



Needle roller and cage assemblies



TECHNICAL SUPPLEMENT

T034

PRODUCT INFORMATION

P035 - 046



K

P035 - 046

1. Types and designs

SLB Needle Roller and Cage Assemblies are supplied in single row Fig. 1. The single row cages are available in two configurations: machined ring (series K), and molded polyamide reinforced with glass or carbon fiber (series K - TV). The T2 cage features a maximum allowable operating temperature of 120°C and maximum allowable continuous operating temperature of 100°C.



Fig. 1

2. Bearing numbers

As summarized in Fig. 2, the bearing numbers of **SLB** Needle Roller and Cage Assemblies comprise a series number, a dimension code (inscribed enveloping circle diameter X roller set outside diameter X cage width), and a suffix.

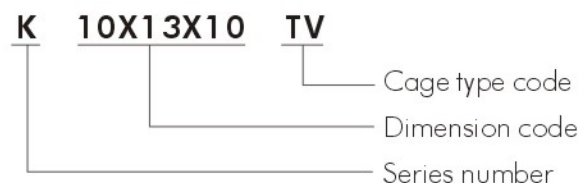


Fig. 2

3. Radial clearance

When the shaft and housing are used as the raceway, the radial clearance of the ball and cage assembly is governed by the shaft diameter and housing bore dimension. Usually, if the tolerance range of the needle rollers is one of the standard groups, the shaft diameter and housing bore diameter in Table 1 are used.

Table 1 Recommended fits

Shaft dia. mm		≥80	81~139	140≥
Radial clearance	Smaller than normal clearance	j5/G6	H5/G6	h5/G6
	Normal clearance	h5/G6	g5/G6	f5/H6
	Greater than normal clearance	g6/G6	f6/G6	f6/G6

4. Shaft and housing requirements

When used as a raceway, a shaft and housing must satisfy the requirements indicated in Table 2.

Table 2 Shaft and housing requirements

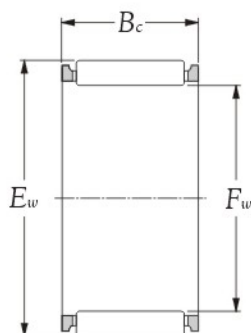
Characteristics	Shaft	Housing
Circularity (max.)	IT3	IT4
Cylindricity (max.)	IT3	IT4
Surface roughness (max.)	0.4μm	0.4μm
Surface roughness (max.)	HRC58~64	

5. Mounting dimensions for bearings

Table 3 gives the recommended tolerance for the cage guide width b dimension relative to the nominal dimension " B_c ".

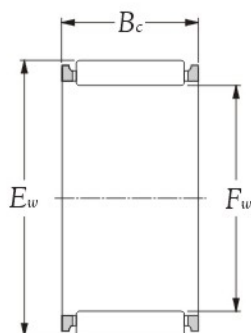
Table 3 Tolerance for guide width

Series classification	Tolerance for b
Metric	$B_c^{+0.2}_0$



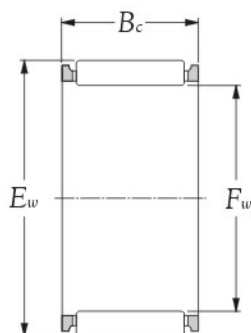
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease r/min	oil r/min	
3	K 3x6x7	6	7 ^{-0.2} / _{-0.55}	1460	970	149	99	33000	50000	0.0004
4	K 4x7x7	7	7 ^{-0.2} / _{-0.55}	1770	1270	180	129	30000	45000	0.0005
5	K 5x8x8	8	8 ^{-0.2} / _{-0.55}	2640	2190	269	224	27000	40000	0.0007
5	K 5x8x10	8	10 ^{-0.2} / _{-0.55}	2720	2250	277	230	27000	40000	0.0009
6	K 6x9x8	9	8 ^{-0.2} / _{-0.55}	2660	2280	272	233	25000	37000	0.0009
6	K 6x9x10	9	10 ^{-0.2} / _{-0.55}	3400	3150	345	320	25000	37000	0.0011
6	K 6x10x13	10	13 ^{-0.2} / _{-0.55}	4400	3700	450	380	25000	37000	0.0019
7	K 7x10x8	10	8 ^{-0.2} / _{-0.55}	2670	2350	272	239	23000	34000	0.0009
7	K 7x10x10	10	10 ^{-0.2} / _{-0.55}	3400	3200	345	330	23000	34000	0.0011
8	K 8x11x8	11	8 ^{-0.2} / _{-0.55}	3150	3000	320	305	21000	32000	0.0011
8	K 8x11x10	11	10 ^{-0.2} / _{-0.55}	4000	4100	410	420	21000	32000	0.0013
8	K 8x11x13	11	13 ^{-0.2} / _{-0.55}	4850	5200	495	535	21000	32000	0.0026
8	K 8x12x10	12	10 ^{-0.2} / _{-0.55}	4650	4150	475	425	21000	32000	0.0020
8	K 8x12x12	12	12 ^{-0.2} / _{-0.55}	5600	5300	570	540	21000	32000	0.0034
8	K 8x12x13	12	13 ^{-0.2} / _{-0.55}	5600	5300	570	540	21000	32000	0.0036
9	K 9x12x10	12	10 ^{-0.2} / _{-0.55}	4550	5000	465	510	20000	30000	0.0015
9	K 9x12x13	12	13 ^{-0.2} / _{-0.55}	5500	6400	560	650	20000	30000	0.0021
10	K 10x13x10	13	10 ^{-0.2} / _{-0.55}	4550	5100	460	520	19000	28000	0.0016
10	K 10x13x13	13	13 ^{-0.2} / _{-0.55}	5450	6450	555	660	19000	28000	0.0031
10	K 10x14x8	14	8 ^{-0.2} / _{-0.55}	4300	3950	435	405	19000	28000	0.0027
10	K 10x14x10	14	10 ^{-0.2} / _{-0.55}	5500	5450	560	555	19000	28000	0.0034
10	K 10x14x13	14	13 ^{-0.2} / _{-0.55}	6600	6900	675	705	19000	28000	0.0044
10	K 10x16x12	16	12 ^{-0.2} / _{-0.55}	7100	5950	720	610	19000	28000	0.0066
11	K 11x14x10	14	10 ^{-0.2} / _{-0.55}	5050	6000	515	615	18000	27000	0.0028

Technical supplement			
	Cages	Precision	Grease
	Steel - ☒		
	Polymid - ☒	Normal (ISO)	Nil
	Brass - ☒		



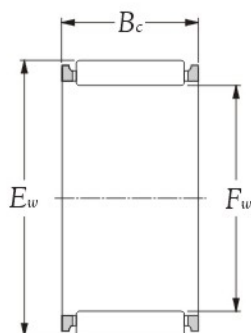
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease oil	r/min	
12	K 12x15x9	15	9 ^{-0.2 -0.55}	4450	5250	455	535	17000	26000	0.0027
12	K 12x15x13	15	13 ^{-0.2 -0.55}	6000	7700	615	785	17000	26000	0.0038
12	K 12x16x8	16	8 ^{-0.2 -0.55}	4850	4900	495	500	17000	26000	0.0034
12	K 12x16x13	16	13 ^{-0.2 -0.55}	7500	8500	765	870	17000	26000	0.0055
12	K 12x17x13	17	13 ^{-0.2 -0.55}	9000	9400	920	960	17000	26000	0.0075
12	K 12x18x12	18	12 ^{-0.2 -0.55}	8650	8000	880	815	17000	26000	0.0084
14	K 14x17x10	17	10 ^{-0.2 -0.55}	5400	7050	550	720	16000	24000	0.0033
14	K 14x18x10	18	10 ^{-0.2 -0.55}	6900	8000	705	815	16000	24000	0.0046
14	K 14x18x11	18	11 ^{-0.2 -0.55}	7600	9050	775	925	16000	24000	0.0053
14	K 14x18x13	18	13 ^{-0.2 -0.55}	8300	10100	845	1030	16000	24000	0.0063
14	K 14x18x17	18	17 ^{-0.2 -0.55}	10900	14400	1120	1470	16000	24000	0.0081
14	K 14x19x13	19	13 ^{-0.2 -0.55}	8950	9650	915	985	16000	24000	0.0080
14	K 14x20x12	20	12 ^{-0.2 -0.55}	9350	9150	955	930	16000	24000	0.0095
14	K 14x20x17	20	17 ^{-0.2 -0.55}	13500	14600	1370	1490	16000	24000	0.0140
15	K 15x18x14	18	14 ^{-0.2 -0.55}	7850	11600	800	1190	15000	23000	0.0060
15	K 15x19x17	19	17 ^{-0.2 -0.55}	10900	14600	1110	1490	15000	23000	0.0090
15	K 15x20x13	20	13 ^{-0.2 -0.55}	10100	11500	1030	1170	15000	23000	0.0088
15	K 15x21x15	21	15 ^{-0.2 -0.55}	11900	12500	1210	1280	15000	23000	0.0130
15	K 15x21x21	21	21 ^{-0.2 -0.55}	16500	19100	1680	1950	15000	23000	0.0170
16	K 16x20x10	20	10 ^{-0.2 -0.55}	7500	9250	765	945	15000	23000	0.0057
16	K 16x20x11	20	11 ^{-0.2 -0.55}	8300	10500	845	1070	15000	23000	0.0061
16	K 16x20x13	20	13 ^{-0.2 -0.55}	9050	11800	925	1200	15000	23000	0.0071
16	K 16x22x12	22	12 ^{-0.2 -0.55}	11700	12500	1190	1280	15000	23000	0.0100
16	K 16x22x17	22	17 ^{-0.2 -0.55}	14400	16400	1470	1670	15000	23000	0.0150

Technical supplement			
Cages	Precision	Grease	
Steel - ☒	Normal (ISO)	Nil	
Polymid - ☒			
Brass - ☒			



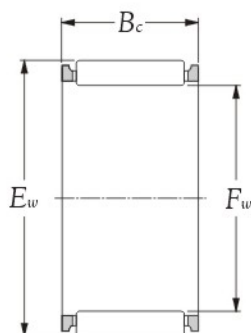
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static Co	dynamic C kgf	static Co	grease r/min	oil r/min	
16	K 16x22x20	22	20 ^{-0.2 -0.55}	16000	18800	1640	1920	15000	23000	0.0170
17	K 17x21x15	21	15 ^{-0.2 -0.55}	10400	14400	1060	1460	15000	22000	0.0089
17	K 17x21x17	21	17 ^{-0.2 -0.55}	11800	16900	1210	1720	15000	22000	0.0095
17	K 17x22x20	22	20 ^{-0.2 -0.55}	14700	19200	1500	1960	15000	22000	0.0150
17	K 17x23x17	23	17 ^{-0.2 -0.55}	14400	16500	1460	1690	15000	22000	0.0160
18	K 18x22x10	22	10 ^{-0.2 -0.55}	7400	9400	755	955	14000	21000	0.0061
18	K 18x22x13	22	13 ^{-0.2 -0.55}	8900	11900	910	1210	14000	21000	0.0077
18	K 18x22x17	22	17 ^{-0.2 -0.55}	11700	17000	1200	1730	14000	21000	0.0110
18	K 18x24x12	24	12 ^{-0.2 -0.55}	12300	13800	1250	1410	14000	21000	0.0120
18	K 18x24x13	24	13 ^{-0.2 -0.55}	11600	12800	1180	1300	14000	21000	0.0130
18	K 18x24x20	24	20 ^{-0.2 -0.55}	17000	20900	1730	2130	14000	21000	0.0190
18	K 18x25x17	25	17 ^{-0.2 -0.55}	18000	20400	1830	2080	14000	21000	0.0190
18	K 18x25x22	25	22 ^{-0.2 -0.55}	22100	26600	2250	2710	14000	21000	0.0240
19	K 19x23x13	23	13 ^{-0.2 -0.55}	9650	13500	985	1370	14000	21000	0.0082
19	K 19x23x17	23	17 ^{-0.2 -0.55}	12700	19200	1300	1960	14000	21000	0.0110
20	K 20x24x11	24	11 ^{-0.2 -0.55}	9500	13400	970	1370	13000	20000	0.0072
20	K 20x26x12	26	12 ^{-0.2 -0.55}	12900	15100	1320	1540	13000	20000	0.0130
20	K 20x28x25	28	25 ^{-0.2 -0.55}	27100	32500	2760	3300	13000	20000	0.0370
21	K 21x25x13	25	13 ^{-0.2 -0.55}	10300	15100	1050	1540	13000	19000	0.0090
21	K 21x25x17	25	17 ^{-0.2 -0.55}	13600	21500	1380	2200	13000	19000	0.0120
22	K 22x26x13	26	13 ^{-0.2 -0.55}	10200	15200	1040	1550	12000	18000	0.0094
22	K 22x27x20	27	20 ^{-0.2 -0.55}	17500	25900	1780	2640	12000	18000	0.0200
22	K 22x28x17	28	17 ^{-0.2 -0.55}	17700	23300	1810	2380	12000	18000	0.0200
22	K 22x30x15	30	15 ^{-0.2 -0.55}	19300	21700	1970	2210	12000	18000	0.0220

Technical supplement			
	Cages	Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	Nil



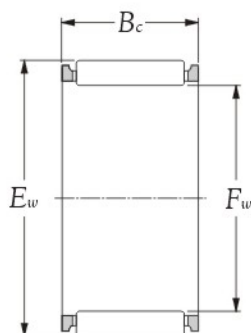
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease r/min	oil r/min	
23	K 23x28x24	28	24 ^{-0.2 -0.55}	19800	31000	2020	3150	11000	17000	0.0230
24	K 24x28x13	28	13 ^{-0.2 -0.55}	10800	16800	1100	1710	11000	17000	0.0100
24	K 24x28x17	28	17 ^{-0.2 -0.55}	14300	23900	1460	2440	11000	17000	0.0130
24	K 24x29x13	29	13 ^{-0.2 -0.55}	12300	16900	1250	1720	11000	17000	0.0120
24	K 24x30x17	30	17 ^{-0.2 -0.55}	18400	25200	1880	2570	11000	17000	0.0220
25	K 25x29x10	29	10 ^{-0.2 -0.55}	8950	13300	910	1350	11000	16000	0.0083
25	K 25x29x13	29	13 ^{-0.2 -0.55}	10800	16900	1100	1720	11000	16000	0.0100
25	K 25x30x13	30	13 ^{-0.2 -0.55}	13200	18800	1350	1920	11000	16000	0.0130
25	K 25x31x13	31	13 ^{-0.2 -0.55}	15200	19900	1550	2030	11000	16000	0.0160
25	K 25x31x14	31	14 ^{-0.2 -0.55}	16500	22100	1680	2250	11000	16000	0.0180
25	K 25x31x17	31	17 ^{-0.2 -0.55}	18300	25300	1870	2580	11000	16000	0.0220
25	K 25x31x21	31	21 ^{-0.2 -0.55}	22500	33000	2290	3350	11000	16000	0.0260
26	K 26x30x13	30	13 ^{-0.2 -0.55}	11800	19200	1200	1960	10000	15000	0.0110
26	K 26x30x17	30	17 ^{-0.2 -0.55}	15500	27400	1580	2790	10000	15000	0.0150
26	K 26x34x22	34	22 ^{-0.2 -0.55}	24200	30000	2470	3050	10000	15000	0.0410
28	K 28x32x17	32	17 ^{-0.2 -0.55}	15300	27500	1560	2810	9500	14000	0.0170
28	K 28x32x21	32	21 ^{-0.2 -0.55}	18700	35500	1910	3650	9500	14000	0.0200
28	K 28x33x13	33	13 ^{-0.2 -0.55}	13900	20900	1420	2130	9500	14000	0.0150
28	K 28x33x27	33	27 ^{-0.2 -0.55}	28300	52000	2890	5300	9500	14000	0.0320
28	K 28x34x14	34	14 ^{-0.2 -0.55}	17500	24800	1790	2530	9500	14000	0.0200
28	K 28x34x17	34	17 ^{-0.2 -0.55}	18100	25800	1850	2630	9500	14000	0.0240
28	K 28x35x16	35	16 ^{-0.2 -0.55}	21200	28400	2160	2900	9500	14000	0.0290
28	K 28x35x18	35	18 ^{-0.2 -0.55}	21500	28900	2190	2950	9500	14000	0.0310
29	K 29x34x27	34	27 ^{-0.2 -0.55}	28100	52000	2870	5300	9500	14000	0.0330

Technical supplement			
	Cages	Precision	Grease
	Steel - ✓	Normal (ISO)	Nil
	Polymid - X		
	Brass - X		



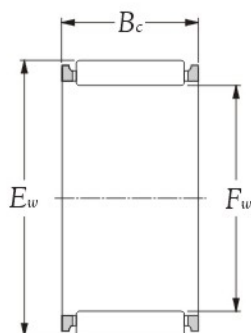
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		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease r/min	oil r/min	
30	K 30x37x16	37	16 ^{-0.2 -0.55}	21900	30500	2230	3100	8500	13000	0.029
30	K 30x37x18	37	18 ^{-0.2 -0.55}	23300	33000	2370	3350	8500	13000	0.034
30	K 30x38x18	38	18 ^{-0.2 -0.55}	25000	33000	2550	3350	8500	13000	0.036
32	K 32x37x13	37	13 ^{-0.2 -0.55}	14500	23000	1480	2350	8500	13000	0.018
32	K 32x38x26	38	26 ^{-0.2 -0.55}	31500	54000	3200	5550	8500	13000	0.041
32	K 32x39x16	39	16 ^{-0.2 -0.55}	22600	32000	2310	3300	8500	13000	0.034
32	K 32x39x18	39	18 ^{-0.2 -0.55}	24000	35000	2450	3550	8500	13000	0.037
35	K 35x40x13	40	13 ^{-0.2 -0.55}	15200	25100	1550	2560	7500	11000	0.019
35	K 35x40x17	40	17 ^{-0.2 -0.55}	20000	36000	2040	3650	7500	11000	0.025
35	K 35x41x14	41	14 ^{-0.2 -0.55}	19400	30500	1980	3100	7500	11000	0.026
35	K 35x41x15	41	15 ^{-0.2 -0.55}	20900	33500	2130	3400	7500	11000	0.027
35	K 35x42x16	42	16 ^{-0.2 -0.55}	24100	36000	2450	3650	7500	11000	0.035
35	K 35x42x18	42	18 ^{-0.2 -0.55}	24700	37000	2510	3750	7500	11000	0.039
35	K 35x42x20	42	20 ^{-0.2 -0.55}	28500	44500	2910	4550	7500	11000	0.041
35	K 35x42x30	42	30 ^{-0.2 -0.55}	39500	68000	4050	6950	7500	11000	0.062
37	K 37x42x13	42	13 ^{-0.2 -0.55}	15900	27100	1620	2770	7500	11000	0.021
37	K 37x44x18	44	18 ^{-0.2 -0.55}	26300	41000	2680	4150	7500	11000	0.042
38	K 38x43x17	43	17 ^{-0.2 -0.55}	20900	38500	2130	3950	7500	11000	0.026
38	K 38x43x27	43	27 ^{-0.2 -0.55}	32000	67500	3300	6900	7500	11000	0.043
38	K 38x46x32	46	32 ^{-0.2 -0.55}	54000	95500	5500	9700	7500	11000	0.073
40	K 40x45x13	45	13 ^{-0.2 -0.55}	16500	29200	1680	2980	6500	10000	0.022
40	K 40x45x17	45	17 ^{-0.2 -0.55}	21800	41500	2220	4250	6500	10000	0.027
40	K 40x45x21	45	21 ^{-0.2 -0.55}	26700	54000	2720	5500	6500	10000	0.037
40	K 40x45x27	45	27 ^{-0.2 -0.55}	33500	72500	3400	7400	6500	10000	0.044

Technical supplement			
	Cages	Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	Nil



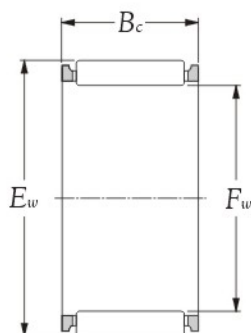
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		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease oil	r/min	
40	K 40x46x17	46	17.0 ^{-0.2} / _{-0.55}	24600	43000	2500	4350	6500	10000	0.030
40	K 40x47x18	47	18.0 ^{-0.2} / _{-0.55}	27700	45000	2820	4550	6500	10000	0.045
40	K 40x47x20	47	20.0 ^{-0.2} / _{-0.55}	31000	51500	3150	5250	6500	10000	0.048
40	K 40x48x20	48	20.0 ^{-0.2} / _{-0.55}	33000	51000	3350	5200	6500	10000	0.052
40	K 40x48x25	48	25.0 ^{-0.2} / _{-0.55}	42500	71000	4350	7250	6500	10000	0.065
42	K 42x47x17	47	17.0 ^{-0.2} / _{-0.55}	22100	43000	2250	4400	6500	9500	0.028
42	K 42x47x27	47	27.0 ^{-0.2} / _{-0.55}	34000	75500	3450	7700	6500	9500	0.047
42	K 42x48x17	48	17.0 ^{-0.2} / _{-0.55}	25700	46000	2630	4700	6500	9500	0.036
42	K 42x50x20	50	20.0 ^{-0.2} / _{-0.55}	34000	53500	3450	5500	6500	9500	0.054
43	K 43x48x17	48	17.0 ^{-0.2} / _{-0.55}	22000	43000	2240	4400	6500	9500	0.029
43	K 43x48x27	48	27.0 ^{-0.2} / _{-0.55}	34000	75500	3450	7700	6500	9500	0.046
43	K 43x50x18	50	18.0 ^{-0.2} / _{-0.55}	29100	49000	2960	5000	6500	9500	0.049
45	K 45x49x19	49	19.0 ^{-0.2} / _{-0.55}	22100	52000	2260	5300	6000	9000	0.027
45	K 45x50x27	50	27.0 ^{-0.2} / _{-0.55}	34500	78000	3500	7950	6000	9000	0.050
45	K 45x52x18	52	18.0 ^{-0.2} / _{-0.55}	29700	51000	3000	5200	6000	9000	0.051
45	K 45x52x21	52	21.0 ^{-0.2} / _{-0.55}	32000	56500	3300	5750	6000	9000	0.061
45	K 45x53x20	53	20.0 ^{-0.2} / _{-0.55}	36000	59000	3650	6000	6000	9000	0.062
45	K 45x53x25	53	25.0 ^{-0.2} / _{-0.55}	46500	82000	4700	8400	6000	9000	0.077
47	K 47x52x17	52	17.0 ^{-0.2} / _{-0.55}	23200	47500	2360	4850	5500	8500	0.033
47	K 47x52x27	52	27.0 ^{-0.2} / _{-0.55}	35500	83000	3650	8450	5500	8500	0.051
48	K 48x54x19	54	19.0 ^{-0.2} / _{-0.55}	31000	61000	3150	6250	5500	8500	0.044
50	K 50x55x13.5	55	13.5 ^{-0.2} / _{-0.55}	18100	35500	1850	3600	5500	8000	0.023
50	K 50x55x20	55	20.0 ^{-0.2} / _{-0.55}	27900	62000	2850	6300	5500	8000	0.042
50	K 50x55x27	55	27.0 ^{-0.2} / _{-0.55}	37000	88500	3750	9000	5500	8000	0.053

Technical supplement			
Cages		Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	



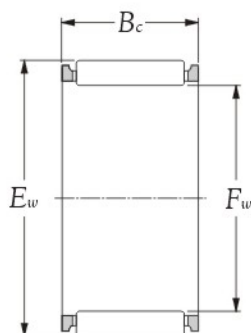
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static Co	dynamic C kgf	static Co	grease oil	r/min	
40	K 40x46x17	46	17.0 ^{-0.2} / _{-0.55}	24600	43000	2500	4350	6500	10000	0.030
40	K 40x47x18	47	18.0 ^{-0.2} / _{-0.55}	27700	45000	2820	4550	6500	10000	0.045
40	K 40x47x20	47	20.0 ^{-0.2} / _{-0.55}	31000	51500	3150	5250	6500	10000	0.048
40	K 40x48x20	48	20.0 ^{-0.2} / _{-0.55}	33000	51000	3350	5200	6500	10000	0.052
40	K 40x48x25	48	25.0 ^{-0.2} / _{-0.55}	42500	71000	4350	7250	6500	10000	0.065
42	K 42x47x17	47	17.0 ^{-0.2} / _{-0.55}	22100	43000	2250	4400	6500	9500	0.028
42	K 42x47x27	47	27.0 ^{-0.2} / _{-0.55}	34000	75500	3450	7700	6500	9500	0.047
42	K 42x48x17	48	17.0 ^{-0.2} / _{-0.55}	25700	46000	2630	4700	6500	9500	0.036
42	K 42x50x20	50	20.0 ^{-0.2} / _{-0.55}	34000	53500	3450	5500	6500	9500	0.054
43	K 43x48x17	48	17.0 ^{-0.2} / _{-0.55}	22000	43000	2240	4400	6500	9500	0.029
43	K 43x48x27	48	27.0 ^{-0.2} / _{-0.55}	34000	75500	3450	7700	6500	9500	0.046
43	K 43x50x18	50	18.0 ^{-0.2} / _{-0.55}	29100	49000	2960	5000	6500	9500	0.049
45	K 45x49x19	49	19.0 ^{-0.2} / _{-0.55}	22100	52000	2260	5300	6000	9000	0.027
45	K 45x50x27	50	27.0 ^{-0.2} / _{-0.55}	34500	78000	3500	7950	6000	9000	0.050
45	K 45x52x18	52	18.0 ^{-0.2} / _{-0.55}	29700	51000	3000	5200	6000	9000	0.051
45	K 45x52x21	52	21.0 ^{-0.2} / _{-0.55}	32000	56500	3300	5750	6000	9000	0.061
45	K 45x53x20	53	20.0 ^{-0.2} / _{-0.55}	36000	59000	3650	6000	6000	9000	0.062
45	K 45x53x25	53	25.0 ^{-0.2} / _{-0.55}	46500	82000	4700	8400	6000	9000	0.077
47	K 47x52x17	52	17.0 ^{-0.2} / _{-0.55}	23200	47500	2360	4850	5500	8500	0.033
47	K 47x52x27	52	27.0 ^{-0.2} / _{-0.55}	35500	83000	3650	8450	5500	8500	0.051
48	K 48x54x19	54	19.0 ^{-0.2} / _{-0.55}	31000	61000	3150	6250	5500	8500	0.044
50	K 50x55x13.5	55	13.5 ^{-0.2} / _{-0.55}	18100	35500	1850	3600	5500	8000	0.023
50	K 50x55x20	55	20.0 ^{-0.2} / _{-0.55}	27900	62000	2850	6300	5500	8000	0.042
50	K 50x55x27	55	27.0 ^{-0.2} / _{-0.55}	37000	88500	3750	9000	5500	8000	0.053

Technical supplement			
Cages	Precision	Grease	
Steel - ☒			
Polymid - ☒	Normal (ISO)	Nil	
Brass - ☒			



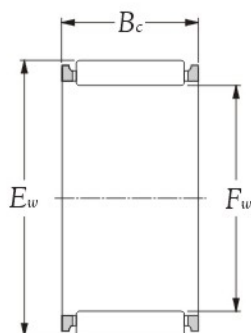
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease r/min	oil r/min	
50	K 50x55x30	55	30 ^{-0.2} / _{-0.55}	39500	97000	4050	9900	5500	8000	0.059
50	K 50x57x18	57	18 ^{-0.2} / _{-0.55}	31500	57000	3200	5800	5500	8000	0.053
50	K 50x58x20	58	20 ^{-0.2} / _{-0.55}	38500	67500	3950	6850	5500	8000	0.065
50	K 50x58x25	58	25 ^{-0.2} / _{-0.55}	48500	90000	4950	9150	5500	8000	0.081
52	K 52x58x19	58	19 ^{-0.2} / _{-0.55}	32000	65500	3250	6650	5000	7500	0.048
55	K 55x60x17	60	17 ^{-0.2} / _{-0.55}	25800	58000	2630	5900	5000	7500	0.043
55	K 55x60x20	60	20 ^{-0.2} / _{-0.55}	28800	66500	2940	6750	5000	7500	0.045
55	K 55x60x30	60	30 ^{-0.2} / _{-0.55}	42000	108000	4300	11000	5000	7500	0.069
55	K 55x61x19	61	19 ^{-0.2} / _{-0.55}	33000	69500	3350	7100	5000	7500	0.051
55	K 55x61x20	61	20 ^{-0.2} / _{-0.55}	33000	69500	3350	7100	5000	7500	0.054
55	K 55x61x30	61	30 ^{-0.2} / _{-0.55}	48000	113000	4900	11500	5000	7500	0.081
55	K 55x62x18	62	18 ^{-0.2} / _{-0.55}	33500	63000	3400	6450	5000	7500	0.054
55	K 55x63x20	63	20 ^{-0.2} / _{-0.55}	39000	70000	3950	7100	5000	7500	0.073
55	K 55x63x25	63	25 ^{-0.2} / _{-0.55}	50500	97500	5150	9950	5000	7500	0.088
55	K 55x63x32	63	32 ^{-0.2} / _{-0.55}	61000	125000	6200	12700	5000	7500	0.117
58	K 58x64x19	64	19 ^{-0.2} / _{-0.55}	34000	73500	3450	7500	4700	7000	0.052
60	K 60x65x20	65	20 ^{-0.2} / _{-0.55}	29800	71500	3050	7300	4300	6500	0.051
60	K 60x65x30	65	30 ^{-0.2} / _{-0.55}	43500	116000	4450	11800	4300	6500	0.071
60	K 60x66x19	66	19 ^{-0.2} / _{-0.55}	33500	73500	3450	7500	4300	6500	0.053
60	K 60x66x20	66	20 ^{-0.2} / _{-0.55}	33500	73500	3450	7500	4300	6500	0.056
60	K 60x66x30	66	30 ^{-0.2} / _{-0.55}	49000	119000	5000	12200	4300	6500	0.084
60	K 60x68x15	68	15 ^{-0.2} / _{-0.55}	27200	45500	2780	4650	4300	6500	0.058
60	K 60x68x20	68	20 ^{-0.2} / _{-0.55}	40000	75000	4100	7650	4300	6500	0.077
60	K 60x68x23	68	23 ^{-0.2} / _{-0.55}	44500	85000	4500	8700	4300	6500	0.092

Technical supplement			
	Cages	Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	Nil



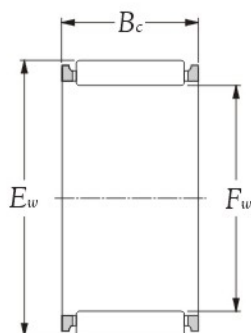
Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static Co	dynamic C kgf	static Co	grease r/min	oil r/min	
60	K 60x68x25	68	25 ^{-0.2 -0.55}	52000	105000	5300	10700	4300	6500	0.097
60	K 60x68x27	68	27 ^{-0.2 -0.55}	52000	105000	5300	10700	4300	6500	0.098
61	K 61x66x20	66	20 ^{-0.2 -0.55}	29700	71500	3050	7300	4300	6500	0.054
61	K 61x66x30	66	30 ^{-0.2 -0.55}	43500	116000	4400	11900	4300	6500	0.073
63	K 63x70x21	70	21 ^{-0.2 -0.55}	44500	95500	4500	9700	4300	6500	0.075
64	K 64x70x16	70	16 ^{-0.2 -0.55}	28400	60500	2900	6150	4300	6500	0.053
65	K 65x70x20	70	20 ^{-0.2 -0.55}	30500	75000	3100	7650	4000	6000	0.055
65	K 65x70x30	70	30 ^{-0.2 -0.55}	45000	124000	4600	12700	4000	6000	0.083
65	K 65x73x23	73	23 ^{-0.2 -0.55}	47000	94000	4800	9600	4000	6000	0.100
65	K 65x73x30	73	30 ^{-0.2 -0.55}	61000	132000	6200	13400	4000	6000	0.126
68	K 68x74x20	74	20 ^{-0.2 -0.55}	36000	83500	3700	8550	4000	6000	0.065
68	K 68x74x30	74	30 ^{-0.2 -0.55}	51500	133000	5250	13500	4000	6000	0.097
68	K 68x75x21	75	21 ^{-0.2 -0.55}	45500	101000	4600	10300	4000	6000	0.077
70	K 70x76x20	76	20 ^{-0.2 -0.55}	36500	86000	3700	8750	3700	5500	0.070
70	K 70x76x30	76	30 ^{-0.2 -0.55}	53000	139000	5400	14200	3700	5500	0.100
70	K 70x77x21	77	21 ^{-0.2 -0.55}	45000	101000	4600	10300	3700	5500	0.080
70	K 70x78x23	78	23 ^{-0.2 -0.55}	49500	103000	5050	10500	3700	5500	0.107
70	K 70x78x30	78	30 ^{-0.2 -0.55}	65500	149000	6700	15200	3700	5500	0.136
72	K 72x79x21	79	21 ^{-0.2 -0.55}	46500	106000	4750	10800	3700	5500	0.085
73	K 73x79x30	79	30 ^{-0.2 -0.55}	54500	146000	5550	14900	3700	5500	0.106
75	K 75x81x30	81	30 ^{-0.2 -0.55}	56000	152000	5700	15500	3700	5500	0.108
75	K 75x82x21	82	21 ^{-0.2 -0.55}	46000	106000	4700	10800	3700	5500	0.088
75	K 75x83x23	83	23 ^{-0.2 -0.55}	50500	109000	5150	11100	3700	5500	0.113
75	K 75x83x30	83	30 ^{-0.2 -0.55}	67500	157000	6850	16100	3700	5500	0.147

Technical supplement			
	Cages	Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	Nil



Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w	B_c	dynamic C	static Co	dynamic C	static Co	grease	oil	
		mm	mm	N		kgf		r/min		
80	K 80x86x20	86	20 ^{-0.2 -0.55}	39000	98000	4000	10000	3300	5000	0.077
80	K 80x86x30	86	30 ^{-0.2 -0.55}	57000	159000	5800	16200	3300	5000	0.110
80	K 80x88x23	88	23 ^{-0.2 -0.55}	53000	118000	5400	12100	3300	5000	0.125
80	K 80x88x26	88	26 ^{-0.2 -0.55}	61000	142000	6250	14500	3300	5000	0.131
80	K 80x88x30	88	30 ^{-0.2 -0.55}	69000	66000	7050	17000	3300	5000	0.157
85	K 85x92x30	92	30 ^{-0.2 -0.55}	66000	176000	6750	18000	3100	4700	0.142
85	K 85x93x27	93	27 ^{-0.2 -0.55}	64000	153000	6500	15600	3100	4700	0.145
85	K 85x93x30	93	30 ^{-0.2 -0.55}	71000	175000	7200	17900	3100	4700	0.160
90	K 90x97x20	97	20 ^{-0.2 -0.55}	46000	113000	4700	11500	2900	4400	0.103
90	K 90x97x30	97	30 ^{-0.2 -0.55}	67500	184000	6850	18700	2900	4400	0.151
90	K 90x98x26	98	26 ^{-0.2 -0.55}	64000	157000	6550	16000	2900	4400	0.148
90	K 90x98x27	98	27 ^{-0.2 -0.55}	64000	157000	6550	16000	2900	4400	0.150
90	K 90x98x30	98	30 ^{-0.2 -0.55}	72500	184000	7400	18800	2900	4400	0.172
95	K 95x102x21	102	21 ^{-0.2 -0.55}	48000	122000	4900	12400	2800	4200	0.115
95	K 95x102x31	102	31 ^{-0.2 -0.55}	70500	199000	7200	20300	2800	4200	0.172
95	K 95x103x27	103	27 ^{-0.2 -0.55}	65500	165000	6700	16800	2800	4200	0.159
95	K 95x103x30	103	30 ^{-0.2 -0.55}	74000	193000	7550	19600	2800	4200	0.165
100	K 100x107x21	107	21 ^{-0.3 -0.65}	49000	127000	5000	12900	2700	4000	0.120
100	K 100x107x31	107	31 ^{-0.3 -0.65}	71500	207000	7300	21100	2700	4000	0.173
100	K 100x108x27	108	27 ^{-0.3 -0.65}	61000	153000	6250	15600	2700	4000	0.176
100	K 100x108x30	108	30 ^{-0.3 -0.65}	76000	201000	7700	20500	2700	4000	0.190
105	K 105x112x21	112	21 ^{-0.3 -0.65}	48500	127000	4950	12900	2500	3800	0.130
105	K 105x112x31	112	31 ^{-0.3 -0.65}	71000	207000	7250	21100	2500	3800	0.176
105	K 105x113x30	113	30 ^{-0.3 -0.65}	77500	210000	7900	21400	2500	3800	0.198

Technical supplement			
	Cages	Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	Nil



Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static C_o	dynamic C kgf	static C_o	grease r/min	oil r/min	
110	K 110x117x24	117	24 ^{-0.3} / _{-0.65}	54500	149000	5550	15200	2400	3600	0.145
110	K 110x117x34	117	34 ^{-0.3} / _{-0.65}	77500	235000	7900	24000	2400	3600	0.205
110	K 110x118x30	118	30 ^{-0.3} / _{-0.65}	79000	219000	8050	22300	2400	3600	0.217
115	K 115x123x27	123	27 ^{-0.3} / _{-0.65}	64000	170000	6550	17300	2300	3500	0.200
115	K 115x125x34	125	34 ^{-0.3} / _{-0.65}	95000	241000	9700	24600	2300	3500	0.330
120	K 120x127x24	127	24 ^{-0.3} / _{-0.65}	57500	165000	5850	16800	2200	3300	0.160
120	K 120x127x34	127	34 ^{-0.3} / _{-0.65}	82000	260000	8350	26600	2200	3300	0.235
125	K 125x133x35	133	35 ^{-0.3} / _{-0.65}	87000	260000	8900	26500	2100	3200	0.275
125	K 125x135x34	135	34 ^{-0.3} / _{-0.65}	100000	265000	10200	27000	2100	3200	0.350
130	K 130x137x24	137	24 ^{-0.3} / _{-0.65}	59000	175000	6000	17900	2100	3100	0.170
130	K 130x137x34	137	34 ^{-0.3} / _{-0.65}	84500	277000	8600	28300	2100	3100	0.240
135	K 135x143x35	143	35 ^{-0.3} / _{-0.65}	92500	288000	9450	29400	2000	3000	0.300
135	K 135x150x38	150	38 ^{-0.3} / _{-0.65}	145000	325000	14800	33500	2000	3000	0.590
145	K 145x153x26	153	26 ^{-0.3} / _{-0.65}	72000	214000	7350	21800	1900	2800	0.250
145	K 145x153x28	153	28 ^{-0.3} / _{-0.65}	80500	247000	8200	25200	1900	2800	0.252
145	K 145x153x36	153	36 ^{-0.3} / _{-0.65}	100000	325000	10200	33000	1900	2800	0.335
150	K 150x160x46	160	46 ^{-0.3} / _{-0.65}	149000	470000	15200	48000	1800	2700	0.550
155	K 155x163x26	163	26 ^{-0.3} / _{-0.65}	73500	224000	7500	22800	1700	2600	0.270
155	K 155x163x36	163	36 ^{-0.3} / _{-0.65}	102000	340000	10400	34500	1700	2600	0.355
160	K 160x170x46	170	46 ^{-0.3} / _{-0.65}	155000	505000	15800	51500	1700	2500	0.570
165	K 165x173x26	173	26 ^{-0.3} / _{-0.65}	79000	251000	8050	25600	1600	2400	0.290
165	K 165x173x32	173	32 ^{-0.3} / _{-0.65}	97000	330000	9900	33500	1600	2400	0.340
165	K 165x173x36	173	36 ^{-0.3} / _{-0.65}	109000	380000	11100	39000	1600	2400	0.375
170	K 170x180x46	180	46 ^{-0.3} / _{-0.65}	160000	540000	16400	55000	1600	2400	0.620

Technical supplement

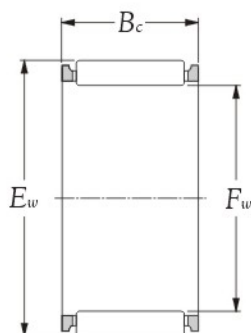
Cages

 Steel- ☒
 Polymid- ☐
 Brass - ☐
Precision

 Normal
(ISO)

Grease

Nil



Inner bore F_w mm	Bearing number	Principal dimensions		Basic load ratings				Max runout speed		Weight kg.
		E_w mm	B_c mm	dynamic C N	static Co	dynamic C kgf	static Co	grease r/min	oil r/min	
175	K 175x183x32	183	32 ^{-0.3} / _{-0.65}	101000	350000	10300	35500	1500	2300	0.360
185	K 185x195x37	195	37 ^{-0.3} / _{-0.65}	131000	425000	13300	43500	1500	2200	0.560
195	K 195x205x37	205	37 ^{-0.3} / _{-0.65}	135000	450000	13800	46000	1400	2100	0.620
210	K 210x220x42	220	42 ^{-0.3} / _{-0.65}	156000	560000	15900	57000	1300	1900	0.740
220	K 220x230x42	230	42 ^{-0.3} / _{-0.65}	161000	590000	16400	60000	1200	1800	0.790
240	K 240x250x42	250	42 ^{-0.3} / _{-0.65}	167000	635000	17000	64500	1100	1700	0.850
265	K 265x280x50	280	50 ^{-0.3} / _{-0.65}	256000	850000	26100	87000	1000	1500	1.810
285	K 285x300x50	300	50 ^{-0.3} / _{-0.65}	268000	930000	27300	94500	950	1400	1.970

Technical supplement			
	Cages	Precision	Grease
	Steel -	✓	
	Polymid -	X	
	Brass -	X	
		Normal (ISO)	Nil