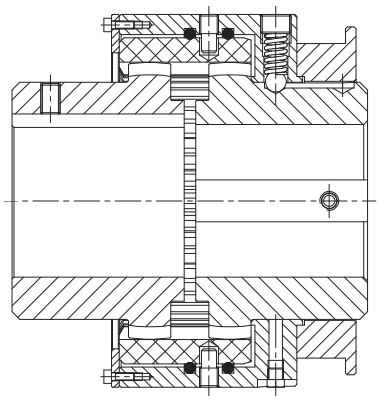
Components



BoWex® SD



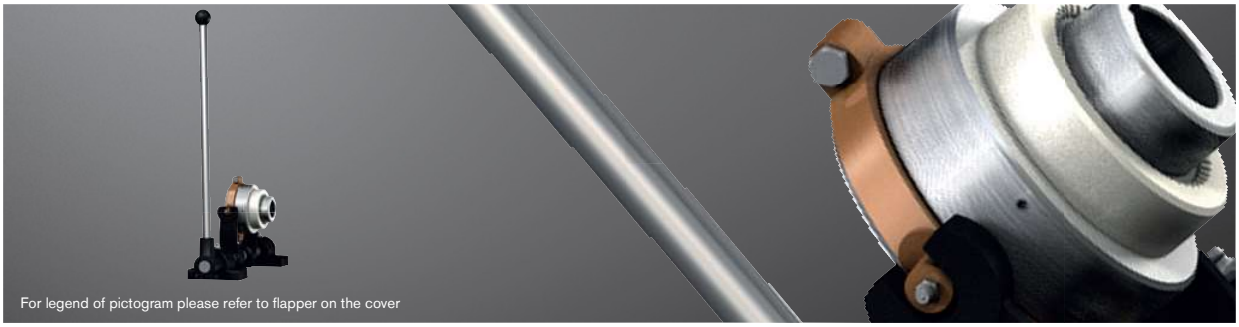
BoWex® SD-D

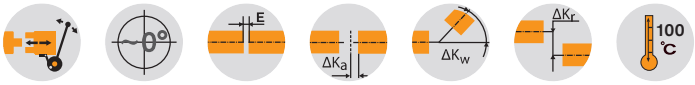


BoWex® SD-D3

BoWex® SD1
Curved-tooth gear coupling®

Shiftable coupling with shiftable linkage (at standstill)





BoWex® Type SD1 and slip ring

Size	Finish bore			Dimensions [mm]																	Shifting force [N]
	d_1	d_1 max.	d_2 max.	E	l_1	l_2	L	L_G	l_4	l_5	M	W	t	D	D_H	D_A	D_1	D_2 ±0.1 (keyway)	D_5	n ±0,1 (keyway)	
24 SD1	For finish bores see stock programme on page 86	24	24	4	26	50	80	67	11	46	10	19	16	36	58	78	45	70.5	78	12.5	140
28 SD1		28	28	4	40	55	99	72	11	48	21.5	21.5	16	44	70	88	45	70.5	78	12.5	180
32 SD1		32	32	4	40	55	99	78	13.5	53	20.5	21.5	21	50	84	100	60	89.5	100	17.5	180
45 SD1		45	45	4	42	60	106	84	14	58	21.5	22.5	22	65	100	125	70	112.5	125	18	250
		48			50		114				29.5										
65 SD1		65	65	4	55	70	129	103	16	61	26	25	25	96	140	156	96	130.5	145	20.5	350
80 SD1		90	90	6	90	90	186	124	18.5	75	56	35	29	124	175	195	125	164.5	182	25.5	350
100 SD1		100	100	8	110	110	228	152	28	94	72	43	39	152	210	235	174	210.5	230	30.5	400
125 SD1		125	125	10	140	140	290	193	30.5	114	89	52	44	192	270	298	214	250.5	275	35.5	450

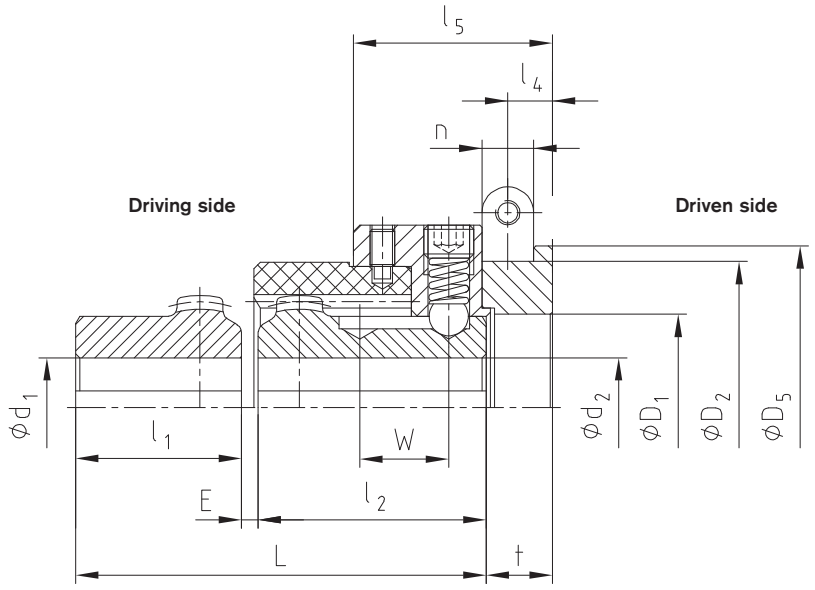
BoWex® Type SD1 - Shiftable linkage

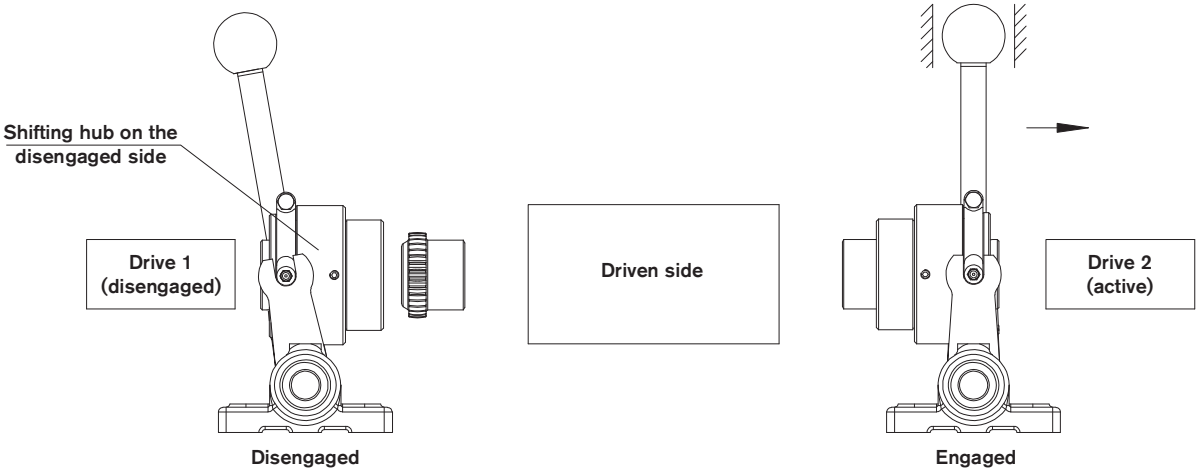
Size	Shiftable linkage size	Slip ring size	Dimensions [mm]															Dimensions with m_1 max.		
			a	b	c	d	d_3	d_4	e	F	g_1	L_2	L_3	m	m_1 min.	m_1 max.	A	B	m_3	m_4	m_5
24 SD1	1	1.1	110	50	18	20	11	16	30	70	55	320	400	75	180	190	90	114		55	16
28 SD1	1	1.1																			
32 SD1	2	2.2				25				97.5	60	430	450		240	270	111	151	20	80	34
45 SD1	3	3.3	140			30		20	40	120		490	600	100	280	310	140	180		90	44
65 SD1	3	4.4		60	25		13.5				70						170	210			
80 SD1	4	5.5				35			50	147.5		565	750		321	365	200	244		100	54
100 SD1	5	6.6	160			40		30	50 [1]	190	80	630	1085	120	365	410	250	300	30	110	62
125 SD1	5	7.7													-		300	350			

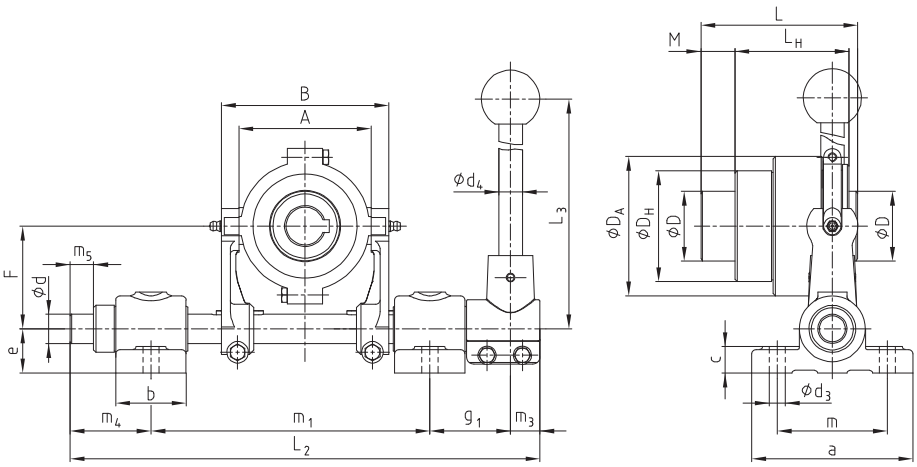
[1] = With a continuous base plate dimension „e" has to be increased by at least 10 mm. The brackets of the driving and driven side have to be adjusted accordingly.
Also available as type SD-D. Other sizes on request.

Performance data/torques see type M (on page 88), max. circumferential speed v = 20 m/s, referring to $ØD_A$

Ordering example:	BoWex® 65 SD1	d_1 Ø32	d_2 Ø32	4.4	3
	Size and type of coupling	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)		Slip ring Size	Shiftable linkage Size

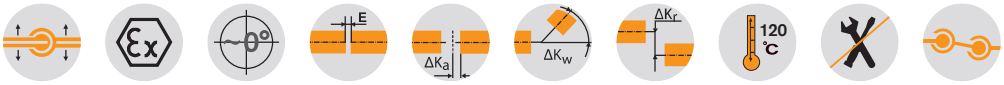

l5
l4
n
Driving side
Driven side
ϕd1
l1
W
ϕd2
ϕD1
ϕD2
ϕD5
E
l2
L
t

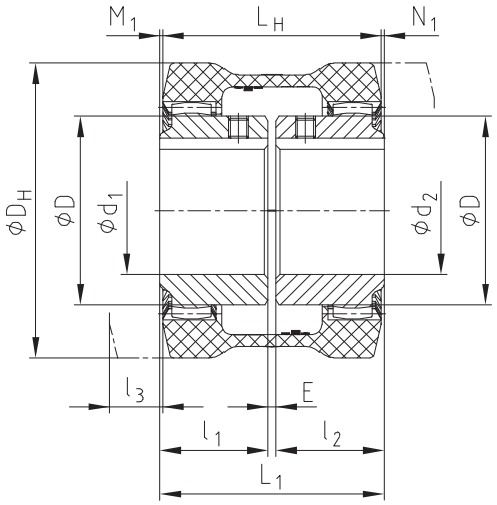

Shifting hub on the disengaged side
Drive 1 (disengaged)
Driven side
Drive 2 (active)
Disengaged
Engaged

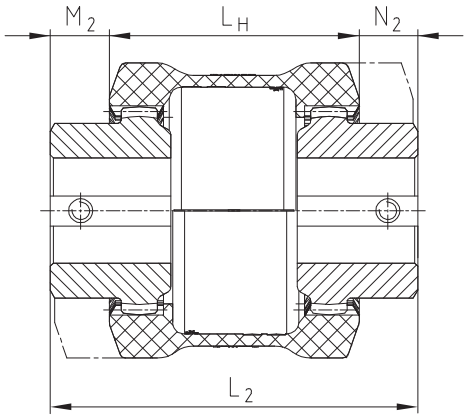

B
A
ϕd4
L3
F
ϕd
m5
e
b
m4
m1
g1
m3
L2
L
M
LH
ϕDA
ϕDH
ϕD
ϕD
c
ϕd3
m
a

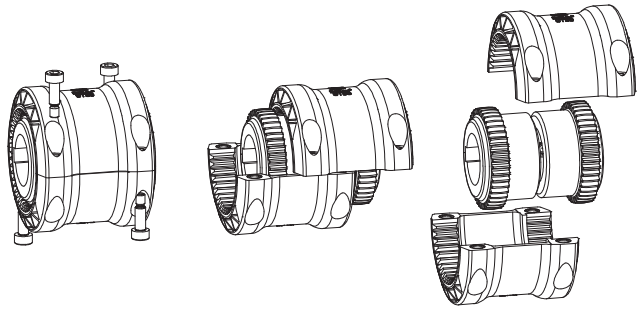
BoWex® GT
Curved-tooth gear coupling®

Split CFK sleeve for high power density









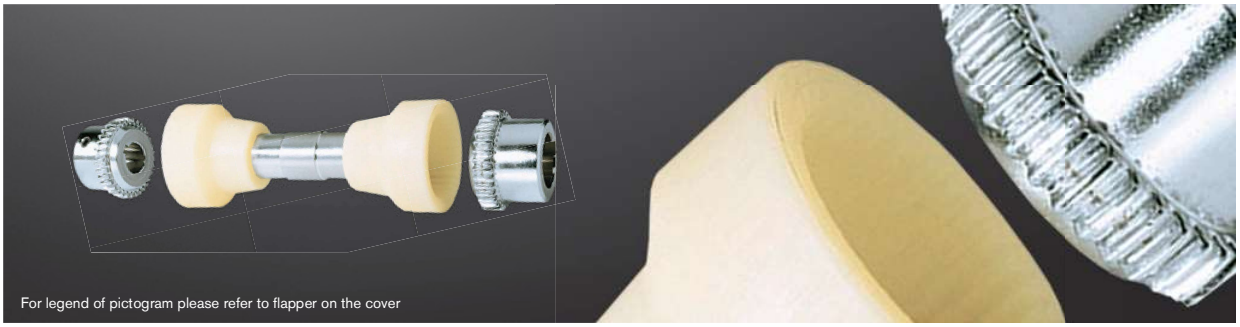
BoWex® Type GT with split sleeve																					
Size	Torque [Nm]			Finish bore $d_{max.}$		Dimensions [mm]										Weight with max. bore [kg]			Mass moment of inertia J with max. bore [kgcm²]		
	T_{KN}	$T_{K\ max.}$	T_{KW}	d_1	d_2	D	D_H	L_H	l_1	l_2	l_3	E	L_1	L_2	M_1, N_1	M_2, N_2	Sleeve	Hub	Total	Sleeve	Hub	Total
28	70	210	35	28	28	44	80	80	40	40	15	4	84	124	2	22	0.158	0.22	0.702	1.77	1.22	4.21
38	120	360	60	38	38	58	98	83	40	40	18	4	84	122	0.5	19.5	0.25	0.45	1.15	4.43	3.36	11.15
48	200	600	100	48	48	68	110	106	50	50	21	4	104	160	0	28	0.33	0.67	1.68	7.39	6.11	19.61
65	560	1680	280	65	65	96	150	111	55	55	27	4	114	160	1.5	24.5	0.69	1.54	3.77	28.9	31.80	92.5

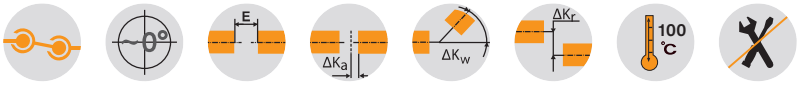
l_3 = Drop-out center dimension required

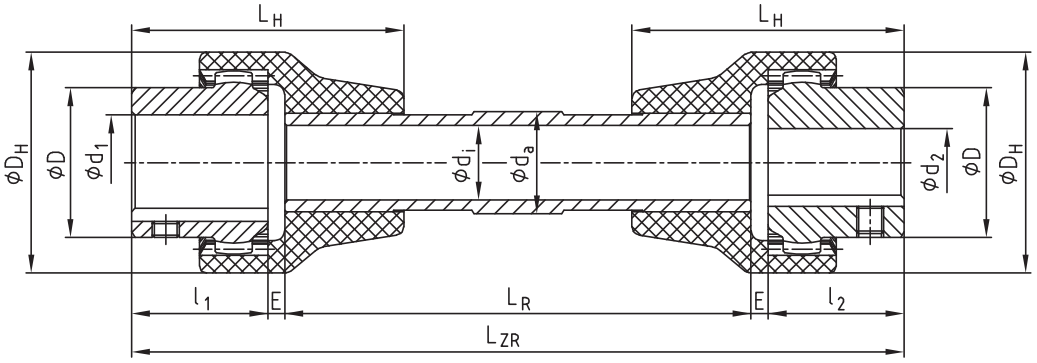
Ordering example:	BoWex® GT-28	d_1 Ø20	d_2 Ø28
	Size and type of coupling	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

BoWex® ZR
Curved-tooth gear coupling®

Bridging larger shaft distances

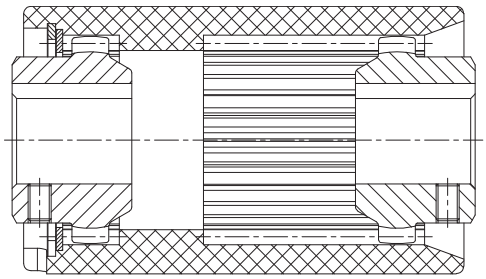






BoWex® Type ZR															
Size	Pilot bore	Finish bore	Dimensions [mm]										Torque [Nm]		
		d_1 max. d_2 max.	l_1, l_2	Hub length. max. l_1, l_2	L_H	E	L_{ZR} tot.	L_R	D	D_H	d_i	d_a	T_{KN}	$T_{K\ max.}$	T_{KW}
14	-	14	23	40	40	3	According to customer specification		25	40	21	25	10	20	5
28	-	28	40	55	60	3			44	66	30	26	45	90	23
42	-	42	42	60	85	3			65	95	40	50	100	200	50
48	-	48	50	60	85	3			68	95	40	50	140	280	70

BoWex® ZR couplings are available up to a length of 2000 mm for serial applications only ($n_{max.}$ = 1000 rpm)

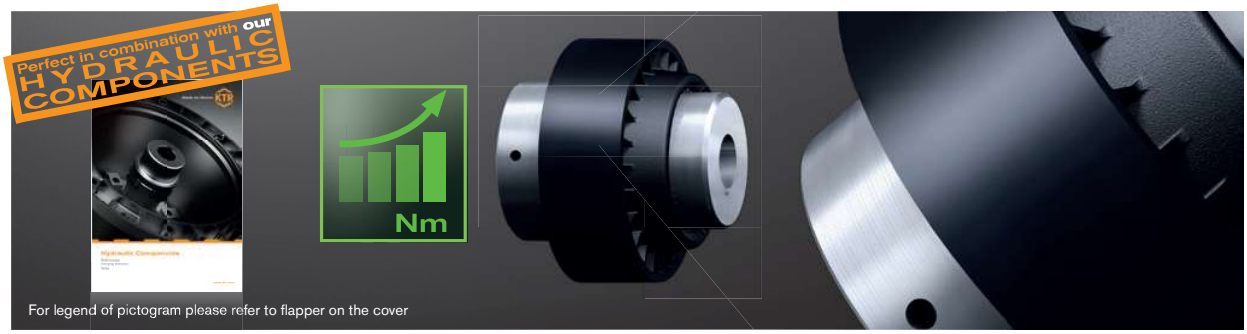


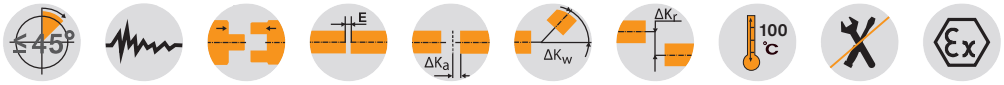
Type Spec.-I with a long PA-sleeve

- BoWex® Spec.-I with lengthened sleeve on request
- Bridging larger shaft distances
- Axial shifting of driving and driven shaft at standstill
- Maintenance-free
- Compensating for larger displacements
- Axial plug-in
- Application range from -25 °C to +100 °C

BoWex® HEW Compact
Curved-tooth gear coupling®

Compensating for large displacements, very compact design





BoWex® Type HEW Compact

Size	Finish bore $d_{max.}$		Dimensions [mm]															Weight with pilot bored coupling [kg]	Mass moment of inertia with pilot bored coupling J_1 [kgm²]	Mass moment of inertia with pilot bored coupling J_2 [kgm²]	Mass moment of inertia with pilot bored coupling J_3 [kgm²]
	d_1	d_2	D_1	D_2	D_4	l_1	l_2	l_3	l_4	l_5	E	L	L_1	D_5	D_3	z	M				
42-130	42	42	90	65	131	42	42	45	37	42	34	118	98	65	78	6	M6	3.4	0.003	0.001	0.001
65-180	65	65	130	96	180	60	55	55	47	55	30	145	122	85	110	8	M10	9	0.014	0.006	0.006
80-225	75	90	145	124	225	70	90	77	51	70	50	210	158	100	120	10	M12	18.9	0.035	0.029	0.021
100-305	100	100	200	152	305	90	110	90	73	70	58	258	187	170	175	16	M12	40.2	0.152	0.087	0.068
125-365	125	125	235	192	365	120	140	105	90	100	68	328	240	170	205	12	M16	75	0.36	0.26	0.192

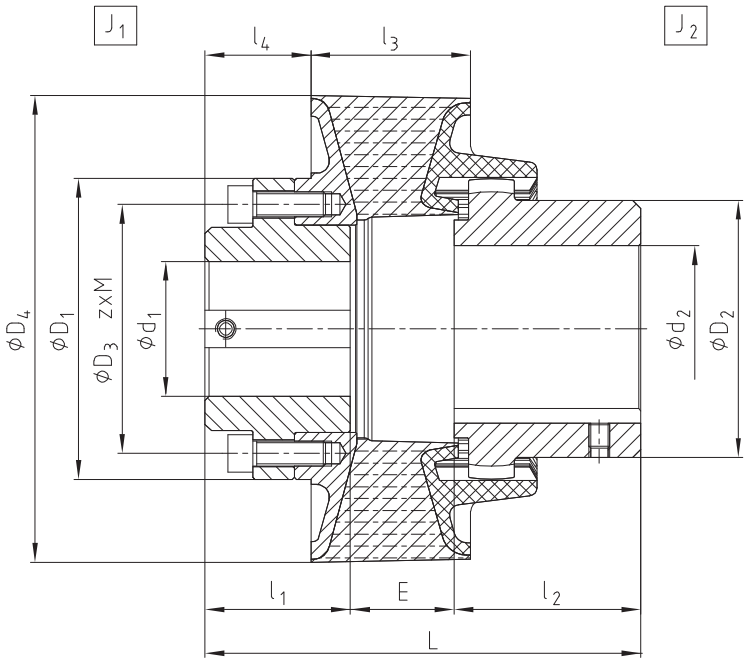
Technical data

Coupling size	Elastomer hardness [Shore A]	Torque [Nm]			Perm. speed $n_{max.}$ [rpm]	Perm. damping power P_{KW}			Dynamic torsion spring stiffness $C_{dyn.}$ [Nm/rad]	Relative damping ψ	Resonance factor $V_R \approx 2 \cdot \Pi / \psi$	Radial spring stiffness C_r [N/mm]
		T_K	$T_{K\ max.}$	with 10 Hz T_{KW}		60 °C	80 °C	90 °C				
	T50	200	400	50					780	0.8	7.9	178
BoWex® 42 HEW Compact	T65	270	540	68	7300	30	18	12	2400	1.2	5.2	600
	T70	320	640	80					2900	1.2	5.2	710
	T50	550	1100	138					2850	0.8	7.9	379
BoWex® 65 HEW Compact	T65	740	1500	185	5500	55	33	22	7800	1.2	5.2	955
	T70	860	1700	215					9500	1.2	5.2	1240
	T50	1250	2500	313					5000	0.8	7.9	420
BoWex® 80 HEW Compact	T65	1600	3200	400	4400	90	54	36	13000	1.2	5.2	1090
	T70	1900	3800	475					16500	1.2	5.2	1450
	T50	2750	5500	688					17000	0.8	7.9	760
BoWex® 100 HEW Compact	T65	3900	7800	975	3200	150	90	60	44000	1.2	5.2	1850
	T70	4500	9000	1125					50000	1.2	5.2	2250
	T50	5500	11000	1375					25000	0.8	7.9	750
BoWex® 125 HEW Compact	T65	7500	15000	1875	2900	220	132	88	62000	1.2	5.2	1930
	T70	8400	16800	2100					70000	1.2	5.2	2300

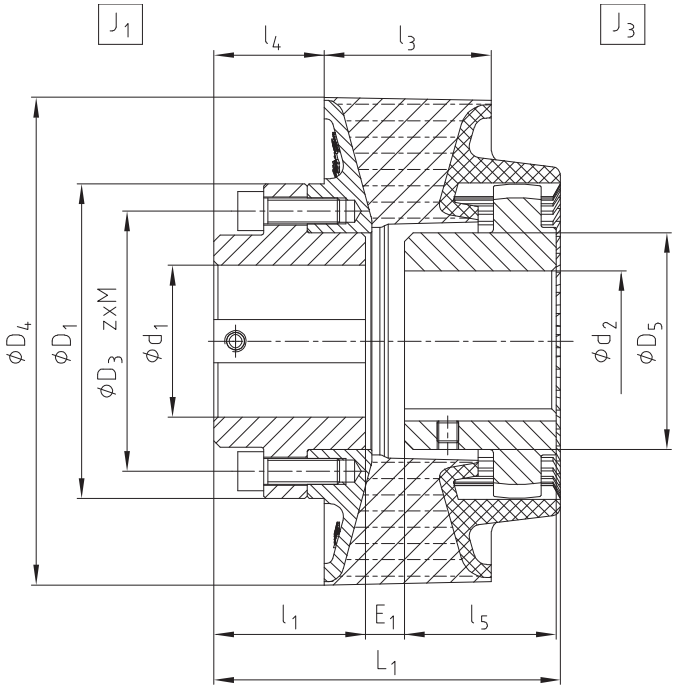
= Years of experience with applications at customer sites and additional test series in the KTR test field in Rheine enabled us to determine potentials allowing for an increase of the rated torques with some sizes of this series.

Ordering example:

BoWex® 65 HEW Compact	T50	d_1 Ø40	d_2 Ø65
Size and type of coupling	Elastomer hardness	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)



BoWex® HEW Compact with reduced hub



BoWex® M
Curved-tooth gear coupling®

Made of corrosion-resistant materials

BoWex® junior plug-in coupling (two-part) and BoWex® junior M (three-part)														
Size	Finish bore				Dimensions [mm]									
	Hub Component 1b		Plug-in sleeve Component 2b		D_H	l_1, l_2	E_1	E	L_{H1}	L_H	L_1	L	M_1	M, N
	d_1	D_1	d_2	D_2										
14	Ø6, Ø7, Ø8, Ø9	22	Ø8	22										
M-14	Ø10, Ø11	25	Ø10, Ø11	25	40	23	2	4	40	37	48	50	8	6.5
	Ø12, Ø14	26	Ø12, Ø14	26										
19	Ø12, Ø14	27	Ø14, Ø15	29										
M-19	Ø16	30			48	25	2	4	42	37	52	54	10	8.5
	Ø19	32	Ø19	35										
	Ø10, Ø11, Ø12	26	Ø14, Ø16	32										
24	Ø14, Ø15, Ø16	32			53	26	2	4	45	41	54	56	9	7.5
M-24	Ø18, Ø19, Ø20	36	Ø19, Ø20	36										
	Ø24	38	Ø24	40										

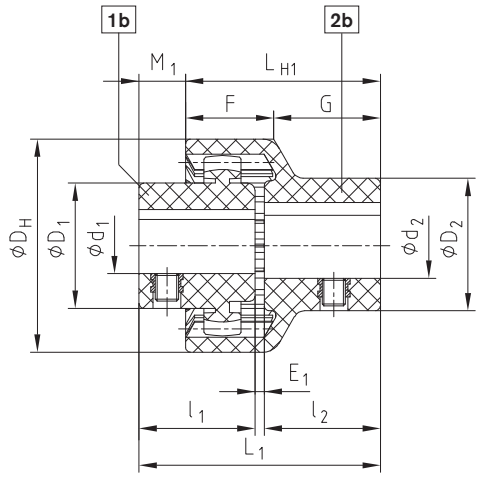
BoWex® Type M								
Size	Finish bore d_1 max., d_2 max.	Dimensions [mm]						
		D_H	D	l_1, l_2	E	L_H	L	M, N
M-24	24	53	36	26	4	41	56	7.5
M-38	38	83	58	40	4	48	84	18
M-48	48	95	68	50	4	50	104	27

Other coupling sizes on request. Setscrews with BoWex® junior coupling are made of V4A as a standard.
For performance data see page 88.

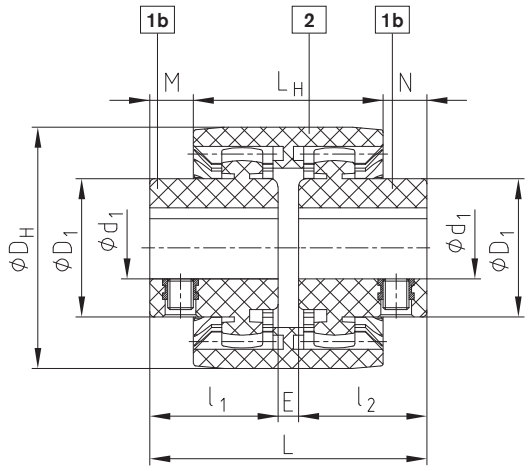
Applications:
Food industry, print and paper industry, textile industry, sewage technology, wash-mobiles, chemical and pharmaceutical industry, offshore units, etc. For use in aggressive environment (air, water, chemicals, etc.).

Ordering example:	BoWex® M-24 V4A	d_1 Ø20	d_2 Ø24
	Size and type of coupling	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)	Finish bore H7 keyway to DIN 6885 sheet 1 (JS9)

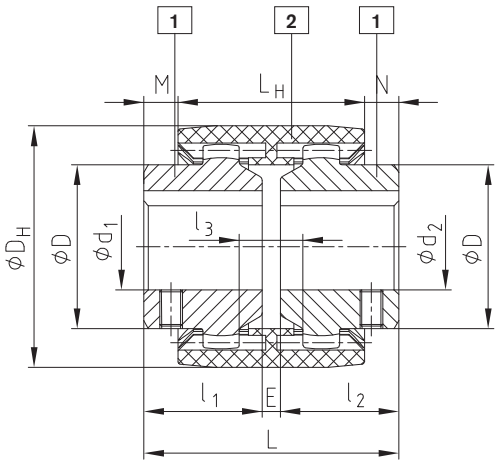
Type junior plug-in coupling (two-part)



Type junior M coupling (three-part)

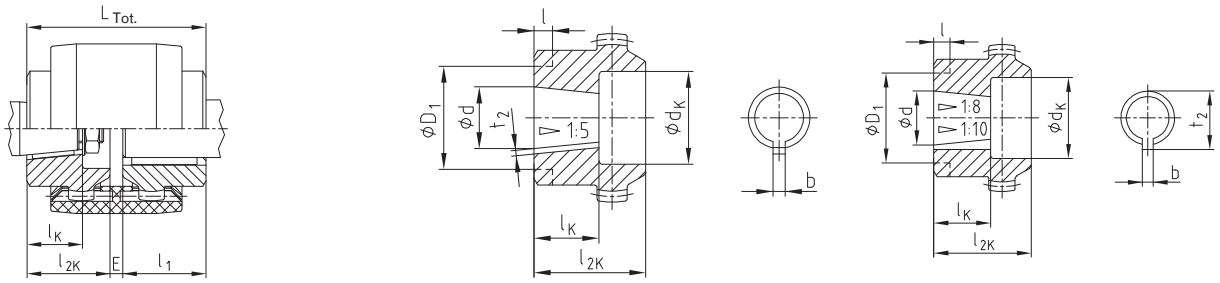


Type M (V4A)



Taper bores

BoWex® with taper bore



$L_{Tot.} = l_1 + E + l_{2K}$

see stock programme on page 90

Taper bores 1:5

Code	Dimensions [mm] Details of bores				Counterbore d_K and hub length l_{2K} [mm] Recess on hub collar D_1 x l [mm]															
					14		19		24		28		32		38		42		48		65	
	$d^{+0.05}$	b^{JS9}	$t_2^{+0.1}$	l_K	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}
A-10	9.85	2	1.0	11.5	18	23	18	25	25	26	25	26	25	26	25	26						
					-		30 x 7		30 x 7		30 x 5		-		30 x 5							
B-17	16.85	3	1.8	18.5			25	30	28	30	36	40	36	40	36	40	45	42	45	42	45	50
C-20	19.85	4	2.2	21.5					28	36	36	40	36	40	36	40	45	42	45	42	45	50
Cs-22	21.95	3	1.8	21.5					28	36	36	40	36	40	36	40	45	42	45	42		
D-25	24.85	5	2.9	26.5							36	40	36	40	36	40	45	42	45	42	45	50
E-30	29.85	6	2.6	31.5											45	55	45	55	45	55	45	55
F-35	34.85	6	2.6	36.5															52	60	55	60
G-40	39.85	6	2.6	41.5															52	60	65	70

Taper bores 1:8

Code	Dimensions [mm] Details of bores				Counterbore d_K and hub length l_{2K} [mm] Recess on hub collar D_1 x l [mm]															
					14		19		24		28		32		38		42		48		65	
	$d^{+0.05}$	b^{JS9}	$t_2^{+0.1}$	l_K	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}
N/1	9.7 ± 0.015	$2.4^{+0.05}$	10.85	17	18	26	18	25	25	26	25	30	25	30	25	30						
					23 x 8		23 x 8		23 x 8		23 x 8		-		23 x 8							
N/1c	11.6	3^{JS9}	12.90	16.5	18	23			25	26	25	30										
N/1e	13	$2.4^{+0.05}$	13.80	21					25	30	25	30			25	30						
N/1d	14	3^{JS9}	15.50	17.5	20	23	25	30	28	30	28	30	28	40								
					-		-		-		28 x 10		-									
N/2	17.287	$3.2^{+0.05}$	18.24	24					28	35	36	40	36	40	36	40	45	42	45	42	45	50
									-		35 x 12		-		-		-		-		-	
N/2a	17.287	4^{JS9}	18.94	24					28	35	36	40	36	40	36	40	45	42	45	42	45	50
									-		35 x 12		-		-		-		-		-	
N/2b	17.287	3^{JS9}	18.34	24					28	35					36	40	45	42	45	42		
									-						-		-		-			
N/3	22.002	4^{JS9}	23.40	28							36	40	36	40	36	40	45	42	45	42	45	50
											-		-		-		-		-		48 x 14	
N/4	25.463	$4.78^{+0.05}$	27.83	36							36	50	36	50	36	50	45	50	45	50	45	62
											-		-		-		58 x 10		58 x 10		-	
N/4b	25.463	5^{JS9}	28.23	36							36	50					45	50	45	50	45	62
N/4a	27	$4.78^{+0.05}$	28.80	32.5											36	50						
N/4g	28.45	6^{JS9}	29.32	38.5											36	60	45	60	45	60		
N/5	33.176	$6.38^{+0.05}$	35.39	44											45	60	45	60	45	60	45	62
N/5a	33.176	7^{JS9}	35.39	44													45	60	45	60	45	62

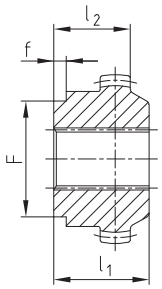
Taper bores 1:10

Code	Dimensions [mm] Details of bores				Counterbore d_K and hub length l_{2K} [mm]																	
					14		19		24		28		32		38		42		48		65	
	$d^{+0.05}$	b^{JS9}	$t_2^{+0.1}$	l_K	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}	d_K	l_{2K}
CX-20	19.85	5	22.08	32							36	50			36	50	45	50	45	50		
DX-25	24.95	6	26.68	45									36	50			45	60	45	60	45	60
EX-30	29.75	8	31.88	50													45	60	45	60	45	70

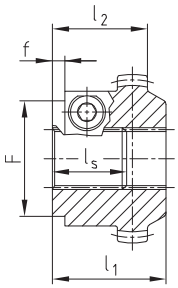
Spline hubs and inch bores

BoWex® spline hubs – basic programme

Spline hub (N)



Clamping hub (K)



If it is not possible to fasten the hubs of pump shafts with involute spline by means of an end plate and a screw, we recommend to use our spline clamping hub.
Radial clamping ensures a backlash-free tight fit on the pump shaft.

Spline and clamping hubs to DIN 5480

Size	Dimensions [mm]							Order designation specify coupling size
	Type	Spline size	l_1	l_2	l_S	F	f	
42	N	25x1.25x18	42	-	-	-	-	P000205
	K	25x1.25x18	42	-	-	-	-	P500202
48	K	30x2x14	42	-	-	60	6	P500203
	N	30x2x14	50	-	-	60	6	P000206
	K	30x2x14	50	-	-	60	6	P500203
65	N	35x2x16	55	-	-	60	6	P000303
	K	35x2x16	60	-	-	60	6	P500301
	N	40x2x18	55	-	-	78	6	P000304
	K	40x2x18	60	-	-	78	6	P500302
	K	45x2x21	55	-	-	78	6	P500401

Spline and clamping hubs to ANSI B92.1

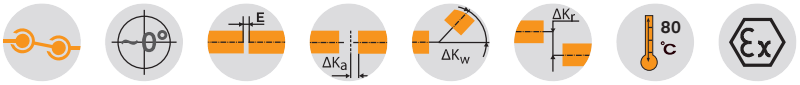
Size	Dimensions [mm]							Order designation specify coupling size
	Type	Spline size	l_1	l_2	l_S	F	f	
42	K	PH-S 5/8" 16/32DP, z=9	42	-	-	-	-	P558101
	K	PI-S 3/4" 16/32DP, z=11	-	35	-	-	-	P559101
	K	PB-S 7/8" 16/32DP, z=13	42	-	-	60	3	P567101
	K	PB-BS 1" 16/32DP, z=15	42	-	27	50	6	P660201
48	K	PA-S 3/8" 16/32DP, z=21	50	-	45	52	7	P663301
65	K	PA-S 3/8" 16/32DP, z=21	55	-	48	52	5	P663301
	K	PC-S 1 1/4" 12/24DP, z=14	55	-	44	52	5	P656201

Inch bores – see stock programme on page 86

Bore and keyway acc. to ANSI/AGMA 9002-C14 Bore (clearance fit) Keyway (commercial class fit)						Bore and keyway acc. to ANSI/AGMA 9002-C14 Bore (clearance fit) Keyway (commercial class fit)					
KTR Code	Bore Ø [Inch]	Width of key-way [Inch]	Bore Ø [mm]	Width of keyway [mm]	Keyway depth/ Tolerance +0.381 [mm]	KTR Code	Bore Ø [Inch]	Width of key-way [Inch]	Bore Ø [mm]	Width of keyway [mm]	Keyway depth/ Tolerance +0.381 [mm]
Tb	3/8	1/8	9.525 +0.0254	3.175 +0.05	10.972	Sd	1 1/8	5/16	28.575+0.0254	7.937 +0.051	32.105
DNB	7/16	3/32	11.112 +0.0254	2.382 +0.051	12.293	Js	1 1/4	1/4	31.75+0.0254	6.35 +0.051	34.721
T	1/2	3/16	12.7 +0.0254	4.762 +0.051	14.757	K	1 1/4	5/16	31.75+0.0254	7.937 +0.051	35.331
Ta	1/2	1/8	12.7+0.0254	3.175 +0.051	14.224	Ma	1 3/8	5/16	34.925+0.0254	7.937 +0.051	38.557
DNC	17/32	1/8	13.495 +0.0254	3.175 +0.051	15.011	RH1	1 3/8	3/8	34.925+0.0254	9.525 +0.063	39.141
Do	9/16	1/8	14.287 +0.0254	3.175 +0.051	15.824	Cb	1 7/16	3/8	36.512+0.0254	9.525 +0.063	40.767
E	5/8	1/8	15.875 +0.0254	3.175 +0.051	17.424	Ca	1 1/2	5/16	38.1+0.0254	7.937 +0.051	41.783
Es	5/8	5/32	15.875 +0.0254	3.968 +0.051	17.729	C	1 1/2	3/8	38.1 +0.0254	9.525 +0.0635	42.392
Ed	5/8	3/16	15.875 +0.0254	4.762 +0.051	18.008	Nb	1 5/8	3/8	41.275 +0.0254	9.525 +0.0635	45.618
DNH	11/16	3/16	17.462 +0.0254	4.762 +0.051	19.634	Ls	1 3/4	3/8	44.45 +0.0254	9.525 +0.0635	48.818
Ad	3/4	1/8	19.05 +0.0254	3.175 +0.051	20.624	L	1 3/4	7/16	44.45 +0.0254	11.112 +0.0635	49.428
A	3/4	3/16	19.05 +0.0254	4.762 +0.051	21.259	Lu	1 7/8	1/2	47.625 +0.0254	12.7 +0.0635	53.238
G	7/8	3/16	22.225 +0.0254	4.762 +0.051	24.485	Da	1 15/16	1/2	49.212 +0.0254	12.7 +0.0635	54.864
F	7/8	1/4	22.225 +0.0254	6.35 +0.051	25.069	Ds	2	1/2	50.8 +0.0254	12.7 +0.0635	56.464
Gf	15/16	1/4	23.812 +0.0254	6.35 +0.051	26.695	Pa	2 1/8	1/2	53.975 +0.0381	12.7 +0.063	59.69
H	1	3/16	25.4 +0.0254	4.762 +0.051	27.686	U	2 1/4	1/2	57.15 +0.0381	12.7 +0.063	62.915
Hs	1	1/4	25.4 +0.0254	6.35 +0.051	28.295	Ub	2 3/8	5/8	60.325 +0.0381	15.875 +0.076	67.335
R	1 1/16	3/16	26.987 +0.0254	4.762 +0.051	29.286	Wd	3 3/8	7/8	85.725 +0.0381	22.225 +0.076	95.504
Sb	1 1/8	1/4	28.575 +0.0254	6.35 +0.051	31.521	Wf	3 5/8	7/8	92.075 +0.0381	22.225 +0.076	101.955

The splines and inch bores specified are only a part of KTR's options. Many other variants are available, too.

Coupling in accordance with AGMA 9008-B00, high power density



Dimensions

Size	Pilot bore	Max. finish bore	Dimensions [mm]														
		d_1, d_2	l_1, l_2	Hub lengthened max. l_1, l_2 [2]	E_{FA}	E_{FB}	E_{FAB}	L_{FA}	L_{FB}	L_{FAB}	L_3	D	D_{A1}	D_{A2}	F [1]	d_3 [1]
10	26	50	43	105	3	21	12	89	107	98	55	67	111	83	74	52
15	26	64	50	115	3	15	9	103	115	109	59	87	152	106	84	68
20	31	80	62	130	3	31	17	127	155	141	79	108	178	129	104	85
25	38	98	76	150	5	29	17	157	181	169	93	130	213	157	123	110
30	44.5	112	90	170	5	33	19	185	213	199	109	153	240	181	148	130
35	46	133	105	185	6	40	23	216	250	233	128	180	280	213	172	150
40	52	158	120	215	6	42	24	246	282	264	144	214	318	249	192	175
45	80	172	135	245	8	50	29	278	320	299	164	233	347	273	216	190
50	80	192	150	295	8	56	32	308	356	332	182	260	390	308	241	220
55	90	210	175	300	8	70	39	358	420	389	214	283	425.5	333	275	250
60	100	232	190	305	8	84	46	388	464	426	236	312	457	364.5	316	265
70	100	276	220	310	10	76	43	450	516	483	263	371	527	424	360	300

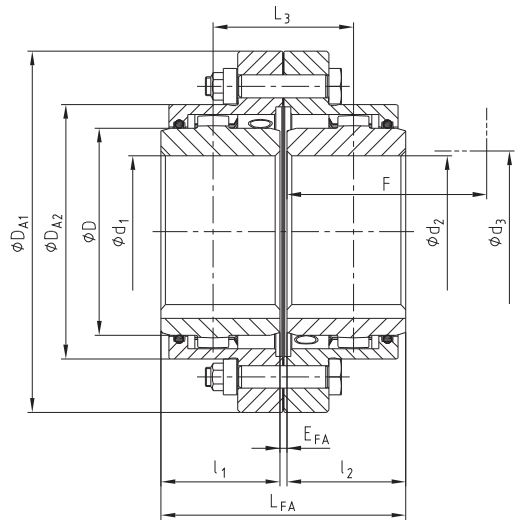
Technical data

Size	Torque [Nm] [3]		Max. speed [rpm]	Weight with max. bore [kg]			Mass moment of inertia with max. bore [kgm²]	Dowel screw (10.9)		
	T_{KN}	T_{KN} (42CrMo4)		Sleeve	Hub	Total		z	M	T_A [Nm]
10	930	1580	8500	0.75	0.55	2.73	0.00436	6	M6	15
15	2000	3300	6400	1.88	1.12	6.38	0.01894	8	M8	36
20	3500	6300	5400	2.60	2.09	9.94	0.04000	6	M10	72
25	6500	11000	4500	4.43	3.56	16.83	0.09749	6	M12	125
30	10000	17400	4000	5.83	6.18	25.21	0.18080	8	M12	125
35	17000	28800	3500	9.71	9.87	41.25	0.41419	8	M14	200
40	28500	48500	3100	11.88	16.07	58.14	0.75535	8	M14	200
45	37000	62000	3000	15.72	21.42	77.08	1.17590	10	M14	200
50	51000	86000	2500	25.66	29.59	114.40	2.24991	8	M18	430
55	65000	110000	2300	31.52	40.30	150.41	3.45102	14	M18	430
60	85000	145000	2100	32.82	52.96	177.44	4.16734	14	M18	430
70	135000	240000	1850	43.52	85.77	268.20	9.32429	16	M20	610

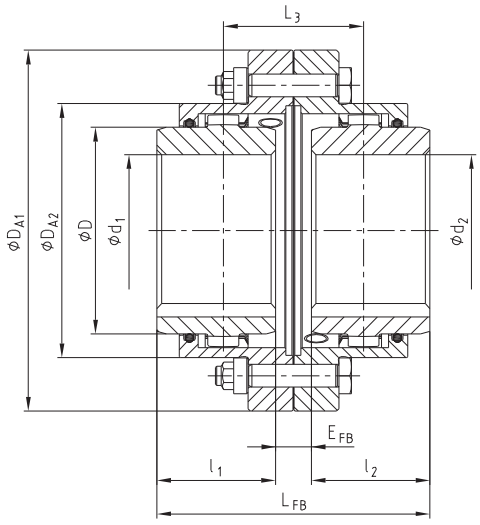
■ = Standard
[1] Space required to align the coupling and replace the gasket
[2] Lengthened hubs as a standard available for type FA only. For type FB and FAB lengthened hubs are available on request only.
[3] Maximum torque of the coupling $T_{K\,max}$ = rated torque of the coupling T_{KN} x 2. For selection please see page 14 et seqq.

Ordering example:	GEARex® FA 10	d_1 Ø50	d_2 Ø50
	Type and size of coupling	Finish bore with keyway to DIN 6885 sheet 1	Finish bore with keyway to DIN 6885 sheet 1

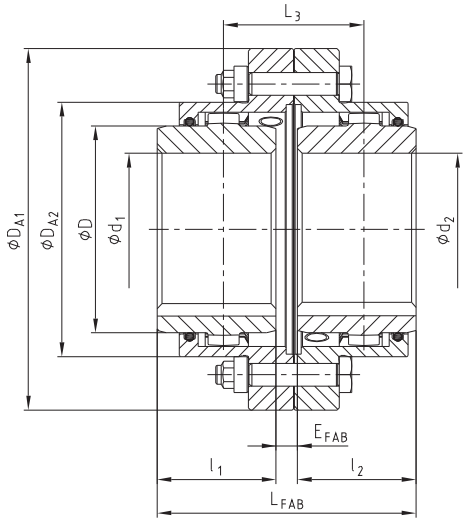
Type FA



Type FB

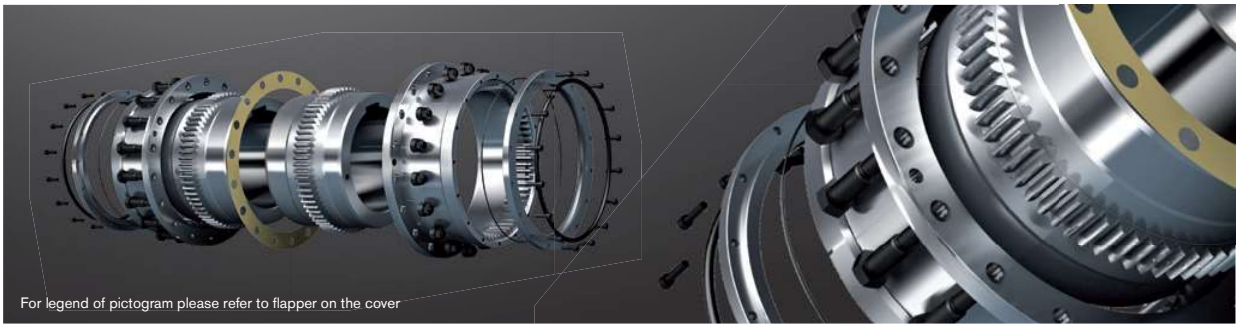


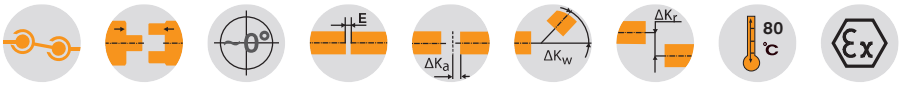
Type FAB



GEARex® DA, DB and DAB
All-steel gear couplings

Easy to assemble, high power density





Dimensions

Size	Pilot bore	Max. finish bore	Dimensions [mm]														
		d_1, d_2	l_1, l_2	Hub lengthened max. l_1, l_2 [2]	E_{DA}	E_{DB}	E_{DAB}	L_{DA}	L_{DB}	L_{DAB}	L_3	D	D_{A1}	D_{A2}	F [1]	d_3 [1]
20	31	80	62	130	3	31	17	133	155	144	79	108	187	146	105	85
25	38	98	76	150	5	29	17	157	181	169	93	130	220	172	115	105
30	44.5	112	90	170	5	33	19	185	213	199	109	153	248	194	140	120
35	46	133	105	185	6	40	23	216	250	233	128	180	285	228	165	145
40	52	158	120	215	6	42	24	246	282	264	144	214	335	270	180	160
45	80	172	135	245	8	50	29	278	320	299	164	233	358	294	195	185
50	80	192	150	295	8	56	32	388	356	332	182	260	390	332	215	205
55	90	210	175	300	8	70	39	358	420	389	214	283	425.5	354	240	220
60	100	232	190	305	8	84	46	388	464	426	236	312	457	380	260	245
70	100	276	220	310	10	76	43	450	516	483	263	371	527	445	300	290
80	140	300	280	-	10	50	30	570	610	590	310	394	545	475	340	310
85	160	325	292	-	13	53	33	597	637	617	325	430	585	515	352	330
90	180	350	305	-	13	83	48	623	693	658	353	464	640	560	365	360
100	220	390	330	-	13	93	53	673	753	713	383	512	690	612	390	400
110	220	420	350	-	20	296	158	720	996	858	508	560	765	665	410	420
120	260	450	420	-	25	421	223	864	1261	1063	643	608	825	720	480	470
130	300	500	440	-	25	415	220	905	1295	1100	660	684	950	805	520	520
140	380	550	460	-	20	430	225	940	1350	1145	685	750	1010	875	570	590
150	460	630	520	-	30	460	245	1070	1500	1285	765	850	1140	975	630	670

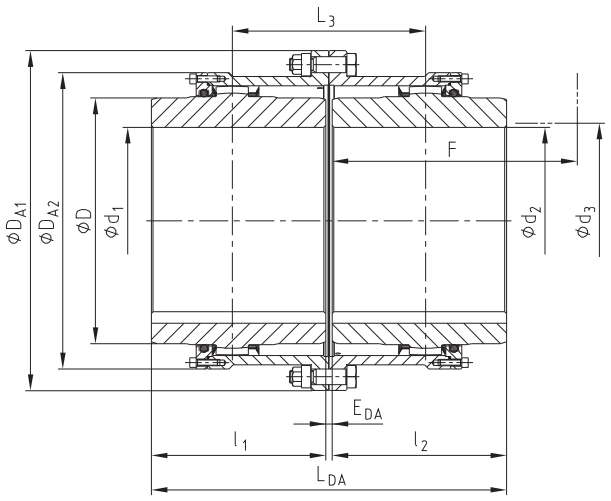
Technical data

Size	Torque [Nm] [3]		Max. speed [rpm]	Weight with max. bore [kg]			Mass moment of inertia with max. bore [kgm²]	Dowel screw (10.9)		
	T_{KN}	T_{KN} (42CrMo4)		Sleeve	Hub	Total		z	M	T_A [Nm]
20	3500	6300	5400	3.6	2.1	12.8	0.056	6	M10	72
25	6500	11000	4500	5.5	3.6	20.3	0.125	6	M12	125
30	10000	17400	4000	6.9	6.2	28.9	0.219	8	M12	125
35	17000	28800	3500	11.2	9.8	46.6	0.488	8	M14	200
40	28500	48500	3100	16.3	15.9	70.9	1.011	8	M14	200
45	37000	62000	3000	20.2	21.4	90.7	1.482	10	M14	200
50	51000	86000	2500	27.0	29.5	123.5	2.474	8	M18	430
55	65000	110000	2300	32.6	40.2	159.1	3.714	14	M18	430
60	85000	145000	2100	32.0	52.8	184.4	4.810	14	M18	430
70	135000	240000	1850	43.8	85.5	280	9.907	16	M20	610
80	175000	300000	1750	64	117	362	14.214	18	M20	610
85	225000	380000	1650	75	148	446	20.320	20	M20	610
90	290000	500000	1550	101	183	568	31.036	20	M24	1000
100	380000	650000	1500	117	232	698	45.358	24	M24	1000
110	480000	820000	1250	140	295	940	73.880	20	M30	1700
120	620000	1050000	1150	188	430	1312	118.40	24	M30	1700
130	-	1450000	1000	319	603	1954	226.732	20	M36	2800
140	-	1950000	950	373	758	2391	328.567	24	M36	2800
150	-	2750000	850	475	983	3069	540.298	30	M36	2800

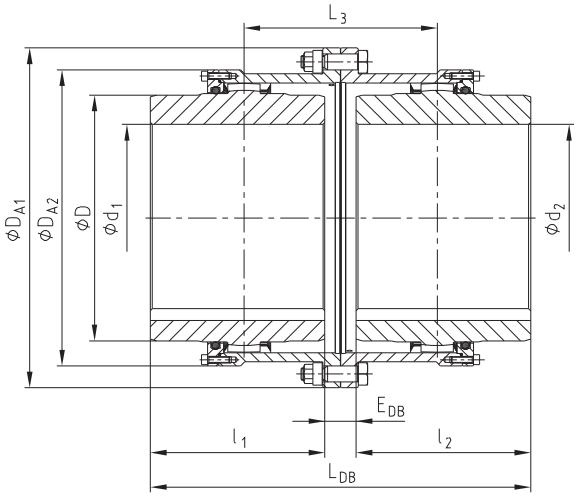
■ = Standard
[1] Space required to align the coupling and replace the gasket
[2] Lengthened hubs as a standard available for type DA only. For type DB and DAB lengthened hubs available on request only.
[3] Maximum torque of the coupling $T_{K\,max}$ = rated torque of the coupling T_{KN} x 2. For selection please see page 14 et seqq.

Ordering example:	GEARex® DA 80	d_1 Ø300	d_2 Ø300
	Type and size of coupling	Finish bore with keyway to DIN 6885 sheet 1	Finish bore with keyway to DIN 6885 sheet 1

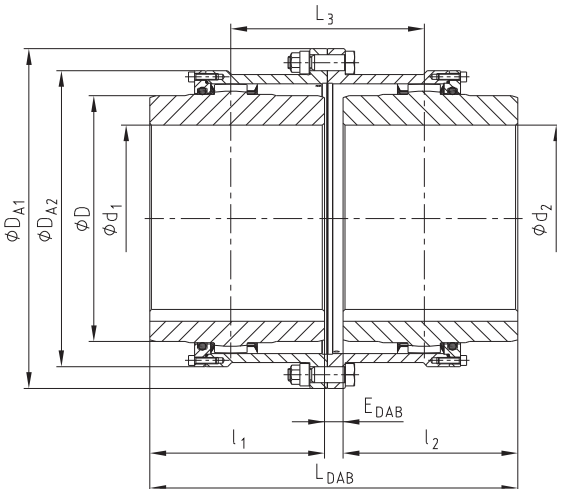
Type DA



Type DB



Type DAB



All-steel gear coupling with brake disk

Dimensions

Size	Pilot bore	Max. finish bore	Dimensions [mm]														
		d_1, d_2	l_1, l_2	Hub lengthened max. l_1, l_2 [3]	E_A	E_B	L_A	L_B	L_3	N	D	D_{A1} [4]	D_{A2} [4]	F [2]	d_3 [2]	a
10 [1]	26	50	43	105	16	34	102	120	55		67	111	83	74	52	1.8
15 [1]	26	64	50	115	23	35	123	135	63		87	152	106	84	68	2.3
20	31	80	62	130	20	48	144	172	83		108	178	129	104	85	2.3
25	38	98	76	150	26	50	178	202	99		130	213	157	123	110	2.3
30	44.5	112	90	170	25	53	205	233	114		153	240	181	148	130	2.3
35	46	133	105	185	33	67	243	277	140		180	280	213	172	150	3.3
40	52	158	120	215	23	59	263	299	145		214	318	249	192	175	3.3
45	80	172	135	245	26	68	296	338	166		233	347	273	216	190	3.3
50	80	192	150	295	27	75	327	375	183		260	390	308	241	220	3.3
55	90	210	175	300	31	93	381	443	217		283	425.5	333	275	250	3.3
60	100	232	190	305	34	110	414	490	242		312	457	364.5	316	265	3.3
70	100	276	220	310	54	120	494	560	285		371	527	424	360	300	3.8

N = L_A • 0.5 or L_B • 0.5

Technical data

Size	Torque [Nm] [5]		Dowel screw (10.9)			Weight with max. bore excluding brake disk [kg]		Max. speed [6]	
	T_{KN}	T_{KN} (42CrMo4)	z	M	TA [Nm]	FBR	DBR	ØA x b [mm]	n [rpm]
10 [1]	930	1580	6	M6	15	2.73	–	250 x 12.7	3900
15 [1]	2000	3300	8	M8	36	6.38	–	300 x 12.7	3300
20	3500	6300	6	M10	72	9.94	12.8	315 x 12.7	3100
25	6500	11000	6	M12	125	16.83	20.3	350 x 12.7	2800
30	10000	17400	8	M12	125	25.21	28.9	400 x 12.7	2400
35	17000	28800	8	M14	200	41.25	46.6	460 x 12.7	2100
40	28500	48500	8	M14	200	58.14	70.9	515 x 12.7	1900
45	37000	62000	10	M14	200	77.08	90.7	610 x 12.7	1600
50	51000	86000	8	M18	430	114.40	123.5	710 x 12.7	1400
55	65000	110000	14	M18	430	150.41	159.1	810 x 12.7	1200
60	85000	145000	14	M18	430	177.44	184.4	915 x 12.7	1000
70	135000	240000	16	M20	610	268.20	280	915 x 12.7	1000

Recommended selection of coupling/brake disk

Coupling size	Brake disk ØA x b [7]				Coupling size	Brake disk ØA x b [7]		
10 [1]	250 x 12.7	300 x 12.7	315 x 12.7	–	40	610 x 12.7	710 x 12.7	810 x 12.7
15 [1]	300 x 12.7	315 x 12.7	350 x 12.7	–	45	610 x 12.7	710 x 12.7	810 x 12.7
20	315 x 12.7	350 x 12.7	400 x 12.7	460 x 12.7	50	610 x 12.7	710 x 12.7	810 x 12.7
25	400 x 12.7	460 x 12.7	515 x 12.7	610 x 12.7	55	710 x 12.7	810 x 12.7	915 x 12.7
30	460 x 12.7	515 x 12.7	610 x 12.7	710 x 12.7	60	710 x 12.7	810 x 12.7	915 x 12.7
35	515 x 12.7	610 x 12.7	710 x 12.7	–	70	810 x 12.7	915 x 12.7	–

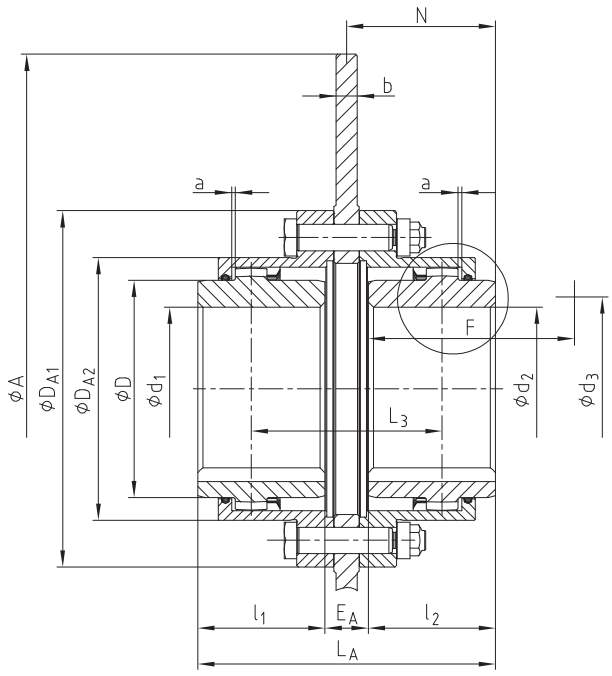
■ = Standard

[1] Size 10 and 15 available as type F only.
[2] Space required to align the coupling and replace the gasket
[3] Hubs lengthened as a standard available in connection with hub configuration A only.
[4] Dimensions of type F For dimensions of type D see page 110.
[5] Maximum torque of the coupling $T_{K\ max.}$ = rated torque of the coupling T_{KN} x 2. For selection see page 14 et seqq.
[6] The maximum speed depends on the size of brake disk and the maximum perm. circumferential speed. Please observe specifications of the brake manufacturer.
[7] Other sizes of brake disks on request. Cranked brake disks are available on request of the customer, too.

Ordering example:

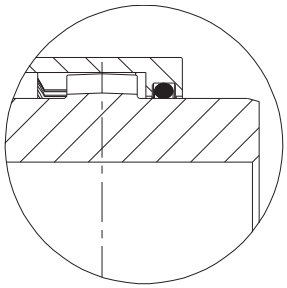
GEARex® FBR 10	d_1 Ø50	d_2 Ø50	E_A = 16	Ø300 x 12.7
Type and size of coupling	Finish bore with keyway to DIN 6885 sheet 1	Finish bore with keyway to DIN 6885 sheet 1	Configuration of hubs with shaft distance E	Brake disk ØA x width b

Type FBR
with hub configuration A

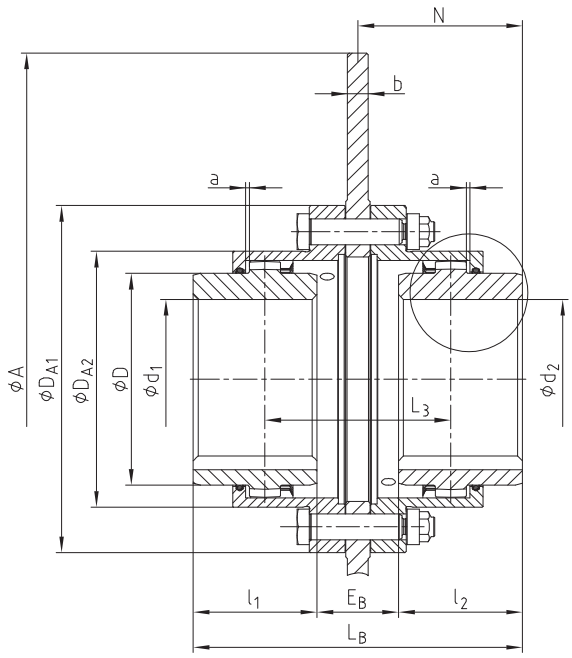


Types:

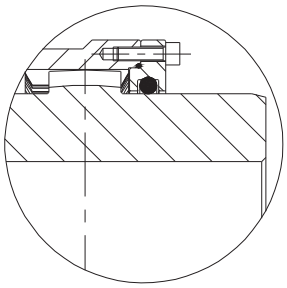
Type FBR



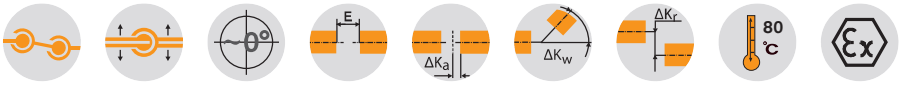
Type FBR
with hub arrangement B



Type DBR



Large shaft distance dimension, high power density



Dimensions

Size [3]	Torque [Nm] [4]		Pilot bore	Max. finish bore	Dimensions [mm]									Dowel screw (10.9)		
	T_{KN}	T_{KN} (42CrMo4)		d_1, d_2	l_1, l_2	Hub lengthened max. l_1, l_2	D	D_{A1} [2]	D_{A2} [2]	L_H	E_H	F [1]	d_3 [1]	z	M	T_A [Nm]
10	930	1580	26	50	43	105	67	111	84			74	52	6	M6	15
15	2000	3300	26	64	50	115	87	152	107			84	68	8	M8	36
20	3500	6300	31	80	62	130	108	178	130			104	85	6	M10	72
25	6500	11000	38	98	76	150	130	213	158			123	110	6	M12	125
30	10000	17400	44.5	112	90	170	153	240	182			148	130	8	M12	125
35	17000	28800	46	133	105	185	180	280	214			172	150	8	M14	200
40	28500	48500	52	158	120	215	214	318	250			192	175	8	M14	200
45	37000	62000	80	172	135	245	233	347	274			216	190	10	M14	200
50	51000	86000	80	192	150	295	260	390	309			241	220	8	M18	430
55	65000	110000	90	210	175	300	283	425.5	334			275	250	14	M18	430
60	85000	145000	100	232	190	305	312	457	365.5			316	265	14	M18	430
70	135000	240000	100	276	220	310	371	527	425			360	300	16	M20	610
80	175000	300000	140	300	280	-	394	545	475			340	310	18	M20	610
85	225000	380000	160	325	292	-	430	585	515			352	330	20	M20	610
90	290000	500000	180	350	305	-	464	640	560			365	360	20	M24	1000
100	380000	650000	220	390	330	-	512	690	612			390	400	24	M24	1000
110	480000	820000	220	420	350	-	560	765	665			410	420	20	M30	1700
120	620000	1050000	260	450	420	-	608	825	720			480	470	24	M30	1700
130	-	1450000	300	500	440	-	684	950	805			520	520	20	M36	2800
140	-	1950000	380	550	460	-	750	1020	875			570	590	24	M36	2800
150	-	2750000	460	630	520	-	850	1140	975			630	670	30	M36	2800

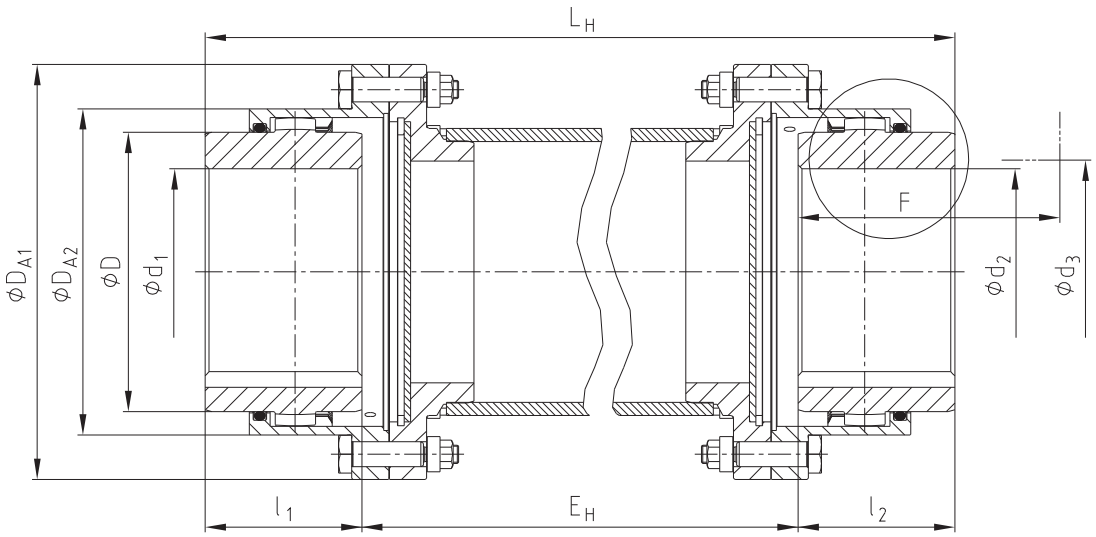
$L_H = E_H + l_1 + l_2$

According to customer specification

■ = Standard
[1] Space required to align the coupling and replace the gasket
[2] For dimensions of type F see page 108. For type D see page 110.
[3] Size 10 and 15 available as type F only. From size 80 available as type D only.
[4] Maximum torque of the coupling $T_{K\,max}$ = rated torque of the coupling T_{KN} x 2. For selection please see page 14 et seqq.

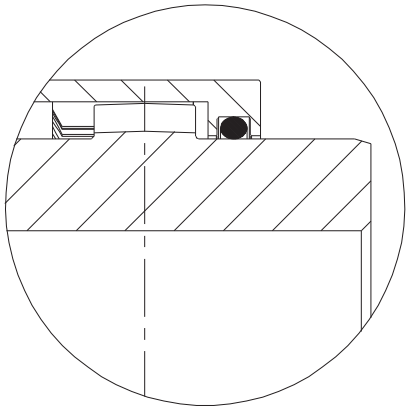
Ordering example:	GEARex® FH 10	d_1 Ø50	d_2 Ø50	250
	Type and size of coupling	Finish bore with keyway to DIN 6885 sheet 1	Finish bore with keyway to DIN 6885 sheet 1	Shaft distance dimension E_H

Components

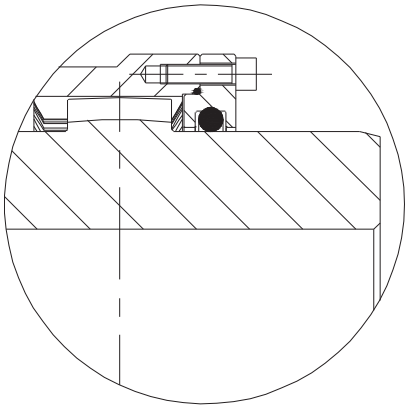


Types

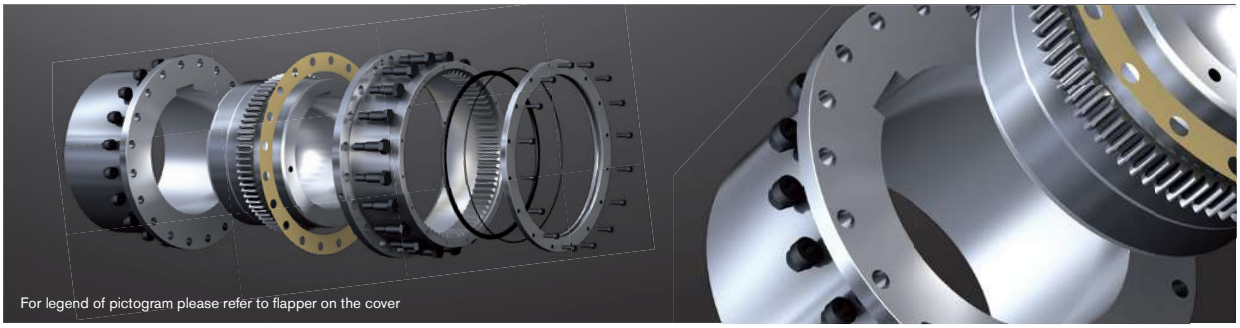
Type FH

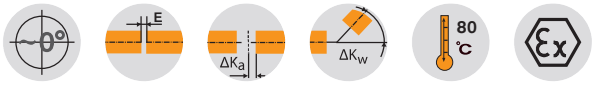


Type DH



Single-cardanic, high power density





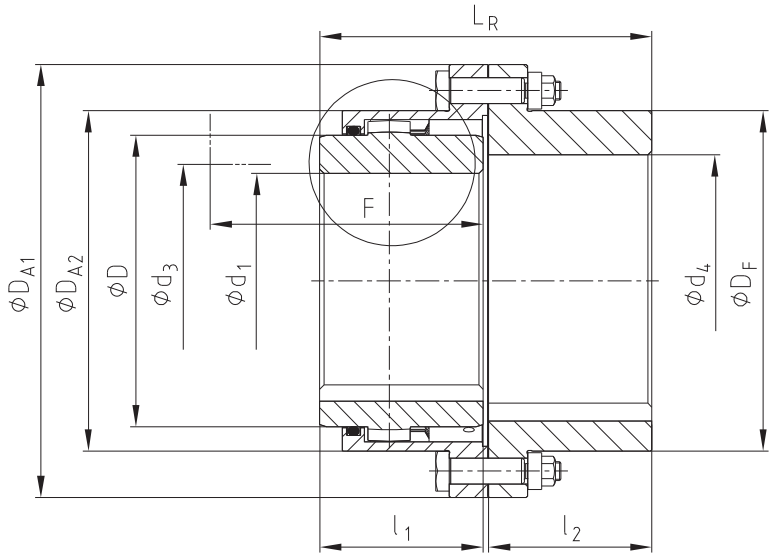
Dimensions

Size [3]	Torque [Nm] [4]		Max. finish bore		Dimensions [mm]									Dowel screw (10.9)		
	T_{KN}	T_{KN} (42CrMo4)	d_1	d_4	l_1, l_2	Hub lengthened max. l_1, l_2	D	D_{A1} [2]	D_{A2} [2]	D_F	L_R	F [1]	d_3 [1]	z	M	T_A [Nm]
10	930	1580	50	60	43	105	67	111	84	84	88	74	52	6	M6	15
15	2000	3300	64	78	50	115	87	152	107	107	103	84	68	8	M8	36
20	3500	6300	80	95	62	130	108	178	130	130	127	104	85	6	M10	72
25	6500	11000	98	115	76	150	130	213	158	158	157	123	110	6	M12	125
30	10000	17400	112	135	90	170	153	240	182	182	185	148	130	8	M12	125
35	17000	28800	133	155	105	185	180	280	214	214	216	172	150	8	M14	200
40	28500	48500	158	185	120	215	214	318	250	250	244	192	175	8	M14	200
45	37000	62000	172	200	135	245	233	347	274	274	276	216	190	10	M14	200
50	51000	86000	192	225	150	295	260	390	309	309	305	241	220	8	M18	430
55	65000	110000	210	245	175	300	283	425.5	334	334	356	275	250	14	M18	430
60	85000	145000	232	265	190	305	312	457	365.5	365.5	386	316	265	14	M18	430
70	135000	240000	276	310	220	310	371	527	425	425	450	360	300	16	M20	610
80	175000	300000	300	340	280	-	394	545	475	462	570	340	310	18	M20	610
85	225000	380000	325	370	292	-	430	585	515	500	597	352	330	20	M20	610
90	290000	500000	350	400	305	-	464	640	560	546	623	365	360	20	M24	1000
100	380000	650000	390	440	330	-	512	690	612	594	673	390	400	24	M24	1000
110	480000	820000	420	480	350	-	560	765	665	647	710	410	420	20	M30	1700
120	620000	1050000	450	520	420	-	608	825	720	700	852	480	470	24	M30	1700
130	-	1450000	500	560	440	-	684	950	805	760	890	520	520	20	M36	2800
140	-	1950000	550	610	460	-	750	1020	875	835	930	570	590	24	M36	2800
150	-	2750000	630	690	520	-	850	1140	975	935	1055	630	670	30	M36	2800

■ = Standard
[1] Space required to align the coupling and replace the gasket
[2] For dimensions of type F see page 108. For type D see page 110.
[3] Size 10 and 15 available as type F only. From size 80 available as type D only.
[4] Maximum torque of the coupling $T_{K\ max}$ = rated torque of the coupling T_{KN} x 2. For selection please see page 14 et seqq.

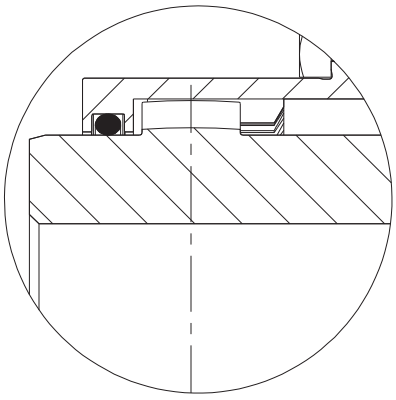
Ordering example:	GEARex® FR 10	d_1 Ø50	d_4 Ø60
	Type and size of coupling	Finish bore with keyway to DIN 6885 sheet 1	Finish bore with keyway to DIN 6885 sheet 1

Components

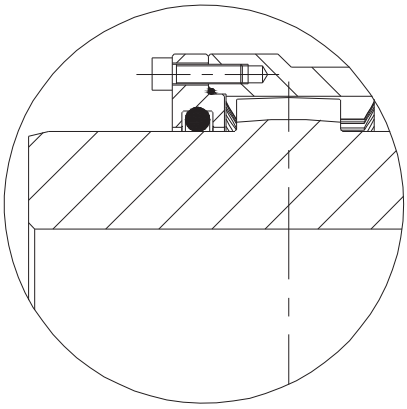


Types

Type FR

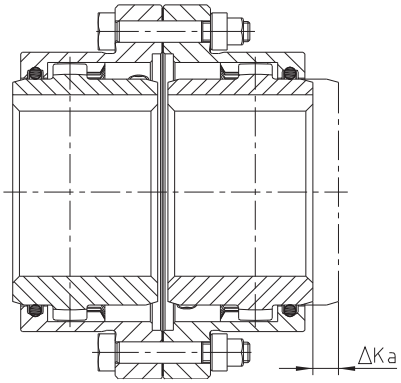


Type DR

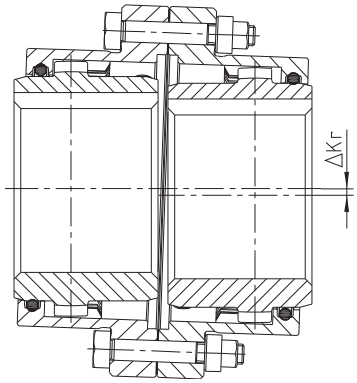


Displacements

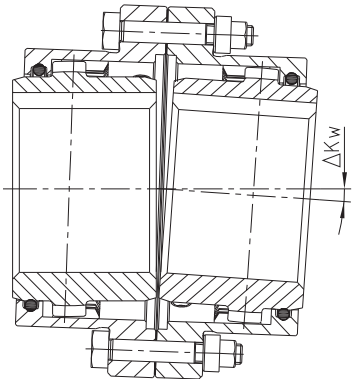
Axial displacement



Radial displacement

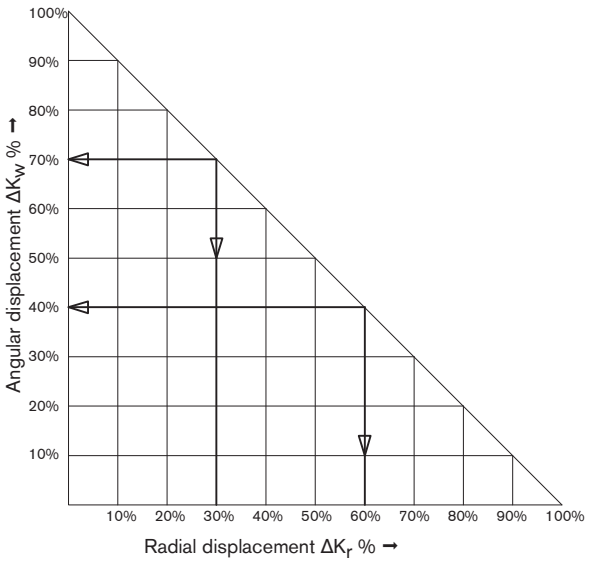


Angular displacement



Displacements			
Size	Max. axial displacement ΔK_a [mm]	Max. permissible displacements [1]	
		ΔK_r [mm]	ΔK_w [°]
10		± 0.4	
15		± 0.5	
20		± 0.6	
25	± 1.0	± 0.8	
30		± 1.0	
35		± 1.0	
40		± 1.2	
45		± 1.4	
50		± 1.6	
55	± 1.5	± 1.8	
60		± 2.0	0.5° each hub
70		± 2.2	
80		± 2.5	
85		± 2.8	
90	± 2.0	± 3.0	
100		± 3.2	
110		± 4.4	
120		± 5.5	
130		± 5.7	
140	± 2.5	± 6.0	
150		± 6.6	

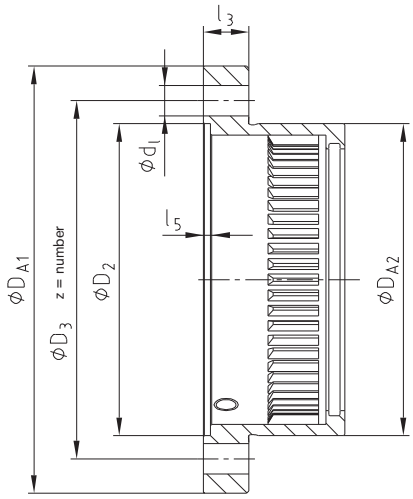
[1] The displacement figures are maximum figures which must not arise in parallel. If radial and angular displacements arise in parallel, the figures need to be reduced (see examples of calculation and diagramme).



Example 1:
ΔK_r = 30%
ΔK_w =70%

Example 2:
ΔK_r = 60%
ΔK_w = 40%

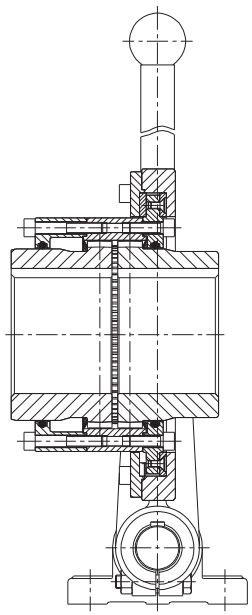
Flange dimensions in accordance with AGMA 9008-B00



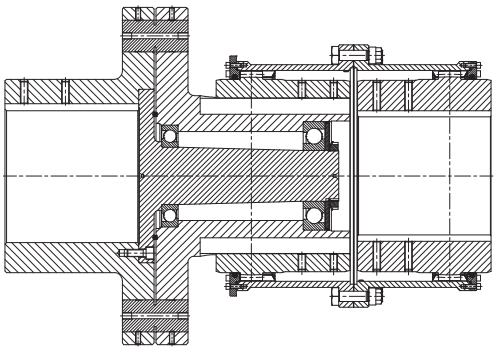
Flange dimensions								
Size	Dimensions [mm]							
	D_{A1}	D_{A2}	D_2	D_3	d_l	z = number	l_3	l_5
10	111	84	82	95.25	6.35	6	14	3
15	152	107	105	122.24	9.52	8	19	3
20	178	130	130	149.23	12.70	6	19	3
25	213	158	153	180.97	15.87	6	22	4
30	240	182	178	206.38	15.87	8	22	4
35	280	214	205	241.30	19.05	8	28.5	5
40	318	250	243	279.40	19.05	8	28.5	4
45	347	274	265	304.80	19.05	10	28.5	5.5
50	390	309	302	342.90	22.22	8	38	6
55	425.5	334	320	368.30	22.22	14	38	6
60	457	365.5	353	400.05	22.22	14	26	6
70	527	425	412	463.55	25.40	16	28.5	8

Other types

Type SD



Type BK



Type VD (vertical assembly)