SERVO COUPLINGS

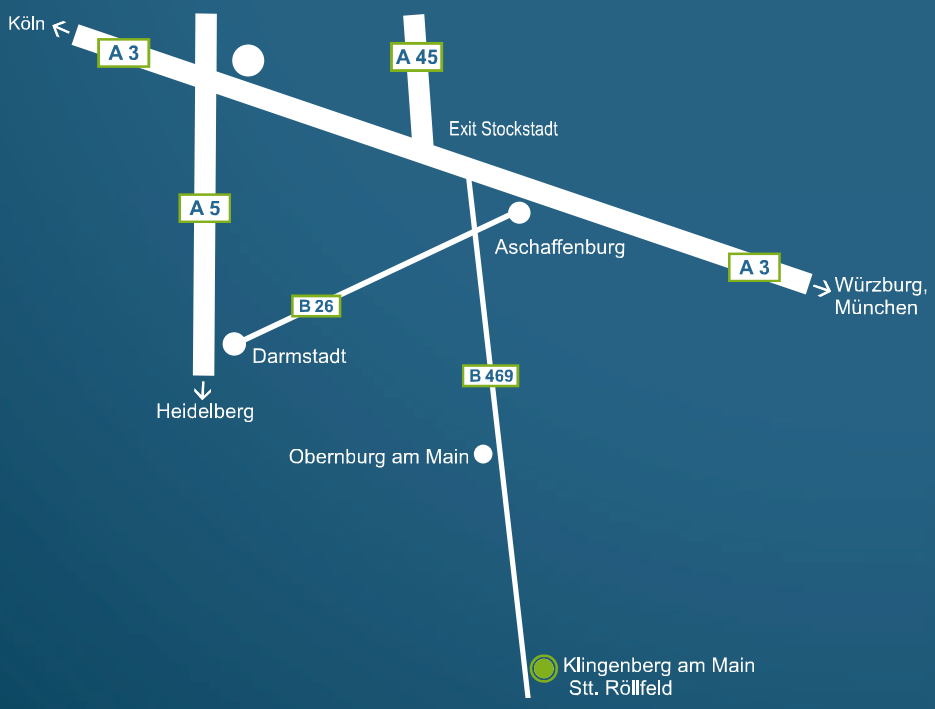
METAL BELLOWS COUPLINGS
SERVO INSERT COUPLINGS
CARDAN COUPLINGS
LINE SHAFTS
RIGID SHAFT COUPLINGS

www.kbk-antriebstechnik.de

KBK – The Company

KBK Antriebstechnik GmbH - successful since 2003

Our products are based on the experience of more than 30 years in developing and producing shaft-hub-connections and backlash-free couplings combined with professional advice, service and professional competence. Our sophisticated modular design forms the basis for top quality products at reasonable prices. It enables us to produce almost all elastomer-, metal bellows-, safety couplings and line shafts as well as locking devices from the standard range within two hours, provide them with customized bores and organize a direct delivery to you by courier. Our traffic-favourable position on the edge of the Rhine-Main area simplifies the delivery to our customers all over the world. Benefit from our strenghts and our strong motivation to satify all our business-partners and safe time and money for your company.



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Servo Insert Coupling

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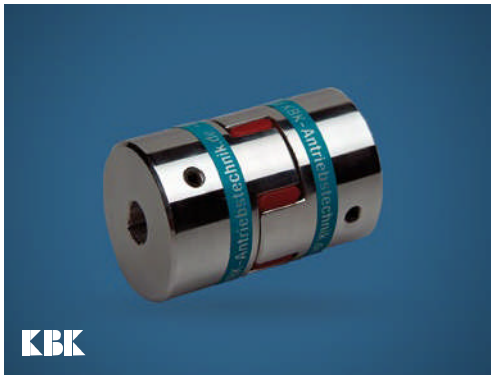
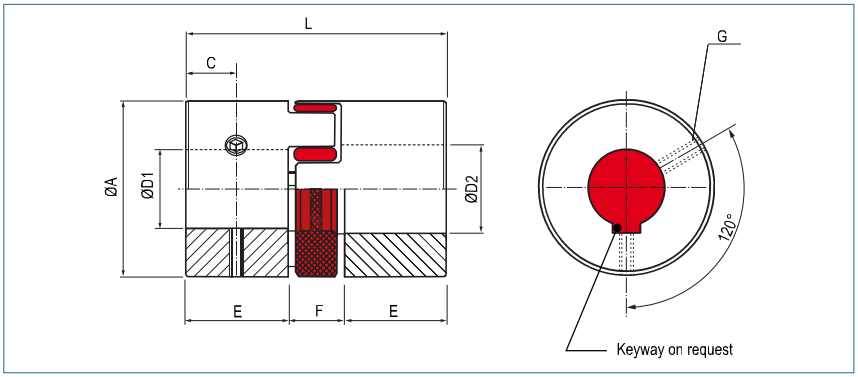
optional full stainless steel version





Order Code KBE1 - 14 - 10 - 12 - 98Sh

Type	Size	ØD1 (H7)	ØD2 (H/)	Shore-hardness

Size	Dimensions (mm)							Technical Data			
	Ø A	L	Ø D1-D2	E	F	C	F	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia (per coupling) J (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max				Screw (ISO4029) TA (Nm)				
5	10	15	2 - 6	5	5	2.5	1 x M3 0.5	47500	2.62	0.0000216	0.5
7	14	22	4 - 7	7	8	3.5	2 x M3 1.3	34000	6.5	0.00018	1.2
9	20	30	6 - 9	10	10	5	2 x M3 1.3	24000	22	0.00105	3
14	30	35	6 - 16	11	13	5	1 x M4 3	16000	45	0.006	12.5
19	40	66	10 - 24	25	16	10	1 x M5 6	12000	187	0.040	17
24	55	78	16 - 28	30	18	10	1 x M5 6	8500	420	0.171	60
28	65	90	20 - 38	35	20	15	1 x M6 11	7200	577	0.368	160
38	80	114	20 - 45	45	24	15	1 x M8 25	6000	1200	1125	325
42	95	126	20 - 55	50	26	20	1 x M8 25	4800	1850	16103	450
48	105	140	20 - 60	56	28	20	1 x M8 25	4300	2562	4124	525

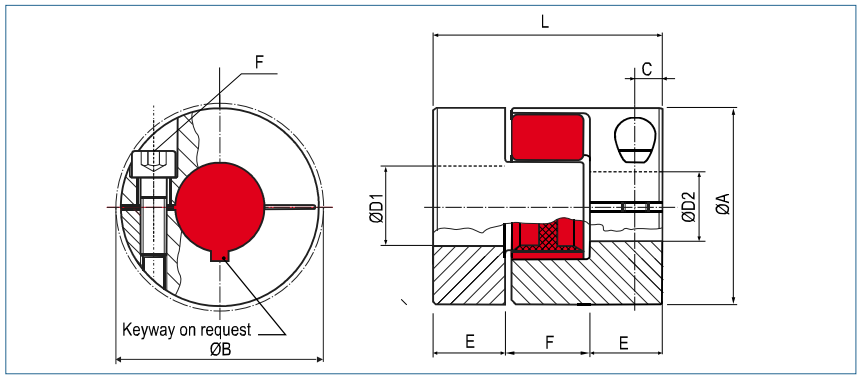
Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	to size 9: 92 Sh A (yellow)
	from size 14: 98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with collet clamps

optional full stainless steel version



Order Code KBE2 - 14 - 10 - 12 - 98Sh

Type	Size	ØD1 (H7)	ØD2 (H7)	Shore-hardness

Size	Dimensions (mm)								Technical Data			
	ØA	L	Ø D1-D2	E	F	C	B	F	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia (per coupling) J (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max					Screw (ISO4762) TA (Nm)				
5	10	15	2 - 5	5	5	2.5	11.4	M1.6 / 0.25	38000	2.52	0.000036	0.5
7	14	22	4 - 7	7	8	3.5	15	M2 / 0.43	27000	7	0.000195	1.2
9	20	30	4 - 11	10	10	5	23.4	M2.5 / 0.85	19000	18.52	0.00107	3
14	30	35	4 - 16	11	13	5	32.2	M3 / 2	13000	59	0.00381	12.5
19	40	66	10 - 22/24*	25	16	12	47	M6 / 15	10000	183	0.0404	17

Size	Ø Bore Size (mm)																				
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
5	06	0.6	0.7	0.8																	
7			1.3	1.4	1.5	1.6															
9			2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.2											
14			7.7	8.0	8.3	8.6	8.9	9.2	9.4	9.7	10	10.3	10.6	10.9	11.2						
19									44	45	47	48	49	50	51	52	54	55	56	57	58

Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	bis size 9: 92 Sh A (yellow)
	ab size 14: 98 Sh A (red)

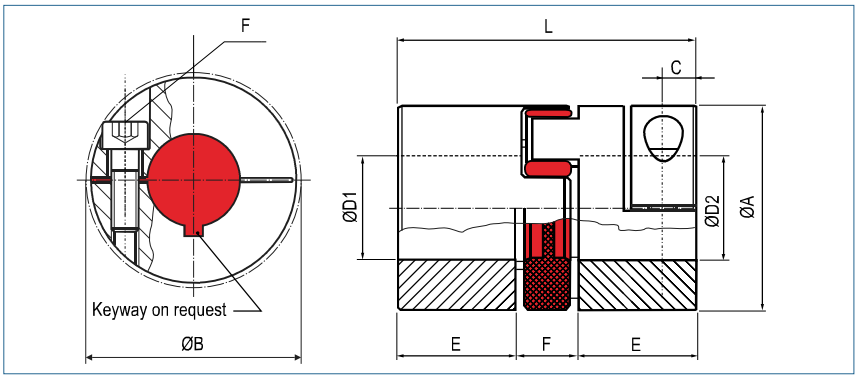
*** Hubs for bores > 22H7 to 24H7 will be supplied with 2 x M4 screws.**

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with collet clamps

optional full stainless steel version



Order Code KBE2 - 38 - 20 - 40 - 98Sh

Type	Size	ØD1 (H7)	ØD2 (H7)	Shore-hardness

Size	Dimensions (mm)								Technical Data			
	ØA	L	Ø D1-D2	E	F	C	B	F	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia J (per coupling) (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max					Screw (ISO4762) TA (Nm)				
24	55	78	15 - 32	30	18	12	56.4	M6 / 15	7000	394	0.175	60
28	65	90	19 - 37	35	20	15	72.6	M8 / 40	6000	624	0.377	160
38	80	114	20 - 48	45	24	20	83.3	M8 / 40	5000	1230	1.139	325
42	95	126	25 - 50	50	26	20	95	M10 / 84	4000	1960	2.505	450
48	105	140	25 - 57	56	28	22	105	M12 / 145	3750	2690	4.175	525

Size	Ø Bore Size (mm)																											
	15	16	19	20	22	24	25	28	30	32	35	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
24	64	65	69	70	72	74	76	79	81	84																		
28			114	116	119	123	124	130	133	137	142																	
38				135	138	142	144	149	152	156	161	166	168	169	171	173	175	176	178									
42							294	304	310	317	327	337	340	343	347	350	353	357	360	363	367	370	373	376				
48							476	491	500	510	524	539	544	548	553	558	563	568	572	577	582	587	592	596	601	606	611	616

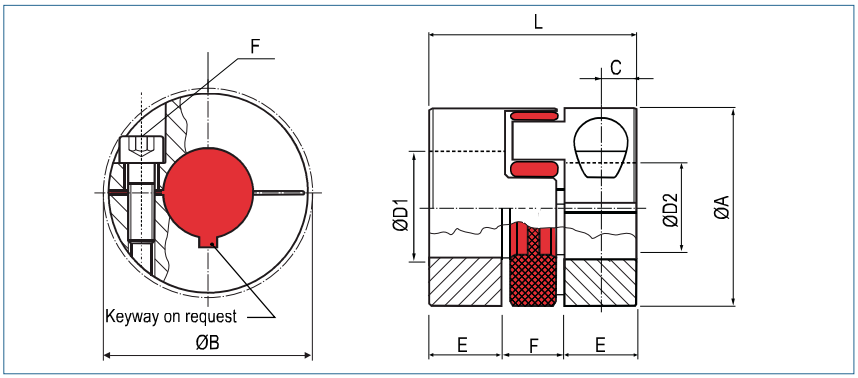
Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with collet clamps, compact

optional full stainless steel version



Order Code

KBE2C	-	38	-	20	-	40	-	98Sh
Type		Size		ØD1 (H7)		ØD2 (H7)		Shore-hardness

Size	Dimensions (mm)								Technical Data			
	Ø A	L	Ø D1-D2	E	F	C	B	G	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia J (per coupling)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max					Screw (ISO4762) TA (Nm)				
7	14	18	3 - 7	5	8	2.5	16.6	M2 0.43	27000	6	0.00018	1.2
9	20	24	4 - 11	7	10	3.5	21.3	M2.5 0.85	19000	15	0.00085	3
14	30	32	4 - 16	9.5	13	5	30.5	M4 4.5	13000	45	0.0166	12.5
19	40	50	8 - 21	17	16	8.5	45.7	M6 15	10000	139	0.0311	17
24	55	58	10 - 32	20	18	10	56.4	M6 15	7000	271	0.119	60
28	65	62	14 - 37	21	20	11	72.6	M8 40	6000	429	0.254	160
38	80	86	15 - 48	31	24	15	83.3	M10 84	5000	888	0.828	325
42	95	94	20 - 50	34	26	17.5	97.6	M12 145	4000	1425	1.866	450
48	105	110	20 - 57	47.5	28	23	105	M12 145	3750	2019	3.221	525

Size	Ø Bore Size (mm)																								
	3	4	6	8	10	12	14	15	16	18	19	20	24	25	28	30	32	35	38	40	42	45	48	50	55
7	1.2	1.3	1.5																						
9		2.3	2.5	2.8	3.0																				
14			14	14.7	15.7	16.7	17.7	18.3	18.8																
19				42	44	47	49	50	51	54	55	56													
24					58	61	63	64	65	67	69	70	74	76	79	81	84								
28							105	107	109	112	114	116	123	124	130	133	137	142	147						
38								241	244	251	254	258	271	274	284	291	297	307	317	324	330	340	350		
42													452	457	471	481	491	505	519	529	539	553	568	577	
48													471	476	491	500	510	524	539	548	558	572	587	596	620

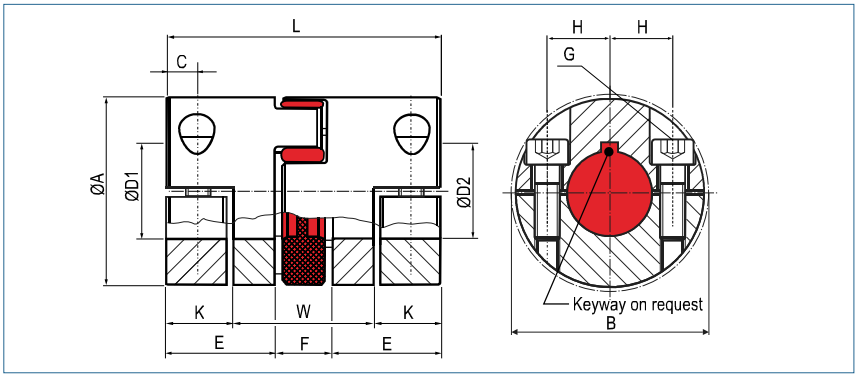
Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with split hubs

optional full stainless steel version



Order Code

KBE2H	-	19	-	10	-	12	-	98Sh
Type		Size		ØD1 (H7)		ØD2 (H7)		Shore-hardness

Size	Dimensions (mm)										Technical Data				
	Ø A	L	Ø D1/D2		E	W	F	C	B	H	K	G Screw (ISO4762) TA (Nm)	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia J (per coupling) (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes													
			min	max												
14	30	35	4	16	11	19	13	5.0	35	10.5	8	M4 / 5	13000	50	0,007	12.5
19	40	66	8	21	25	27	16	8.0	46	14.5	19.5	M6 / 15	10000	182	0,042	17
24	55	78	10	32	30	34	18	10.5	57.5	20	22.0	M6 / 15	7000	391	0,171	60
28	65	90	14	37	35	40	20	11.5	73	25	25.0	M8 / 40	6000	643	0,402	160
38	80	114	18	48	45	48	24	15.5	83.5	30	33.0	M8 / 40	5000	1167	1,096	325
42	95	126	22	50	50	53	26	18.0	93.5	32	36.5	M10 / 84	4000	1943	2,522	450
48	105	140	22	57	56	61	28	18.5	105	36	39.5	M12 / 145	3750	2592	4,076	525

Size	Ø Bore Size (mm)																									
	4	6	8	10	11	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	46	48	50	55
14	10.3	15.5	20.7	25.8	28.4	36.1	38.7	41.3																		
19			47	59	65	83	89	95	107	113	119															
24				59	65	83	89	95	107	113	119	130	142	148	166	178	190									
28						123	132	141	159	167	176	194	211	220	247	264	282	308								
38									159	167	176	194	211	220	247	264	282	308	335	352	370	396	405	423		
42												370	404	420	471	505	538	589	639	673	706	757	774	807	841	
48												539	588	612	686	735	784	857	931	980	1029	1102	1127	1176	1225	1347

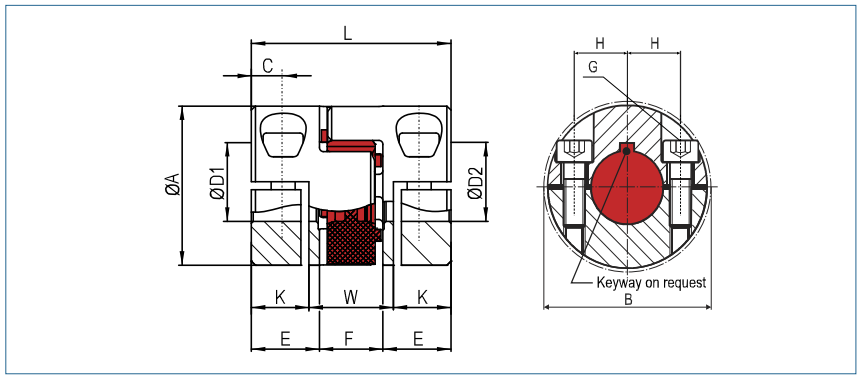
Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with split hubs

optional full stainless steel version



Order Code KBE2HC - 19 - 10 - 12 - 98Sh

Type	Size	ØD1 (H7)	ØD2 (H7)	Shore-hardness

Size	Dimensions (mm)											Technical Data			
	Ø A	L	Ø D1/D2		E	W	F	K	C	B	H	G	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia (per coupling) J (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes min	Bore Sizes max								Screw (ISO4762) TA (Nm)				
14	30	32	4	16	9.5	16.4	13	7.8	4,5	35	10.5	M4 / 4.5	13000	47	0.006	12.5
19	40	50	8	21	17	21	16	14.5	8.0	46	14.5	M6 / 15	10000	79	0.019	17
24	55	58	10	32	20	26	18	16	8	57.5	20	M6 / 15	7000	280	0.121	60
28	65	62	14	37	21	28	20	17	9	73	25	M8 / 40	6000	421	0.266	160
38	80	86	18	48	31	38	24	24	12	83.5	30	M8 / 40	5000	840	0.790	325
42	95	94	22	50	34.5	44	25	25	12,5	93.5	32	M10 / 84	4000	1416	1.832	450
48	105	110	22	57	41	50	28	30	14	105	36	M12 / 145	3750	1956	3.101	525

Size	Ø Bore Size (mm)																								
	4	6	8	10	11	14	15	16	18	19	20	22	24	25	28	30	32	35	38	40	42	45	46	48	50	55
14	10.3	15.5	20.7	25.8	28.4	36.1	38.7	41.3																		
19			47	59	65	83	89	95	107	113	119															
24				59	65	83	89	95	107	113	119	130	142	148	166	178	190									
28						123	132	141	159	167	176	194	211	220	247	264	282	308	335							
38									159	167	176	194	211	220	247	264	282	308	335	352	370	396	405	423		
42												370	404	420	471	505	538	589	639	673	706	757	774	807	841	
48												539	588	612	686	735	784	857	931	980	1029	1102	1127	1176	1225	1347

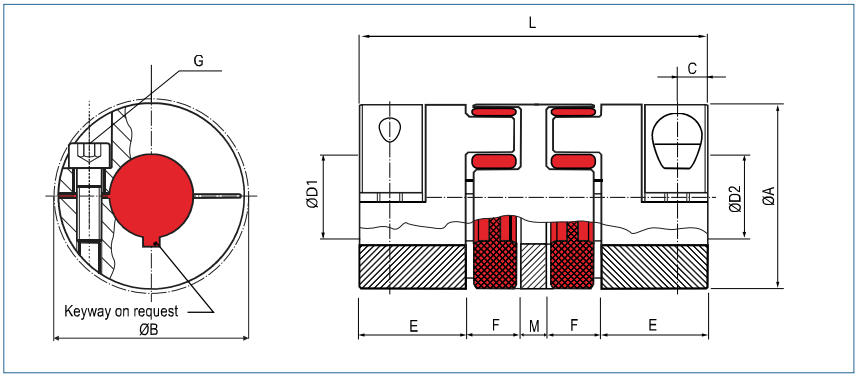
Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

doublecardanic with collet clamps

optional full stainless steel version



Order Code

KBE2D	-	14	-	10	-	12	-	98Sh
Type		Size		ØD1 (H7)		ØD2 (H7)		Shore-hardness

Size	Dimensions (mm)									Technical Data			
	ØA	L	Ø D1-D2	E	F	C	B	G	M	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia J (per coupling) (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max					Screw (ISO4762) TA (Nm)					
7	14	34	4 - 7	7	8	3.5	15	M2 0.43	4	27000	5	0002	1.2
9	20	45	4 - 11	10	10	5	23.4	M2.5 0.85	5	19000	32	0.002	3
14	30	56	4 - 16	11	13	5	32.2	M3 2	8	13000	77	0.010	12.5
19	40	92	10 - 22/24*	25	16	12	45.7	M6 15	10	10000	232	0.056	17
24	55	112	15 - 32	30	18	14	56.6	M6 15	16	7000	534	0.188	60
28	65	128	19 - 37	35	20	15	70.2	M8 40	18	6000	844	0.507	160
38	80	158	20 - 48	45	24	20	82.5	M8 40	20	5000	1580	1.489	325

Size	Ø Bore Size (mm)																								
	4	5	6	7	8	9	10	11	12	14	15	16	19	20	22	24	25	28	30	32	35	38	40	42	45
7	1.3	1.4	1.5	1.6																					
9	2.3	2.4	2.5	2.7	2.8	2.9	3.0	3.2																	
14	7.7	8.0	8.3	8.6	8.9	9.2	9.4	9.7	10	10.6	10.9	11.2													
19							44	45	47	49	50	51	55	56	58										
24											64	65	69	70	72	74	76	79	81	84					
28													114	116	119	123	124	130	133	137	142				
38														135	138	142	144	149	152	156	161	166	169	173	178

Material	hub - aluminium
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	to size 9: 92 Sh A (yellow)
	from size 14: 98 Sh A (red)

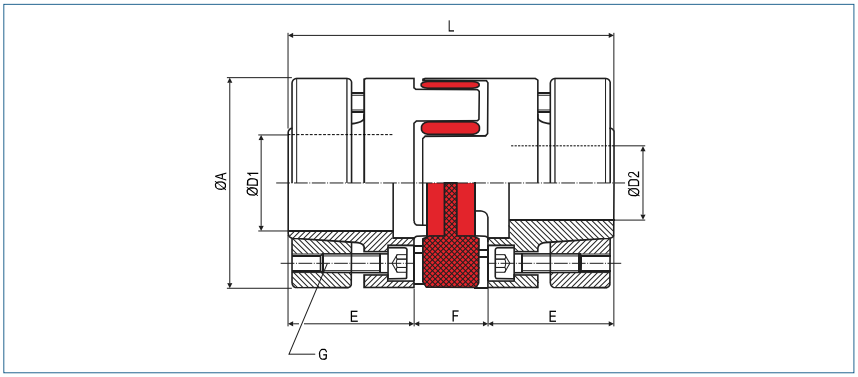
*** Hubs for bores > 22H7 to 24H7 will be supplied with 2 x M4 screws.**

Further spider elements and technical rates are available on page 42.

Servo Insert Coupling

with outer conical hubs

optional full stainless steel version



Order Code

KBE3	-	48	-	40	-	35	-	98Sh
Type		Size		ØD1 (H7)		ØD2 (H7)		Shore-hardness

Size	Dimensions (mm)						Technical Data			
	Ø A	L	Ø D1-D2	E	F	G	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia (per coupling) J (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max			Screw (ISO4762) TA (Nm)				
14	30	50	6 - 14	18.5	13	M3 / 1.34	25000	105	0.014	12.5
19	40	66	10 - 20	25	16	M4 / 2.9	19000	277	0.066	17
24	55	78	15 - 28	30	18	M5 / 6	14000	612	0.282	60
28	65	90	19 - 38	35	20	M5 / 6	12000	937	0.650	160
38	80	114	20 - 45	45	24	M6 / 10	10000	1961	2.005	325
42	95	126	28 - 50	50	26	M8 / 35	8000	3069	4.322	450
48	105	140	35 - 60	56	28	M8 / 35	7000	3855	6.851	525

Size	Ø Bore Sitze (mm)																				
	6	10	11	14	15	16	19	20	24	25	28	30	32	35	38	40	42	45	48	50	55
14	8.6	13.8	14.7	22.7																	
19		41	45	62	68	67	83	90													
24					74	72	90	97	112	120	143										
28							189	188	237	250	280	307	310	353	389						
38								269	337	356	398	436	424	501	533	572	585	644			
42											445	506	470	566	581	647	630	728	836	858	
48														955	999	1092	1091	1230	1381	1334	1540

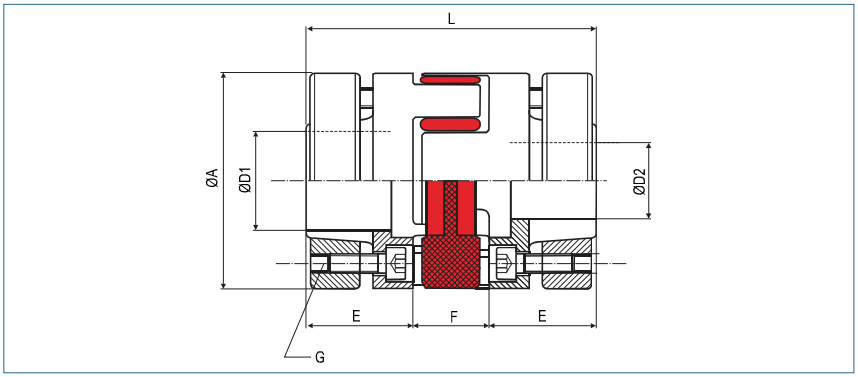
Material	hub - aluminium outer conical hub - Steel spider element - polyurethane
Hub	bore tolerance: H7
Shore-hardness	98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with outer conical hubs, compact

optional full stainless steel version



Order Code

KBE3C	-	48	-	40	-	35	-	98Sh
Type		Size		ØD1 (H7)		ØD2 (H7)		Shore-hardness

Size	Dimensions (mm)						Technical Data			
	Ø A	L	Ø D1-D2	E	F	G	max. speed rpm. (1/min)	Mass (per coupling) (g)	Moment of Inertia (per coupling) J (g m²)	Torque (Nm)
	Outer Ø	Length	Bore Sizes (H7) min~max			Screw (ISO4762) TA (Nm)				
14	30	42	6 - 14	14.5	13	M3 1.34	25000	91	0.012	12.5
19	40	56	10 - 20	20	16	M4 3	19000	252	0.063	17
24	55	64	14 - 28	23	18	M5 6	14000	492	0.236	60
28	65	76	19 - 38	28	20	M5 6	12000	776	0.535	160
38	80	96	20 - 45	36	24	M6 10	10000	1639	1.686	325
42	95	103	28 - 50	38.5	26	M8 35	8000	2612	3.621	450
48	105	110	30 - 55	41	28	M8 35	7000	3105	5.465	525

Size	Ø Bore Size (mm)																				
	6	10	11	14	15	16	19	20	24	25	28	30	32	35	38	40	42	45	48	50	55
14	5.4	7.5	11.3	24.7																	
19		17	20	41	49	36	56	64													
24				47	57	67	98	110	127	139	175										
28							121	133	201	219	248	285	253	307	329						
38								203	304	331	394	452	453	543	550	609	669	634			
42											444	508	535	638	692	763	754	858	964	976	
48												572	638	762	842	929	943	1074	1208	1136	1336

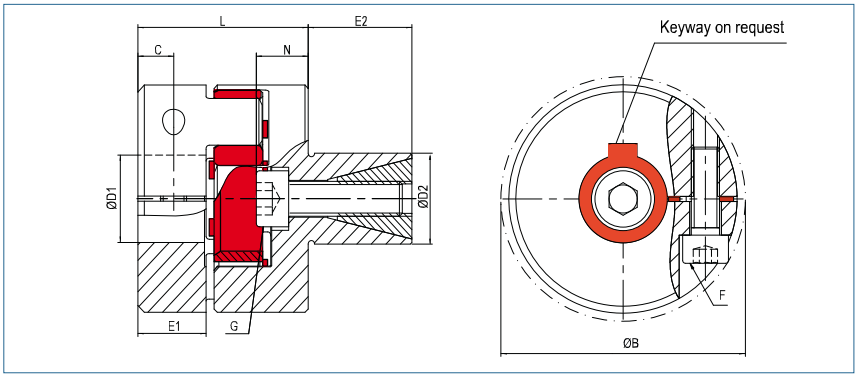
Material	hub - aluminium outer conical hub - steel spider element - polyurethane
Hub	bore tolerance: H7
Shore-hardness	98 Sh A (red)

Further spider elements and technical data are available on page 42.

Servo Insert Coupling

with expanding clamps

optional full stainless steel version



Order Code

KBE4	-	38	-	40	-	35	-	98Sh
Type		Size		ØD1 (H7)		ØD2 (h7)		Shore-hardness

Size	Dimensions (mm)											Technical Data			
	ØA	L	Ø D1	Ø D2	E1	E2	N	C	B	F	G	max. speed upm. (1/min)	Mass (per coupling) (g)	Moment of Inertia (per coupling) J (g m²)	Torque (Nm)
	Outer Ø		Bore Size (H7) min~max	(h7) min~max						Screw (ISO4762) TA (Nm)	Screw (ISO4762) TA (Nm)				
14	30	28	4 - 16	13 - 25	11	20	7	5	32.2	M3	M5	20000	98	0.010	12.5
										2	9				
19	40	40	10 - 22/24*	14 - 30	17	25	10	9	45.7	M6	M6	19000	240	0.042	17
										15	15				
24	55	46	12 - 32	23 - 36	20	27	11	10	56.4	M6	M8	14000	463	0.158	60
										15	40				
28	65	51	19 - 37	26 - 42	21	32	16	11	72.6	M8	M10	11500	799	0.375	160
										40	84				
38	80	68	20 - 48	38 - 60	31	45	20	15	83.3	M8	M12	9500	1754	1.213	325
										40	145				

Size	Ø Bore Size (mm)																						
	4	6	8	9	10	11	12	14	15	16	18	19	20	24	25	28	30	32	35	38	40	42	45
14	7.7	8.3	8.9	9.2	9.4	9.7	10	10.6	10.9	11.2													
19					44	45	47	49	50	51	54	55	56										
24							61	63	64	65	67	69	70	74	76	79	81	84					
28												114	116	123	124	130	133	137	142				
38													135	142	144	149	152	156	161	166	169	173	178

Material	hub - aluminium
	expanding clamps - steel
	spider element - polyurethane
Hub	bore tolerance: H7
Keyway	optional acc. DIN 6885
Shore-hardness	98 Sh A (red)

*** Hubs for bores > 22H7 to 24H7 will be supplied with 2 x M4 screws.**

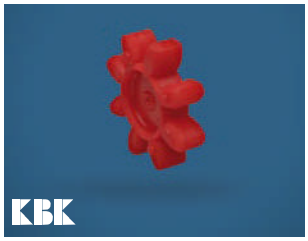
Further spider elements and technical data are available on page 42.

Spider Elements for Couplings Type KBE

Type KBE series

80 ShoreA
operating temperature:
-50 to +80
peak temperature: -60 to +120

92 ShoreA
operating temperature:
-30 to +90
peak temperature: -50 bis +120



98 ShoreA
operating temperature:
- 30 to +90
peak temperature: -40 bis +120

64 ShoreD
operating temperature:
-20 to +110
peak temperature: -30 bis +120

Size	Hardness	Torque [Nm]		Torsional Stiffness Static [Nm/rad]	Torsional Stiffness Dynamic [Nm/rad]	Spring Stiffness radial [N/mm]	Misalignment			max. Bore [mm]
		TK nom.	TK max				axial [mm]	radial [mm]	angular [Grad]	
5	92 ShA	0.5	0.6	5.16	16	154	+0.4 / -0.2	0.06	1.0°	3
7	80 ShA	0.7	1.4	8.6	26	114	+0.6 / -0.3	0.15	1.1°	3
	92 ShA	1.2	2.4	14.3	43	219	+0.6 / -0.3	0.10	1.0°	
	98 ShA	2	4	22.9	69	421	+0.6 / -0.3	0.10	1.0°	
	64 ShD	2.4	4.8	34.3	103	630	+0.6 / -0.3	0.04	0.8°	
9	80 ShA	1.8	3.6	17.2	52	125	+0.8 / -0.4	0.2	1.1°	7
	92 ShA	3	6	31.5	95	262	+0.8 / -0 .4	0.15	1.0°	
	98 ShA	5	10	51.6	155	518	+0.8 / -0.4	0.1	0.9°	
	64 ShD	6	12	74.6	224	739	+0.8 / -0.4	0.05	0.8°	
12	80 ShA	3	6	84.3	252	274	+0.9 / -0.4	0.20	1.1°	8
	92 ShA	5	10	160.4	482	470	+0.9 / -0.4	0.14	1.0°	
	98 ShA	9	18	240.7	718	846	+0.9 / -0.4	0.08	0.9°	
	64 ShD	12	24	327.9	982	1198	+0.9 / -0.4	0.05	0.8°	
14	80 ShA	4	8	60.2	180	153	+1.0 / -0 .5	0.21	1.1°	10
	92 ShA	7.5	15	114.6	344	336	+1.0 / -0.5	0.15	1.0°	
	98 ShA	12.5	25	171.9	513	654	+1.0 / -0 .5	0.09	0.9°	
	64 ShD	16	32	234.2	702	856	+1.0 / -0.5	0.06	0.8°	
19	80 ShA	6	12	618	1065	582	+1.2 / -0.5	0.15	1.1°	18
	92 ShA	12	24	1090	1815	1120	+1.2 / -0.5	0.10	1.0°	
	98 ShA	21	42	1512	2540	2010	+1.2 / -0.5	0.06	0.9°	
	64 ShD	26	52	2560	3810	2930	+1.2 / -0 .5	0.04	0.8°	
24	80 ShA	17	34	860	1390	840	+1.4 / -0.5	0.2	1.0°	27
	92 ShA	35	70	2300	5130	1900	+1.4 / -0.5	0.15	1.0°	
	98 ShA	60	120	3700	8130	2940	+1.4 / -0.5	0.11	0.9°	
	64 ShD	75	150	5030	11500	4200	+1.4 / -0.5	0.08	0.8°	
28	80 ShA	46	92	1370	2350	990	+1.5 / -0.7	0.2	1.3°	30
	92 ShA	95	190	4080	6745	1780	+1.5 / -0.7	0.15	1,0°	
	98 ShA	160	320	6410	9920	3200	+1.5 / -0.7	0.11	0.9°	
	64 ShD	200	400	10260	20177	4348	+1.5 / -0.7	0.08	0.8°	
38	92 ShA	190	380	6525	12000	2350	+ 1.8 / -0.7	0.17	1.0°	38
	98 ShA	325	650	11800	21850	4400	+1.8 / -0.7	0.12	0.9°	
	64 ShD	405	810	26300	40335	6474	+1.8 / -0.7	0.09	0.8°	
42	92 ShA	265	530	10870	20500	4100	+ 2.0 / -1.0	0.19	1.0°	46
	98 ShA	450	900	21594	37692	5940	+2.0 / -1.0	0.14	0.9°	
	64 ShD	560	1120	36860	71400	7590	+2.0 / -1.0	0.10	0.8°	
48	92 ShA	310	620	12968	22800	4500	+2.1 / -1.0	0.23	1.0°	51
	98 ShA	525	1050	25759	49400	6820	+2.1 / -1.0	0.16	0.9°	
	64 ShD	655	1310	57630	102800	9000	+ 2.1 / -1.0	0.11	0.8°	