

Possible systems with safety couplings



Single Position

C

When exceeding the adjusted overload torque, the coupling will disengage. After eliminating the malfunction, the coupling will re-engage automatically. This can only happen at a certain position within 360° which can be noticed on the markings of the adjusting ring and the flange.

Note: Engagement is only possible at low speed.



Multi Position

D

When exceeding the adjusted overload torque, the coupling will disengage. After eliminating the malfunction, the coupling will re-engage automatically at the next successive ball points. Thus the safety coupling is immediately ready for use.

Note: Engagement is only possible at low speed.

Up to size 30 the angle of engagement is 45°.
From size 60 the angle of engagement is 60°.
Further angles of engagement upon request.



Full Disengagement

F

When exceeding the adjusted overload torque, the coupling will disengage. The driving and driven side are permanently torque-free separated from each other. After eliminating the malfunction, the coupling can be re-engaged by applying axial pressure on the pressure ring. It might be necessary to slightly rotate the driving and driven side towards each other.

Note: Engagement is only possible at standstill



Failsafe System

G

When the preset overload torque has been reached, the coupling will disengage and after a few angle degrees it will be mechanically locked. The response of the safety coupling is detected by using a limit switch and the torque flow will be stopped.

Safety Couplings with ball bearings

KBK|LP -10 ~ 1400

Safety Coupling
with keyway



P. 7

KBK|LLP -10 ~ 1400

Safety Coupling
with keyway and two bearings



P. 8

KBK|LK -2 ~ 500

Safety Coupling
with collet clamp



P. 9

KBK|LLK -2 ~ 500

Safety Coupling
with collet clamp and two bearings



P. 10

KBK|LI -10 ~ 1400

Safety Coupling
with inner cone



P. 11

KBK|LLI -10 ~ 1400

Safety Coupling
with inner cone and two bearings



P. 12

KBK|LA -10 ~ 1400

Safety Coupling
with outer cone



P. 13

KBK|LLA -10 ~ 1400

Safety Coupling
with outer cone and two bearings

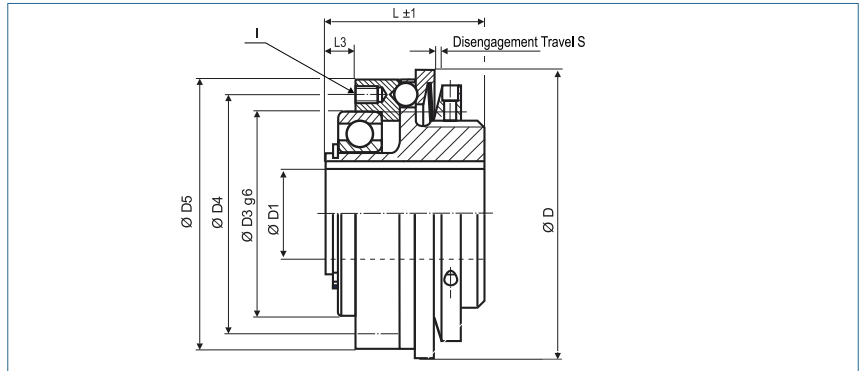


P. 14

Safety Coupling

with keyway

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/L-P - 60 - N20H7 - 20Nm - C or D - 2

Type Size ØD1 (H7) Disengagement Torque Torque Range
 C = Single Position D = Multi Position Engagement

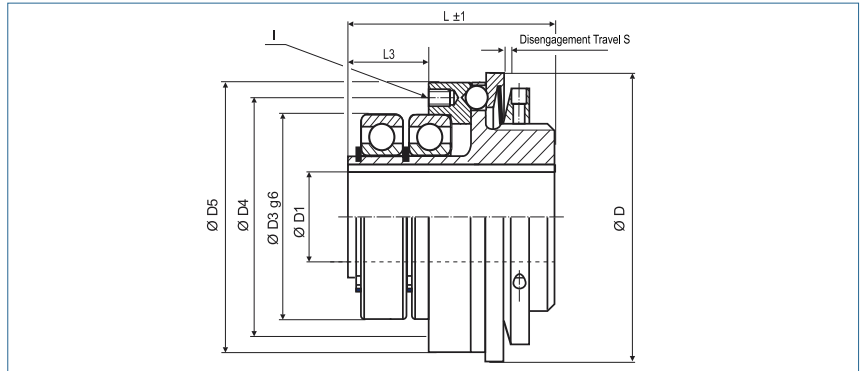
Size	Dimensions (mm)									Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	L	L3	S	I	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm ²)
	Outer Ø	Bore Size (H7) min-max				Length			6x	1 T _{KN} (Nm)	2 T _{KN} (Nm)			
-10	49	6-12	37	42	47	26	5	0.7	M3	3-7	5-10	12000	0.15	0.4
-30	64	10-16	47	53	60	33.5	6	1.2	M4	5-15	10-30	9400	0.45	1.9
-60	79	15-24	62	69	75	45	8	1.2	M5	13-35	20-65	7800	0.83	5.1
-80	94	19-29	68	80	90	46	10	2	M6	15-40	30-80	6400	1.4	12
-150	94	19-29	68	80	90	46	10	2	M6	50-130	65-150	6400	1.4	12
-200	109	20-38	80	90	105	52	10	2	M6	30-90	80-200	5500	1.64	19
-300	119	20-42	90	102	115	58	10	2	M8	60-200	100-300	5000	2.5	38
-500	129	20-50	100	112	125	57	10	2	M8	80-250	200-500	4500	3.8	68
-800	169	30-60	110	125	165	80	15	2	M12	260-600	500-900	3500	11	318
-1400	169	30-60	110	125	165	80	15	2	M12	450-900	800-1400	3500	11	318

+ Temperature Range -30 °C ~ 120 °C

Safety Coupling

with keyway and two bearings

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/LL-P - 60 - N20H7 - 20Nm - C or D - 2

Type

Size

ØD1
(H7)

Disengagement
Torque

Torque
Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)									Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	L	L3	S	I	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm ²)
	Outer Ø	Bore Size (H7) min~max				Length			6x	1 T _{KN} (Nm)	2 T _{KN} (Nm)			
-10	49	6-12	37	42	47	36	15	0.7	M3	3-7	5-10	12000	0.18	0.4
-30	64	10-16	47	53	60	47	20	1.2	M4	5-15	10-30	9400	0.53	2.2
-60	79	15-24	62	69	75	62	26	1.2	M5	13-35	20-65	7800	0.98	6.0
-80	94	19-29	68	80	90	62	27	2	M6	15-40	30-80	6400	1.7	14
-150	94	19-29	68	80	90	62	27	2	M6	50-130	65-150	6400	1.7	14
-200	109	20-38	80	90	105	68	28	2	M6	30-90	80-200	5500	1.9	23
-300	119	20-42	90	102	115	78	31	2	M8	60-200	100-300	5000	3.0	44
-500	129	20-50	100	112	125	77	31	2	M8	80-250	200-500	4500	4.5	80
-800	169	30-60	110	125	165	103	38	2	M12	260-600	500-900	3500	13	376
-1400	169	30-60	110	125	165	103	38	2	M12	450-900	800-1400	3500	13	376

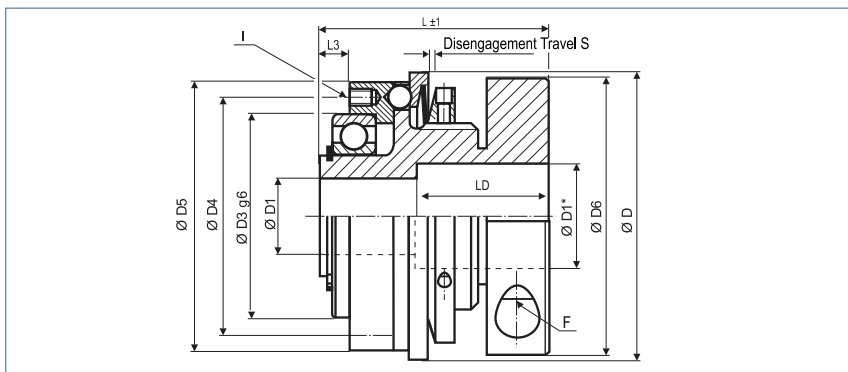


Temperature Range -30 °C ~ 120 °C

Safety Coupling

with collet clamp

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/L-K - 60 - 20H7 - 20Nm - C or D - 2

Type Size ØD1 (H7) Disengagement Torque Torque Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)											Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	Ø D6	L	L3	S	I	F	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm²)
	Outer Ø	Bore Size (H7) min~max					Length		6x	Screw ISO4762 T _A (Nm)	1 T _{KN} (Nm)	2 T _{KN} (Nm)				
-2	29	3-8	19	21	25	25	28	3	0.7	M2	M3 2	0.2-1.5	0.5-2	13200	0.06	0.05
-4.5	36	6-13 9#	26	28	32	32.5	30	4	0.7	M2	M4 3.5	1-3	3-6	12300	0.11	0.20
-7	49	6-16 11#	37	42	47	40.5	36	5	0.7	M3	M4 4.5	1-4	3-7	12000	0.18	0.4
-10	49	6-16 11#	37	42	47	40.5	36	5	0.7	M3	M4 5.1	3-7	5-10	12000	0.18	0.4
-30	64	10-20 14#	47	53	60	56	52.5	6	1.2	M4	M6 15	5-15	10-30	9400	0.59	2.4
-60	79	12-28 21#	62	69	75	66	73	8	1.2	M5	M8 36	13-35	20-65	7800	1.05	6.4
-80	94	14-35 27#	68	80	90	82	67	10	2	M6	M10 84	15-40	30-80	6400	2.4	21
-150	94	14-35 27#	68	80	90	82	67	10	2	M6	M10 84	50-130	65-150	6400	2.4	21
-200	109	22-41 33#	80	90	105	90	79	10	2	M6	M12 125	30-90	80-200	5500	2.9	35
-300	119	30-50 42#	90	102	115	110	84	10	2	M8	M12 145	60-200	150-300	5000	4.4	66
-500	129	35-56 46#	100	112	125	122	95	10	2	M8	M12 145	80-250	200-500	4500	6.4	113

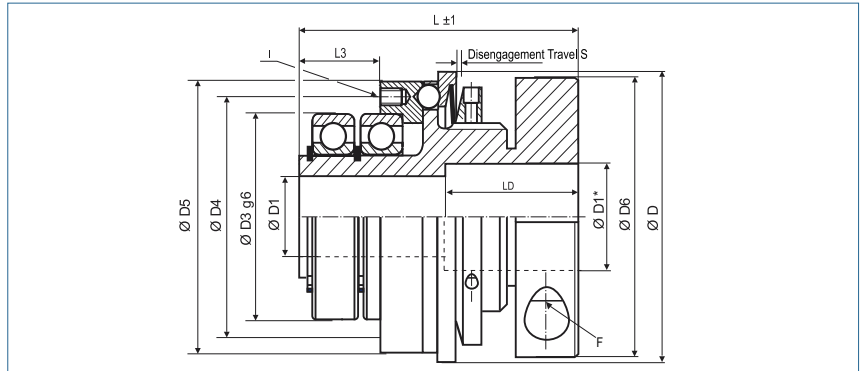
- Bore** > Ø D1 and ≤ D1* only over LD
- Keyway** optional acc. DIN 6885
biggest bore marked with a #
- Temperature Range** -30 °C ~ 120 °C

Size	2	4.5	7	10	30	60	80	150	200	300	500
D1*	11	X	20	20	26	31	38	38	X	57	62
LD	15	X	20	20	28	38	34	34	X	42	56

Safety Coupling

with collet clamp and two bearings

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/LL-K - 60 - 20H7 - 20Nm - C or D - 2

Type

Size

ØD1 (H7)

Disengagement Torque

Torque Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)											Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	Ø D6	L	L3	S	I	F	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm²)
	Outer Ø	Bore Size (H7) min-max					Length		6x	Screw ISO4762 T _A (Nm)	1 T _{KN} (Nm)	2 T _{KN} (Nm)				
-2	29	3-8	19	21	25	25	34	7	0.7	M2	M3 2	0.2-1.5	0.5-2	13200	0.07	0.06
-4.5	36	6-13 9#	26	28	32	32.5	37	9	0.7	M2	M4 3.5	1-3	3-6	12300	0.13	0.22
-7	49	6-16 11#	37	42	47	40.5	46	15	0.7	M3	M4 4.5	1-4	3-7	12000	0.21	0.5
-10	49	6-16 11#	37	42	47	40.5	46	15	0.7	M3	M4 5.1	3-7	5-10	12000	0.21	0.5
-30	64	10-20 14#	47	53	60	56	66	20	1.2	M4	M6 15	5-15	10-30	9400	0.67	2.8
-60	79	12-28 21#	62	69	75	66	90	26	1.2	M5	M8 36	13-35	20-65	7800	1.2	7.3
-80	94	14-35 27#	68	80	90	82	83	27	2	M6	M10 84	15-40	30-80	6400	2.7	23
-150	94	14-35 27#	68	80	90	82	83	27	2	M6	M10 84	50-130	65-150	6400	2.7	23
-200	109	22-41 33#	80	90	105	90	96	28	2	M6	M12 125	30-90	80-200	5500	3.3	39
-300	119	30-50 42#	90	102	115	110	104	31	2	M8	M12 145	60-200	150-300	5000	4.9	73
-500	129	35-56 46#	100	112	125	122	113	31	2	M8	M12 145	80-250	200-500	4500	7.0	125



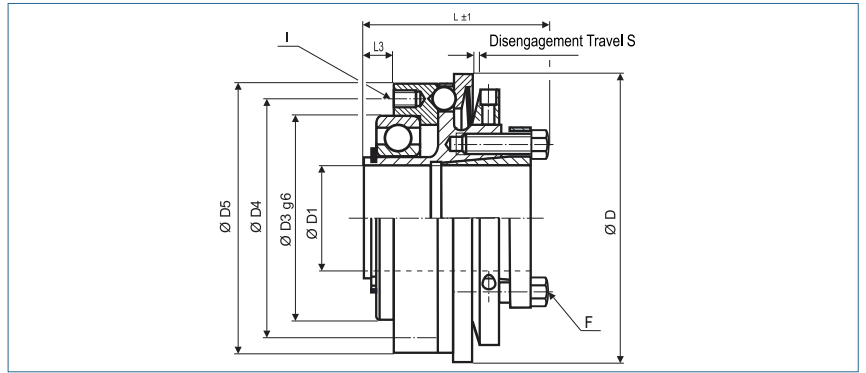
Bore > Ø D1 and ≤ D1* only over LD
Keyway optional acc. DIN 6885
 biggest bore marked with a #
Temperature Range -30 °C ~ 120 °C

Size	2	4.5	7	10	30	60	80	150	200	300	500
D1*	11	X	20	20	26	31	38	38	X	57	62
LD	15	X	20	20	28	38	34	34	X	42	56

Safety Coupling

with inner cone

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/L-I - 60 - 20H7 - 20Nm - C or D - 2

Type

Size

ØD1
(H7)

Disengagement
Torque

Torque
Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)										Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	L	L3	S	I	F	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm ²)
	Outer Ø	Bore Size (H7) min~max				Length			6x	Screw ISO4017 T _A (Nm)	1 T _{KN} (Nm)	2 T _{KN} (Nm)			
-10	49	6-14 10#	37	42	47	36	5	0.7	M3	M3 2.1	3-7	5-10	12000	0.18	0.4
-30	64	12-20 14#	47	53	60	45	6	1.2	M4	M5 6	5-15	10-30	9400	0.54	2.2
-60	79	15-25 18#	62	69	75	58	8	1.2	M5	M6 8.5	13-35	20-65	7800	1.01	6.2
-80	94	20-35 27#	68	80	90	60	10	2	M6	M6 14	15-40	30-80	6400	1.72	15
-150	94	20-35 27#	68	80	90	60	10	2	M6	M6 14	50-130	65-150	6400	1.72	15
-200	109	20-40 32#	80	90	105	66	10	2	M6	M6 14	30-90	80-200	5500	2	24
-300	119	25-45 37#	90	102	115	75	10	2	M8	M8 20	60-200	150-300	5000	3.3	49
-500	129	35-55 45#	100	112	125	75	10	2	M8	M8 26	80-250	200-500	4500	4.7	83
-800	169	50-70 58#	110	125	165	110	15	2	M12	M16 45	260-600	500-900	3500	13.1	380
-1400	169	50-70 58#	110	125	165	110	15	2	M12	M16 80	450-900	800-1400	3500	13.2	385



Keyway

optional acc. DIN 6885

biggest bore marked with a #

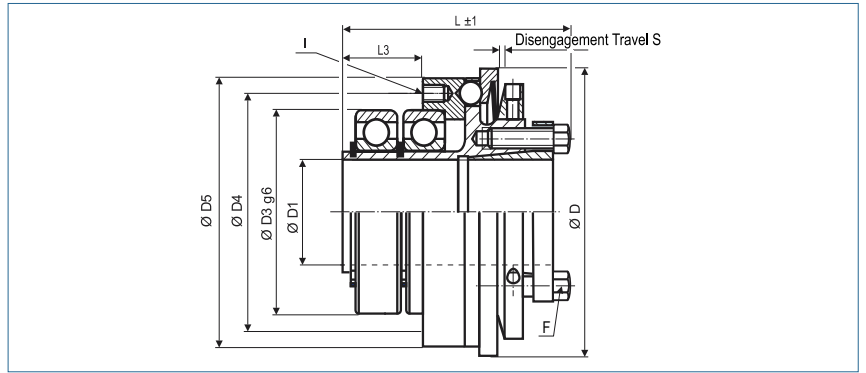
Temperature Range

-30 °C ~ 120 °C

Safety Coupling

with inner cone and two bearings

optional
nickel-plated version
optional full stainless
steel version



Order Code **KBK/LL-I - 60 - 20H7 - 20Nm - C or D - 2**

Type Size ØD1 (H7) Disengagement Torque Torque Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)										Technical Data				
	ØD Outer Ø	Ø D1 Bore Size (H7) min-max	Ø D3	Ø D4	Ø D5	L Length	L3	S	I 6x	F Screw (ISO4017) T _A (Nm)	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm ²)
											1 T _{KN} (Nm)	2 T _{KN} (Nm)			
-10	49	6-14 10#	37	42	47	46	15	0.7	M3	M3 2.1	3-7	5-10	12000	0.21	0.5
-30	64	12-20 14#	47	53	60	58	20	1.2	M4	M5 6	5-15	10-30	9400	0.62	2.6
-60	79	15-25 18#	62	69	75	75	26	1.2	M5	M6 8.5	13-35	20-65	7800	1.16	7.1
-80	94	20-35 27#	68	80	90	76	27	2	M6	M6 14	15-40	30-80	6400	1.97	17
-150	94	20-35 27#	68	80	90	76	27	2	M6	M6 14	50-130	65-150	6400	1.97	17
-200	109	20-40 32#	80	90	105	85	28	2	M6	M6 14	30-90	80-200	5500	2.30	27
-300	119	25-45 37#	90	102	115	95	31	2	M8	M8 20	60-200	150-300	5000	3.7	56
-500	129	35-55 45	100	112	125	95	31	2	M8	M8 26	80-250	200-500	4500	5.3	95
-800	169	50-70 58#	110	125	165	133	38	2	M12	M16 45	260-600	500-900	3500	15	438
-1400	169	50-70 58#	110	125	165	133	38	2	M12	M16 80	450-900	800-1400	3500	15	438

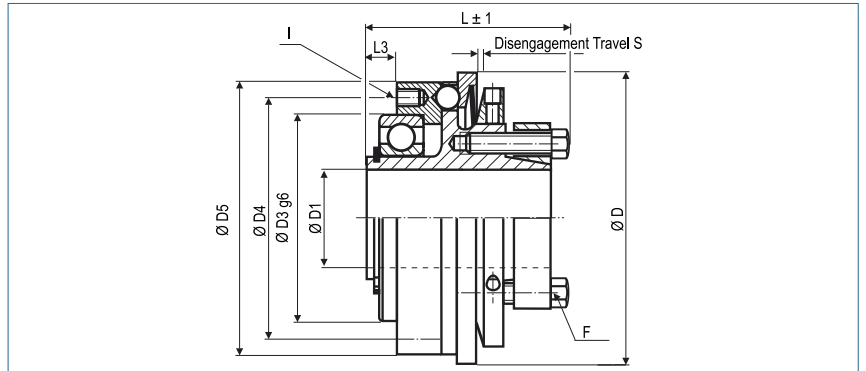
+ **Keyway** optional acc. DIN 6885
 biggest bore marked with a #

Temperature Range -30 °C ~ 120 °C

Safety Coupling

with outer cone

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/L-A - 60 - 20H7 - 20Nm - C or D - 2

Type

Size

ØD1
(H7)

Disengagement
Torque

Torque
Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)										Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	L	L3	S	I	F	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm ²)
	Outer Ø	Bore Size (H7) min-max				Length			6x	Screw ISO4017 T _A (Nm)	1 T _{KN} (Nm)	2 T _{KN} (Nm)			
-10	49	5-12 10#	37	42	47	37.5	5	0.7	M3	M3 2.1	3-7	5-10	12000	0.18	0.4
-30	64	12-20 14#	47	53	60	48	6	1.2	M4	M5 5.9	5-15	10-30	9400	0.54	2.2
-60	79	15-30 24#	62	69	75	66	8	1.2	M5	M5 8.7	13-35	20-65	7800	1.01	6.2
-80	94	20-35 27#	68	80	90	68.5	10	2	M6	M6 15	15-40	30-80	6400	1.72	15
-150	94	20-35 27#	68	80	90	68.5	10	2	M6	M6 15	50-130	65-150	6400	1.72	15
-200	109	20-42 34#	80	90	105	74.5	10	2	M6	M6 15	30-90	80-200	5500	2	24
-300	119	25-50 42#	90	102	115	83.5	10	2	M8	M8 25	60-200	150-300	5000	3.3	49
-500	129	35-55 45#	100	112	125	89	10	2	M8	M8 36	80-250	200-500	4500	4.7	83
-800	169	50-70 58#	110	125	165	118	15	2	M12	M12 85	260-600	500-900	3500	13.1	380
-1400	169	50-70 58#	110	125	165	118	15	2	M12	M12 115	450-900	800-1400	3500	13.2	385



Keyway

optional acc. DIN 6885
biggest bore marked with a #

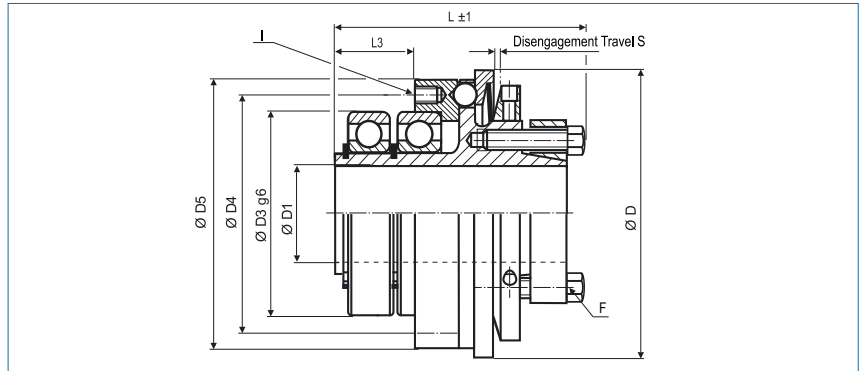
Temperature Range

-30 °C ~ 120 °C

Safety Coupling

with outer cone and two bearings

optional
nickel-plated version
optional full stainless
steel version



Order Code

KBK/LL-A - 60 - 20H7 - 20Nm - C or D - 2

Type

Size

ØD1
(H7)

Disengagement
Torque

Torque
Range

C = Single Position D = Multi Position Engagement

Size	Dimensions (mm)										Technical Data				
	ØD	Ø D1	Ø D3	Ø D4	Ø D5	L	L3	S	I	F	Torque Range		max. speed (1/min)	Mass (kg)	Moment of Inertia J (kg cm ²)
	Outer Ø	Bore Size (H7) min~max				Length		6x	Screw ISO4017 T _A (Nm)	1 T _{KN} (Nm)	2 T _{KN} (Nm)				
-10	49	5-12 10#	37	42	47	47.5	15	0.7	M3	M3 2.1	3-7	5-10	12000	0.21	0.5
-30	64	12-20 14#	47	53	60	61.5	20	1.2	M4	M5 5.9	5-15	10-30	9400	0.62	2.6
-60	79	15-30 24#	62	69	75	83	26	1.2	M5	M5 8.7	13-35	20-65	7800	1.16	7.1
-80	94	20-35 27#	68	80	90	84.5	27	2	M6	M6 15	15-40	30-80	6400	1.97	17
-150	94	20-35 27#	68	80	90	84.5	27	2	M6	M6 15	50-130	65-150	6400	1.97	17
-200	109	20-42 34#	80	90	105	93.5	28	2	M6	M6 15	30-90	80-200	5500	2.30	27
-300	119	25-50 42#	90	102	115	103.5	31	2	M8	M8 25	60-200	150-300	5000	3.7	56
-500	129	35-55 45#	100	112	125	109	31	2	M8	M8 36	80-250	200-500	4500	5.3	95
-800	169	50-70 58#	110	125	165	141	38	2	M12	M12 85	260-600	500-900	3500	15	438
-1400	169	50-70 58#	110	125	165	141	38	2	M12	M12 115	450-900	800-1400	3500	15	438



Keyway

optional acc. DIN 6885

biggest bore marked with a #

Temperature Range

-30 °C ~ 120 °C