滚针和保持架组件为一独立的轴承元件，其中每个滚针由保持架精确地引导和保持。它实现了最小的结构空间下具有高负荷能力和高刚性的轴承设计。保持架的两引导面间距宽广，保证了滚针和保持架组件的精确引导。

滚针和保持架组件适用于轴和座孔可作为滚道之处。在具有高尺寸精度、几何精度的轴和座孔滚道下，可得到最高旋转精度。

轴部位的工作间隙取决于内外滚道的公差、滚针组差和工作温度。

向心滚针和保持架组件
Radial Needle Roller and Cage Assemblies



The needle roller and cage assembly is an independent bearing element. The each of needle roller is guided and caged accurately by the cage. It has the highest load carrying capacity and the high rigid design in the smallest structure and space. The wide distance between two guiding surfaces of cage ensures the accurate guide of needle roller and cage assembly.

Needle roller and cage assembly is suitable for the place where the shaft and housing bore are acted as the raceway. Under the geographic accuracy shaft and housing bore raceway, the highest rotation precision can be obtained.

The working clearance in bearing location is dependent on the tolerance of inner and outer raceways, needle roller difference and working temperature.

向心滚针和保持架组件K、K…D型，该种轴承只有一组向心滚针和保持架组件，外径尺寸小，适用于径向尺寸特别受限制的部件中，用来承受径向负荷。K…ZW、K…ZWD型为双列向心滚针和保持架组件。

该种轴承由于无套圈，与其相配的轴颈表面和外壳孔表面直接作为滚动面要求其表面硬度HRC60、表面粗糙度Ra值不大于0.63 μm。

为满足主机要求，该种轴承可加工成剖分式，便于装拆。K…D表示剖分式、单列，K…ZWD表示剖分式、双列。

K 单列向心滚针和保持架组件

K…D 剖分式单列向心滚针和保持架组件

K…ZW 双列向心滚针和保持架组件

K…ZWD 剖分式双列向心滚针和保持架组件

向心滚针和保持架组件
Radial Needle Roller and Cage Assemblies



As for Model K, K…D radial needle and retainer assembly, this kind of bearing only has a group of radial needle and retainer assembly. With small outside diameter size, it is suitable for the parts, where the radial sizes are specially limited, used for bearing the radial load. Model K…ZW, K…ZWD radial needle and retainer assembly is the double row radial needle and retainer assembly.

As for this kind of bearing, since it has not collar, the surface of journal and the surface of hole at the housing are directly acted as rolling surface with surface hardness HRC 60 and surface roughness Ra no more than 0.63 μm.

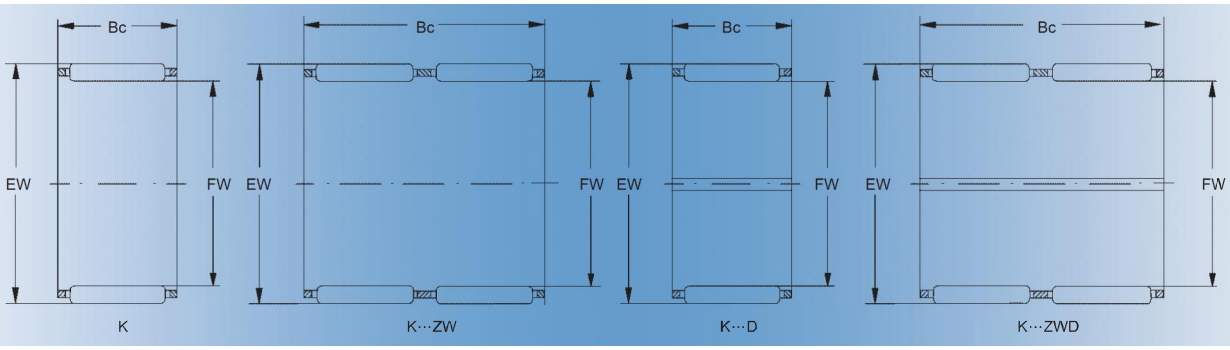
In order to satisfy the requirement of main machine, this kind of bearing can be made in split bearing, convenient for mounting. Model K… D represents as the single row split bearing and Model K…ZWD represents as double row split bearing.

(1-1) K single-row radial needle roller and cage assembly

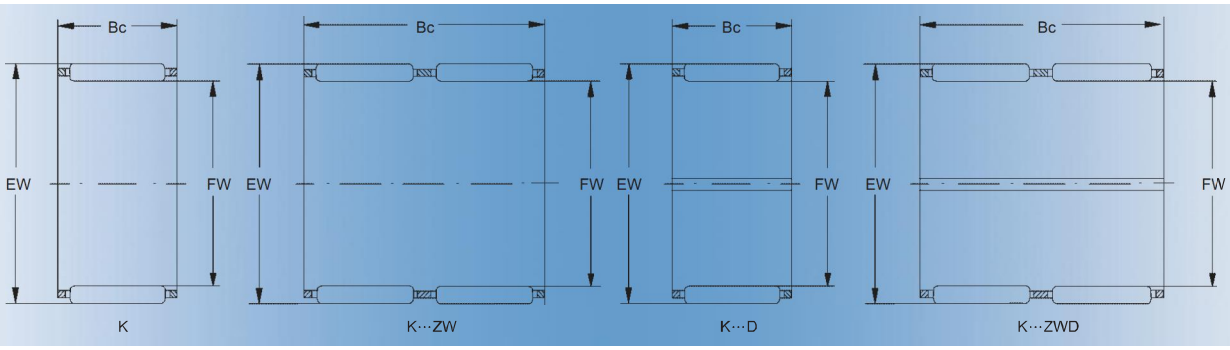
(1-2) K...ZW double-row radial needle roller and cage assembly

(1-3) K... D partial single-row radial needle roller and cage assembly

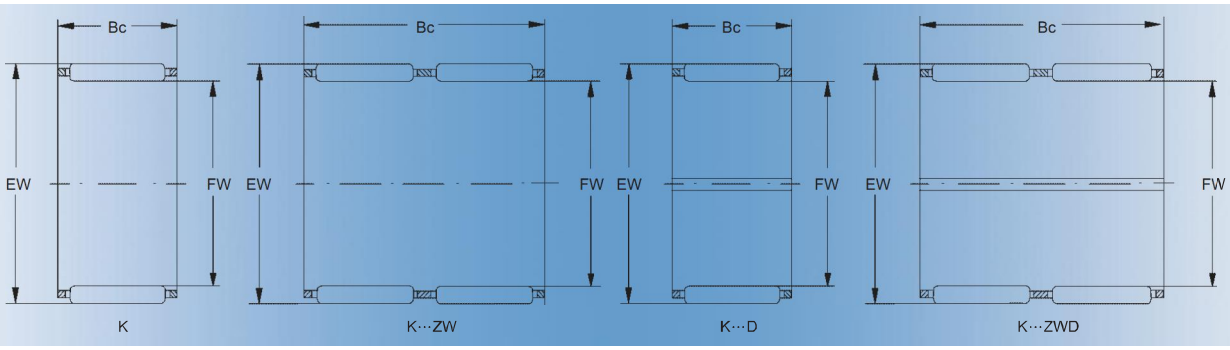
(1-4) K...ZWD double-row radial needle roller and cage assembly



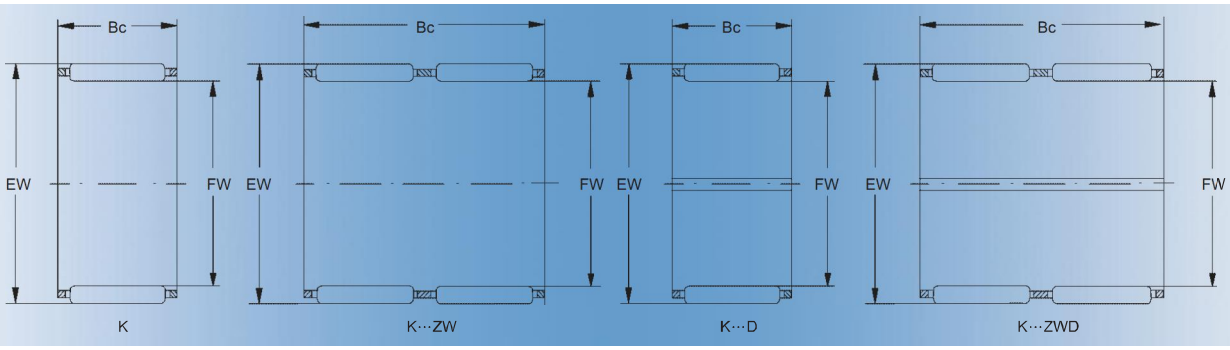
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
3	K3 × 5 × 7TN		0.3	3	5	7	1.54	1.29	50000
	K3 × 5 × 9TN		0.4	3	5	9	1.71	1.48	
	K3 × 6 × 7TN		0.4	3	6	7	1.43	0.97	47000
4	K4 × 7 × 7TN		0.5	4	7	7	2.33	1.84	43000
	K4 × 7 × 10TN		0.7	4	7	10	2.35	1.92	39000
5	K5 × 8 × 8TN	29241/5	0.7	5	8	8	2300	1880	37000
	K5 × 8 × 10TN	39241/5	0.9	5	8	10	2800	2450	37000
6	K6 × 9 × 8TN	29241/6	0.8	6	9	8	25600	2240	35000
	K6 × 9 × 10TN	39241/6	1	6	9	10	3300	3100	35000
	K6 × 10 × 13TN	19241/6	1.3	6	10	13	3500	2800	33000
7	K7 × 10 × 8TN	29241/7	0.9	7	10	8	2750	2550	32000
	K7 × 10 × 10TN	39241/7	1.1	7	10	10	3350	3400	32000
8	K8 × 11 × 8TN	29241/8	1.1	8	11	8	3000	2900	30000
	K8 × 11 × 10TN	39241/8	1.7	8	11	10	3830	3950	30000
	K8 × 11 × 13TN	49241/8	1.8	8	11	13	5000	5700	30000
	K8 × 12 × 10TN	29242/8	1.3	8	12	10	4900	4600	30000
9	K9 × 12 × 10TN	39241/9	1.5	9	12	10	4200	4700	30000
	K9 × 12 × 13TN	19241/9	1.9	9	12	13	5500	6700	30000
10	K10 × 13 × 10TN	39241/10	1.6	10	13	10	4500	5250	27000
	K10 × 13 × 13TN	39241/10	2.1	10	13	13	6000	7600	27000
	K10 × 13 × 16TN		2.2	10	13	16	6300	7800	27000
	K10 × 14 × 10TN	29242/10	2.9	10	14	10	7000	7900	27000
	K10 × 14 × 13TN	3922/10	4.3	10	14	13	8000	9100	26000
	K10 × 16 × 12TN	19244/10	3.7	10	16	12	7000	9300	27000
12	K12 × 15 × 9TN		2.7	12	15	9	4120	5210	25000
	K12 × 15 × 10TN	39241/12	1.9	12	15	10	4320	5730	25000
	K12 × 15 × 13TN	49241/12	2.4	12	15	13	6000	8100	25000
	K12 × 16 × 8TN	19242/12	2.9	12	16	8	1200	4700	25000
	K12 × 16 × 10TN	29242/12	3.4	12	16	10	6000	6900	25000
	K12 × 16 × 13TN	39242/12	3.8	12	16	13	7900	9200	25000
	K12 × 17 × 13TN	59242/12	4.4	12	17	13	9300	10000	24000
	K12 × 18 × 12TN	19244/12	5	12	18	12	9800	8000	24000
	K12 × 15 × 20TN	K12 × 15 × 20TN	3.8	12	15	20	8200	12000	25000
14	K14 × 17 × 10		4	14	17	10	5100	6800	23000
	K14 × 17 × 17		6.8	14	17	17	9300	14000	23000
	K14 × 18 × 10	29242/14	4.8	14	18	10	6800	8300	23000
	K14 × 18 × 13	39242/14	6.3	14	18	13	8100	9800	23000
	K14 × 18 × 14		6.8	14	18	14	9200	12000	23000
	K14 × 18 × 15	49242/14	7.3	14	18	15	10000	13000	23000



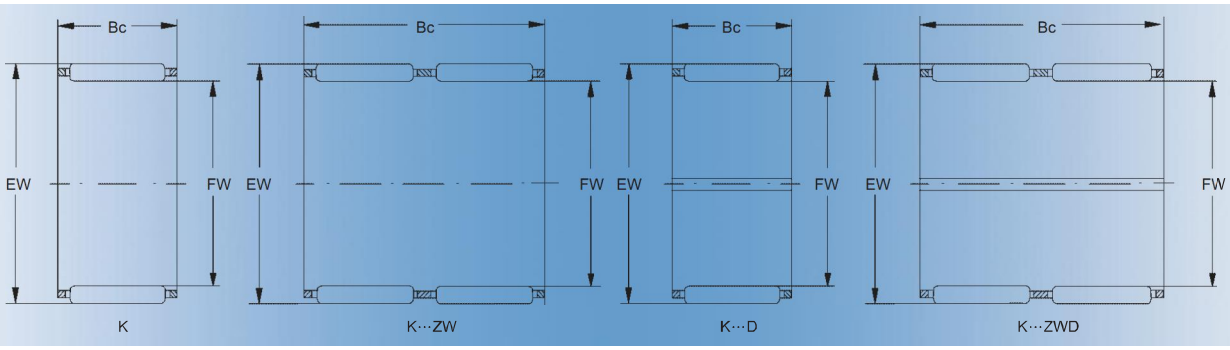
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
14	K14 × 18 × 17	59242/14	8.1	14	18	17	10500	13900	23000
	K14 × 20 × 12	19243/14	8.6	14	20	12	9900	10500	22000
15	K15 × 18 × 14		5.3	15	18	14	7500	11000	23000
	K15 × 18 × 17		6.4	15	18	17	9600	15900	23000
	K15 × 19 × 10	29242/15	5.1	15	19	10	7200	9000	22000
	K15 × 19 × 13	39241/15	7	15	19	13	8300	9800	22000
	K15 × 19 × 17	59241/15	8.8	15	19	17	10300	15000	22000
	K15 × 19 × 24 ZW	79241/15	10.5	15	19	24	128å00	20100	22000
	K15 × 22 × 13	29242/15	8.9	15	22	13	9700	11000	22000
	K15 × 22 × 12	19243/15	10	15	22	12	10000	13000	22000
	K15 × 21 × 15	39242/15	13	15	21	15	13800	16000	22000
	K15 × 21 × 21		18.2	15	21	21	18000	24000	22000
16	K16 × 20 × 10	29241/16	5.7	16	20	10	7600	9700	22000
	K16 × 20 × 13	39241/16	7.1	16	20	13	8700	11300	22000
	K16 × 20 × 17	59241/16	9.2	16	20	17	11200	16300	22000
	K16 × 21 × 10	19242/16	3.7	16	21	10	9000	12000	22000
	K16 × 22 × 12	19243/16	10.4	16	22	12	11000	12000	21000
	K16 × 22 × 13		11.9	16	22	13	12000	13400	21000
	K16 × 22 × 16		13.7	16	22	16	14300	17000	21000
	K16 × 22 × 20	49243/16	16.7	16	22	20	18000	22300	21000
	K16 × 23 × 14	19244/16	20	16	23	14	19000	21000	19000
	K16 × 24 × 20	19245/16	24.9	16	24	20	21100	23000	20000
17	K17 × 21 × 10	29241/17	5.6	17	21	10	7900	10100	21000
	K17 × 21 × 13	39241/17	7.5	17	21	13	10000	14100	21000
	K17 × 21 × 17	59241/17	9.5	17	21	17	12000	17400	21000
	K17 × 23 × 14	29243/17	11.5	17	23	14	11000	15000	21000
18	K18 × 22 × 10	29241/18	6.1	18	22	10	8200	9900	20000
	K18 × 22 × 13	39241/18	7.7	18	22	13	9000	12100	20000
	K18 × 22 × 17	59241/18	10.8	18	22	17	11900	17600	20000
	K18 × 24 × 12	19243/18	11.6	18	24	12	11200	12900	20000
	K18 × 24 × 13		12.6	18	24	13	12900	14900	20000
	K18 × 24 × 13.5		13	18	24	13.5	12900	14900	20000
	K18 × 24 × 20	49243/18	19	18	24	20	20000	26500	20000
	K18 × 25 × 14		14.9	18	25	14	16500	18800	20000
	K18 × 25 × 22		24.3	18	25	22	22900	28400	20000
	K18 × 26 × 14		19	18	26	14	18000	20000	18000
	K18 × 28 × 16	19244/18	24	18	28	16	19000	18400	19000
19	K19 × 23 × 13		8.2	19	23	13	9300	13000	20000
	K19 × 23 × 17		11.1	19	23	17	12000	18600	20000



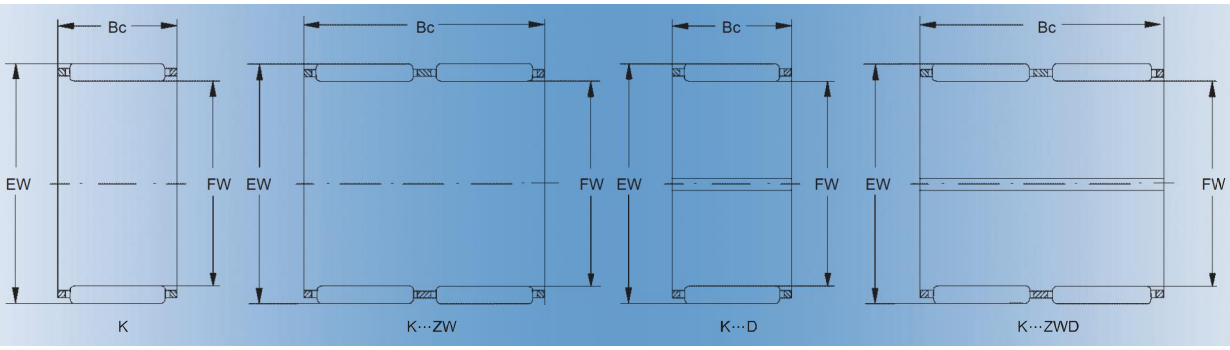
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
20	K20 × 24 × 10	29241/20	6.5	20	24	10	8700	12100	19000
	K20 × 24 × 12		8	20	24	12	9600	13800	19000
	K20 × 24 × 13	39241/20	8.9	20	24	13	9600	13800	19000
	K20 × 24 × 17	59241/20	11.2	20	24	17	12400	20000	19000
	K20 × 26 × 12	19243/20	13.2	20	26	12	13100	15700	19000
	K20 × 26 × 16	K9249/20	17.5	20	26	16	18000	25000	18500
	K20 × 26 × 17	39243/20	18.2	20	26	17	18700	25500	19000
	K20 × 26 × 20	49243/20	22	20	26	20	20600	28500	19000
	K20 × 28 × 20	19245/20	26.8	20	28	20	23400	28000	18000
	K20 × 28 × 25	29245/20	36.2	20	28	25	30000	28500	18000
	K20 × 30 × 30	39245/20	56	20	30	30	35000	41000	18000
21	K21 × 25 × 13		9	21	25	13	9600	14500	19000
	K21 × 25 × 17		12	21	25	17	12800	21000	19000
22	K22 × 26 × 10	29241/22	7.1	22	26	10	8700	12900	18000
	K22 × 26 × 13	39241/22	9.4	22	26	13	10000	15400	18000
	K22 × 26 × 17	59241/22	12.1	22	26	17	13100	22100	18000
	K22 × 27 × 13	29242/22	10.8	22	27	13	14000	23000	18000
	K22 × 28 × 17	39243/22	19.7	22	28	17	19000	26500	18000
	K22 × 28 × 23	59243/22	26	22	28	23	20000	27000	19000
	K22 × 29 × 16	19244/22	22.2	22	29	16	19500	25000	17000
	K22 × 30 × 15 TN		14.4	22	30	15	19600	22900	17000
	K22 × 30 × 20	19245/22	28	22	30	20	21000	23500	18900
	K22 × 32 × 24		43.4	22	32	24	33500	39500	16000
23	K23 × 35 × 16 TN		30	23	35	16	24000	23400	15000
24	K24 × 28 × 10		8.1	24	28	10	9400	14300	17000
	K24 × 28 × 13		10.1	24	28	13	10500	17000	17000
	K24 × 28 × 17	9243/24	13.2	24	28	17	14000	24500	17000
	K24 × 29 × 13		13.5	24	29	13	13100	19100	16000
	K24 × 30 × 17		21.5	24	30	17	19000	27000	16000
	K24 × 30 × 31		39.1	24	30	31	27000	43000	16000
25	K25 × 29 × 10	29241/25	8.3	25	29	10	9700	14900	16000
	K25 × 29 × 13	39241/25	10.4	25	29	13	10800	17900	16000
	K25 × 29 × 17	59241/25	13.7	25	29	17	14500	25500	16000
	K25 × 30 × 13	29242/25	12.9	25	30	13	14100	21300	16000
	K25 × 30 × 20	59242/25	20.5	25	30	20	21100	28000	16000
	K25 × 30 × 25		21	25	30	25	21700	40400	15000
	K25 × 30 × 26	52.436	21.6	25	30	26	20100	26500	15000
	K25 × 31 × 17	39243/25	21.8	25	31	17	19000	28000	16000
	K25 × 31 × 21	39243/25	26.2	25	31	21	24100	37500	16000



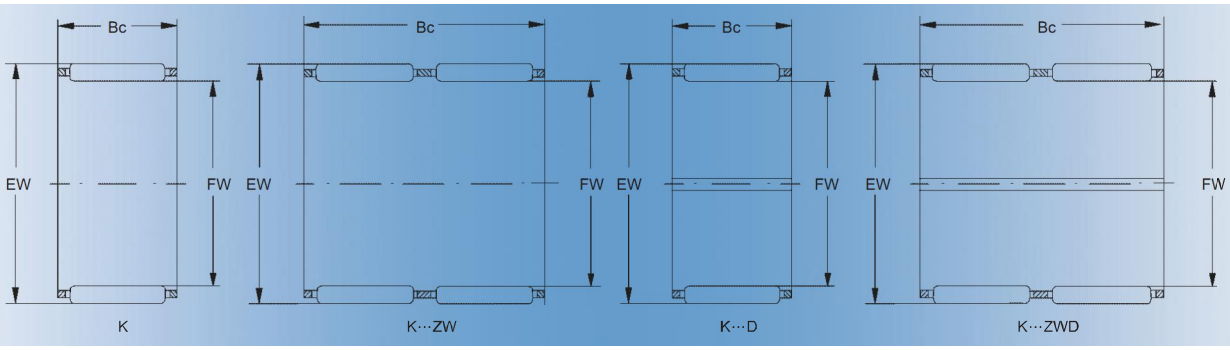
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
25	K25 × 32 × 16	19244/25	24.5	25	32	16	20500	27500	15000
	K25 × 33 × 20	19245/25	32	25	33	20	28000	37500	15000
	K25 × 33 × 24	29245/25	38.7	25	33	24	33900	46500	15000
	K25 × 34 × 18		32	25	34	18	48000	67000	15000
	K25 × 35 × 30	39245/25	65.5	25	35	30	46500	61500	14000
	K25 × 30 × 26 ZW		27	25	30	26	21000	35000	14000
26	K26 × 30 × 10		9	26	30	10	9500	15500	16000
	K26 × 30 × 13		11.4	26	30	13	11100	18700	16000
	K26 × 30 × 17		15	26	30	17	14700	27000	16000
	K26 × 31 × 13		9.9	26	31	13	12400	18400	15000
	K26 × 30 × 22		12.3	26	30	22	15200	28000	16000
27	K27 × 32 × 17		29	27	32	27	16000	34000	17000
28	K28 × 32 × 16.5		16	28	32	16.5	15000	32400	14000
	K28 × 32 × 17	9242/28	18.2	28	32	17	15000	32400	14000
	K28 × 33 × 13	29241/25	15.2	28	33	13	14800	23600	14000
	K28 × 33 × 17	49241/28	19.5	28	33	17	19100	33000	14000
	K28 × 33 × 27 TN	79241/28	19	28	33	27	22800	40500	14000
	K28 × 34 × 17	39242/28	24.2	28	34	17	21300	35000	14000
	K28 × 35 × 16	19243/28	26	28	35	16	21000	29000	14000
	K28 × 35 × 18		31	28	35	18	23500	33500	14000
	K28 × 35 × 20	29243/28	35	28	35	20	24000	34000	14000
	K28 × 35 × 27		47	28	35	27	34500	54500	14000
	K28 × 36 × 16		40	28	36	16	34000	47000	11000
	K28 × 40 × 18		50	28	40	18	33000	36500	12000
	K28 × 40 × 25		71	28	40	25	45000	54500	12000
30	K30 × 33 × 10			30	33	10			
	K30 × 34 × 13		14.6	30	34	13	11800	21200	13000
	K30 × 35 × 13	29241/30	16.3	30	35	13	15100	25000	13000
	K30 × 35 × 17	49241/30	21.3	30	35	17	19100	33500	13000
	K30 × 35 × 26			30	35	26			
	K30 × 35 × 27	19241/30	33.3	30	35	27	30000	58500	13000
	K30 × 37 × 16	19243/30	26.4	30	37	16	22500	33000	13000
	K30 × 38 × 25	29244/30	43	30	38	25	16000	390000	13000
	K30 × 39 × 21			30	39	21			
	K30 × 40 × 18		44	30	40	18	31500	39500	12000
	K30 × 40 × 27	92401/30T	60	30	40	27			
	K30 × 40 × 30	49243/30	78	30	40	30	48500	68500	13000
	K30 × 35 × 26		32	30	35	26	23500	43500	12000
	K30 × 42 × 44.1			30	42	44.1			



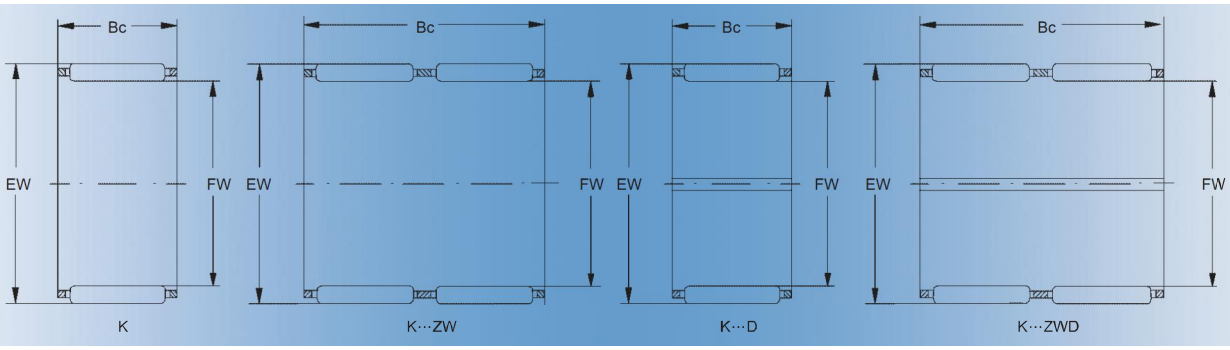
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
32	K32 × 37 × 13	29241/32	18.3	32	37	13	15000	25000	12000
	K32 × 37 × 17	49241/32	22.4	32	37	17	19400	35000	12000
	K32 × 37 × 27	19241/32	36.7	32	37	27	29500	59500	12000
	K32 × 37 × 28 TN		22.3	32	37	28	23100	43000	12000
	K32 × 38 × 16		25	32	38	16	21000	34000	12000
	K32 × 38 × 20	49242/32	31	32	38	20	26000	44500	12000
	K32 × 38 × 26 TN		25.2	32	38	26	27000	46500	12000
	K32 × 39 × 16	19243/32	36.7	32	39	16	23500	35000	12000
	K32 × 39 × 18		37.2	32	39	18	26000	40500	12000
	K32 × 40 × 20	19244/32	48	32	40	20	37000	40500	12000
	K32 × 40 × 36		73	32	40	36	53500	91500	12000
	K32 × 46 × 32		119	32	46	32	65500	82500	11000
	K32 × 40 × 42 TN		771	32	40	42	49500	83500	12000
35	K35 × 40 × 13	29241/35	188	35	40	13	15800	27500	11000
	K35 × 40 × 17	49241/35	25.3	35	40	17	20300	38000	11000
	K35 × 40 × 25	29244/35	31	35	40	25	29000	59500	11000
	K35 × 40 × 27 TN	19241/35	23.4	35	40	27	24500	48000	11000
	K35 × 40 × 27	79241/35	28	35	40	27	27800	62100	11000
	K35 × 40 × 30	39244/35	43	35	40	30	25000	49500	11000
	K35 × 42 × 16	19243/35	34	35	42	16	23900	37000	11000
	K35 × 42 × 18		39.2	35	42	18	27000	42500	11000
	K35 × 42 × 30	49243/35	62.4	35	42	30	38500	67500	11000
	K35 × 43 × 18		38	35	43	18	28000	41500	11000
	K35 × 45 × 20		55.5	35	45	20	36500	49500	10000
	K35 × 45 × 30	29245/35	80	35	45	30	52500	78500	10000
	K35 × 45 × 49		120	35	45	49	81500	13400	10000
	K35 × 40 × 30 ZW		48	35	40	30	31500	65500	11000
	K35 × 42 × 20 ZW	29243/35	41	35	42	20	29500	48500	11000
36	K36 × 41 × 30		52	36	41	30	23000	43000	11000
	K36 × 42 × 16		50	36	42	16	24000	42000	11000
37	K37 × 42 × 17		25.8	37	42	17	21900	42500	10000
	K37 × 42 × 27		40.7	37	42	27	31500	67500	10000
	K37 × 45 × 26		60.5	37	45	26	43500	73500	10000
38	K38 × 43 × 17	49241/38	26.9	38	43	17	20000	38000	10000
	K38 × 43 × 27	49241/38	43.2	38	43	27	31000	67500	10000
	K38 × 46 × 20	19244/38	46	38	46	20	35000	56500	10000
	K38 × 46 × 32		72.7	38	46	32	54500	98500	10000
39	K39 × 44 × 24		38	39	44	24	28000	58500	10000
	K39 × 44 × 26 ZW		29.5	39	44	26	27000	55500	10000



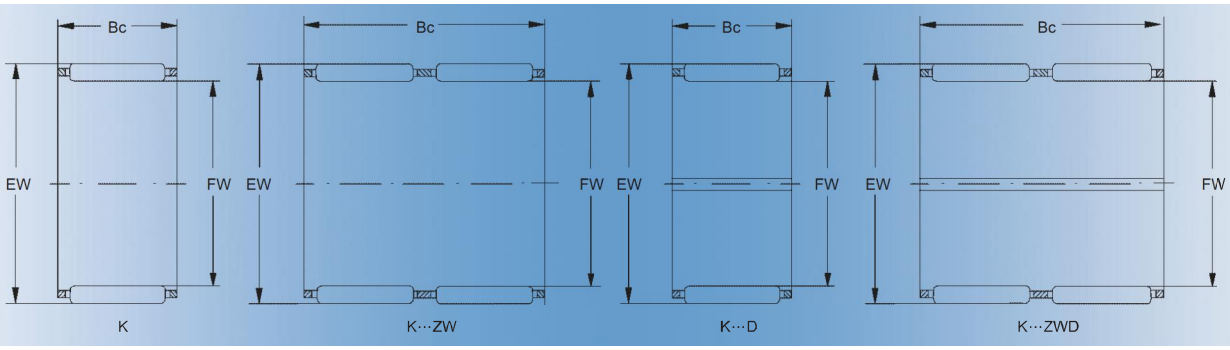
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
40	K40 × 44 × 13		20	40	44	13	13500	28000	10000
	K40 × 45 × 13	29241/40	21.5	40	45	13	17100	32000	10000
	K40 × 45 × 17	49241/40	27.4	40	45	17	20900	41000	10000
	K40 × 45 × 21		36.5	40	45	21	24400	49500	10000
	K40 × 45 × 27	19241/40	46	40	45	27	32500	72500	10000
	K40 × 46 × 17	39242/40	30	40	46	17	24500	44500	9000
	K40 × 47 × 18		45.2	40	47	18	29000	49500	9000
	K40 × 47 × 20	29243/40	42	40	47	20	32000	56500	9000
	K40 × 48 × 20	19244/40	57.7	40	48	20	35500	58500	9000
	K40 × 45 × 30 ZW		48	40	45	30	26000	53500	9000
42	K42 × 47 × 13	29241/42	22.5	42	47	13	17300	33000	9000
	K42 × 47 × 17	49241/42	31.1	42	47	17	21100	42500	9000
	K42 × 47 × 25 TN		25.4	42	47	25	27000	57500	9000
	K42 × 47 × 27	79241/42	46.6	42	47	27	33000	74500	9000
	K42 × 48 × 35	79242/42	60	42	48	35	35000	76000	9000
	K42 × 50 × 18		53	42	50	18	31000	49500	9000
	K42 × 50 × 20	19244/42	54	42	50	20	34500	56500	9000
	K42 × 47 × 30 ZW		54	42	47	30	31000	75500	9000
43	K43 × 48 × 17		29.3	43	48	17	21000	42500	9000
	K43 × 48 × 27		45.7	43	48	27	33000	74500	9000
	K43 × 50 × 18	9249/43	48.5	43	50	18	30500	53500	8000
45	K45 × 49 × 19		27	45	49	19	17500	40000	8000
	K45 × 50 × 17	49241/45	25.5	45	50	17	22000	45000	8000
	K45 × 50 × 27	19241/45	50	45	50	27	34000	79500	8000
	K45 × 50 × 32 TN		45	45	50	32	38000	90500	8000
	K45 × 52 × 18		51	45	52	18	31000	56500	8000
	K45 × 52 × 21 TN		32.9	45	52	21	39500	57500	8000
	K45 × 53 × 20	19244/45	62.2	45	53	20	38500	66500	8000
	K45 × 53 × 21		65	45	53	21	38000	66500	8000
	K45 × 53 × 22		68.4	45	53	22	42000	66500	8000
	K45 × 53 × 28		78	45	53	28	51500	97500	8000
	K45 × 59 × 18 TN		60.5	45	59	18	43500	53500	7000
	K45 × 59 × 32		145.5	45	59	32	72500	101500	7000
	K45 × 59 × 36		195	45	59	36	75500	108500	7000
	K45 × 51 × 36 ZW		85	45	51	36	44500	98500	7000
47	K47 × 52 × 17		32	47	52	17	22800	48500	8000
	K47 × 52 × 27		50.7	47	52	27	34500	82500	8000
	K47 × 53 × 25		53	47	53	25	38000	81500	8000
	K47 × 55 × 28		62.4	47	55	28	52500	99500	7500



轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
48	K48 × 54 × 19	39242/48	44	48	54	19	30000	60500	7500
	K48 × 54 × 25	59242/48	55	48	54	25	31000	91000	7500
50	K50 × 55 × 13.5		31	50	55	13.5	17500	36000	7500
	K50 × 55 × 17	49241/50	35	50	55	17	21400	46500	7500
	K50 × 55 × 20	59241/50	39.4	50	55	20	26000	59500	7500
	K50 × 55 × 30	9243/50	59.4	50	55	30	38500	96500	7500
	K50 × 57 × 18		53.4	50	57	18	33000	62500	7000
	K50 × 58 × 20	19244/50	64.9	50	58	20	35000	61500	7000
	K50 × 58 × 25	29244/50	81	50	58	25	43500	80500	7000
52	K52 × 57 × 12		24	52	57	12	17500	36000	7000
55	K55 × 60 × 20		43.4	55	60	20	28000	65500	6500
	K55 × 60 × 27		60.5	55	60	27	37500	96500	6500
	K55 × 60 × 30		68.6	55	60	30	40500	10300	6500
	K55 × 61 × 20		56	55	61	20	41000	11000	6500
	K55 × 62 × 18		58.4	55	62	18	35000	69500	6500
	K55 × 63 × 15		53	55	63	15	245000	40500	6500
	K55 × 63 × 20	19243/55	73.3	55	63	20	39500	73500	6500
	K55 × 63 × 25	29243/55	88	55	63	25	49500	99500	6500
	K55 × 63 × 32		117	55	63	32	61500	129500	6500
	K55 × 60 × 40 ZW		96.5	55	60	40	48000	132000	6500
56	K56 × 61 × 20		45	56	61	20	27000	64500	6500
58	K58 × 63 × 17		42	58	63	17	21500	63500	6000
	K58 × 64 × 19		53	58	64	19	24500	77500	6000
	K58 × 65 × 18		52	58	65	18	34500	69500	6000
	K58 × 65 × 38 ZW		106	58	65	38	48500	106500	6000
60	K60 × 65 × 20	49241/60	50.5	60	65	20	29000	71500	6000
	K60 × 65 × 30	69241/60	71.2	60	65	30	42000	115500	6000
	K60 × 68 × 20	19243/60	79	60	68	20	43000	84500	5500
	K60 × 68 × 23		94	60	68	23	49000	100500	5500
	K60 × 68 × 25	29243/60	97	60	68	25	52500	110500	5500
	K60 × 68 × 27		98	60	68	27	59000	120500	6000
	K60 × 75 × 42		240	60	75	42	11300	19200	5500
	K60 × 66 × 33 ZW		104	60	66	33	45500	111500	6000
	K60 × 66 × 40 ZW		116	60	66	40	57500	150500	5500
	K60 × 68 × 30 ZW		136	60	68	30	44000	87500	5500
	K60 × 68 × 34 ZW		140	60	68	34	47500	95500	5500
62	K62 × 70 × 40 ZW		147.5	62	70	40	65500	145500	5500
63	K63 × 70 × 21		75	63	70	21	45000	100500	5500
64	K47 × 70 × 16		53	64	70	16	27500	59500	5500



轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
65	K65 × 70 × 20	49241/65	49	65	70	20	30000	76500	5500
	K65 × 70 × 30		83	65	70	30	43500	93500	5500
	K65 × 73 × 23		100	65	73	23	45500	93500	5000
	K65 × 73 × 30	39243/65	126	65	73	30	56500	122500	5000
68	K68 × 74 × 20	49241/68	65	68	74	20	35000	83500	5000
	K68 × 74 × 30	69241/68	97	68	74	30	46000	117500	5000
	K68 × 74 × 35 ZW	79241/68	116	68	74	35	48000	124500	5000
	K68 × 75 × 20		120	68	75	32	53500	127500	4500
70	K70 × 76 × 20	49241/70	70	70	76	20	35500	85500	4500
	K70 × 76 × 30	69241/70	100	70	76	30	51500	138500	4500
	K70 × 78 × 25	29243/70	115	70	78	25	51500	111500	4500
	K70 × 78 × 30	39243/70	136	70	78	30	59500	134500	4500
	K70 × 80 × 30	29244/70	150	70	80	30	72500	147500	4500
	K70 × 78 × 46 ZW		230	70	78	46	77500	18800	4500
72	K72 × 80 × 20	19243/72	94	72	80	20	41000	84500	4500
73	K73 × 79 × 20		69	73	79	20	36500	99500	4500
75	K75 × 81 × 20	49241/75	72	75	81	20	37000	93500	4500
	K75 × 81 × 30	69241/75	106	75	81	30	51500	142000	4500
	K75 × 83 × 23		113	75	83	23	49500	108000	4000
	K75 × 83 × 30	39243/75	147	75	83	30	91500	142000	4000
	K75 × 83 × 35 ZW	49243/75	165	75	83	35	62500	146500	4000
	K75 × 83 × 40 ZW	59243/75	190	75	83	40	72500	176500	4000
80	K80 × 86 × 20	49241/80	76	80	86	20	38000	97500	4000
	K80 × 86 × 30	69241/80	114	80	86	30	55500	158500	4000
	K80 × 88 × 30	39243/80	141	80	88	30	71500	178500	4000
	K80 × 88 × 40 ZW	59243/80	204	80	88	40	75500	191500	4000
	K80 × 88 × 46 ZW	69243/80	235	80	88	46	87500	23000	4000
85	K85 × 92 × 20	29241/85	96	85	92	20	44000	107500	3500
90	K90 × 97 × 20	29241/90	103	90	97	20	44500	112500	3000
	K90 × 98 × 27		150	90	98	27	60500	149500	3000
	K90 × 98 × 30	39242/90	172	90	98	30	67500	171500	3000
95	K95 × 102 × 20	29241/95	110	95	102	20	45500	122500	2900
	K95 × 103 × 30 ZW	39242/95	177	95	103	30	68500	179500	2900
	K95 × 103 × 40 ZW	59242/95	250	95	103	40	82500	227500	2900
100	K100 × 107 × 21		120	100	107	21	47500	126500	2700
	K100 × 108 × 27		176	100	108	27	56500	142500	2700
	K100 × 108 × 30	39242/100	190	100	108	30	70500	187500	2700
105	K105 × 112 × 21		123	105	112	21	47000	126500	2500
	K105 × 113 × 30	39242/105	198	105	113	30	71500	196500	2500



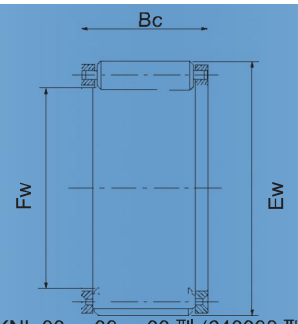
轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating		极限转速 Limiting Speed
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static	油润滑 Oil
mm			g	mm			N		rpm
110	K110 × 117 × 24		146	110	117	24	55500	157500	2300
	K110 × 118 × 30	39244/110	217	110	118	30	77500	218500	2300
115	K115 × 123 × 27		200	115	123	27	63	170	4100
	K115 × 125 × 35			115	125	35	63	170	4100
	K115 × 125 × 40			115	125	40	65	175	4100
120	K120 × 127 × 24		165	120	127	24	59	174	4000
125	K125 × 133 × 35		275	125	133	35	86	260	3800
130	K130 × 127 × 24		170	130	137	24	61	186	3700
145	K145 × 153 × 26		262	145	153	26	74	225	3300
155	K155 × 163 × 26		265	155	163	26	75	236	3100
160	K160 × 170 × 46		550	160	170	46	152	510	3000
165	K165 × 173 × 26		320	165	173	26	81	265	3000
175	K175 × 183 × 32		400	175	183	32	99	350	2700
185	K185 × 195 × 37		607	185	195	37	128	425	2600
195	K195 × 205 × 37		620	195	205	37	133	450	2500
210	K210 × 220 × 42		740	210	220	42	154	560	2300
220	K220 × 230 × 42		790	220	230	42	158	590	2200
240	K240 × 250 × 42		850	240	250	42	164	630	2000
265	K265 × 280 × 50		1810	265	280	50	255	860	1800

该种轴承适用于径向尺寸特别受限制的部件中，该种轴承因无套圈，轴颈表面和外壳内孔表面直接作为滚动面，要求与其相配的轴颈表面和外壳内孔表面的硬度、表面粗造度及尺寸精度应与轴承套圈相当，还有一种改枢轴式圆柱体为平头圆柱体，并采用“M”型保持架的结构型式，这时速度性能有较大改善。

无套圈长圆柱滚子和保持架组件
No Collar Slab Roller and Cage Assemblies



This kind of bearing is suitable for the parts in which the radial size is specially limited. Since the bearing has not collar, the surface of shaft journal and the surface of housing inner bore are directly acted as rolling face. It is requested that the hardness, surface roughness and size accuracy of shaft journal surface and housing inner bore surface fitted with it be adaptable to the collar of bearing. Another pivot cylinder is modified as flat cylinder with M-type cage structure. Its speed performance is greatly improved.



KNL 00 × 00 × 00型 (640000型)

轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating	
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static
mm			g	mm			N	
19.051	KNL19.051 × 28.588 × 36.75	64903	70	19.051	28.588	36.75		
19.051	KNL19.051 × 28.588 × 43.25	64904	80	19.051	28.588	43.25		
20	KNL20 × 30.2 × 18	64704	40	20	30.2	18		
20.612	KNL20.612 × 33.325 × 35	864904	96	20.612	33.325	35		
20.638	KNL20.638 × 33.338 × 36.75	64705	92	20.638	33.338	36.75		
25	KNL25 × 38 × 24.7	64805	82	25	38	24.7		
25.4	KNL25.4 × 41.2 × 60.4	64905	265	25.4	41.2	60.4		
27.71	KNL27.71 × 42.825 × 44.1	64906	183	27.71	42.825	44.1		
28.575	KNL28.575 × 41.275 × 34.925	64806	122	28.575	41.275	34.925		
28.578	KNL28.575 × 41.275 × 40	94626	155	28.578	41.275	40		
29.975	KNL29.975 × 42 × 44.1	64706	160	29.975	42	44.1		
29.975	KNL29.975 × 42 × 31	9148/30	81	29.975	42	31		
31.75	KNL31.75 × 44.45 × 31.75	864807	115.8	31.75	44.45	31.75		
31.9	KNL31.9 × 41.46 × 32	31.9 × 41.46 × 32	95	31.9	41.46	32		
32	KNL32 × 50 × 45	30643/32	272	32	50	45		
32	KNL32 × 52 × 49	64907	329	32	52	49		
37.96	KNL37.96 × 53.9 × 36	37.96 × 53.9 × 36	208.3	37.96	53.9	36		
40	KNL40 × 60 × 30	10643/40	248	40	60	30		
52.412	KNL52.412 × 71.425 × 42.3	864911	441	52.412	71.425	42.3		
65	KNL65 × 89 × 58.9	864913	943	65	89	58.9		
74	KNL74 × 106 × 57.9	864915	1563	74	106	57.9		

连杆用滚针和保持架组件主要用于发电机、压缩机和其他曲柄连杆机构上。

连杆用滚针和保持架组件的代号由字母和数字两部分组成，字母KZK表示曲柄销用组件;KBK表示活塞销用组件。

KZK 曲柄销用滚针和保持架组件，采用 M 型保持架，性能可靠。应特殊要求，保持架表面可进行镀银、镀铜处理。

KBK 活塞销用滚针和保持架组件不象曲柄销那样外引，而是在活塞销上内引导，因此就可以加大滚针长度。

连杆用滚针和保持架组件
Rod-use Needle Roller and Cage Assemblies For P in of Connecting Rod

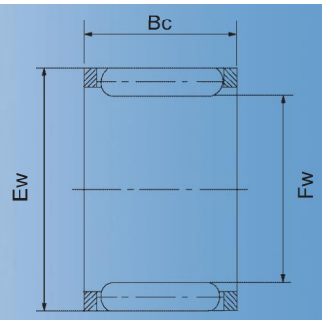


The rod-use needle roller and cage assembly is mainly used for engine, compressor and other crank-guide.

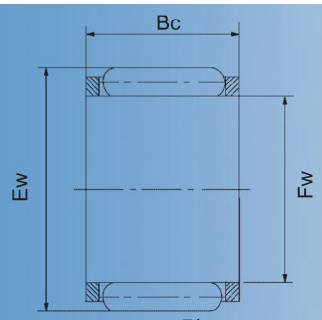
The designation of the rod-use needle roller and cage assembly is composed of letter and number. The letter KZK represents crank pine assembly and KBK represents piston pin assembly.

4.The needle roller and cage assembly for KZK crank pin adapts M-type cage with reliable performance. It has special requirement. The surface of cage can be silver-plated or copper-coated.

5. The needle roller and cage assembly for KBK piston pin is different from KZK (external guide for crank pin). It is internally guided on the piston pin), thus increasing the length of needle.

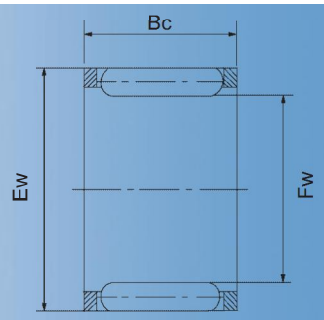


KZK

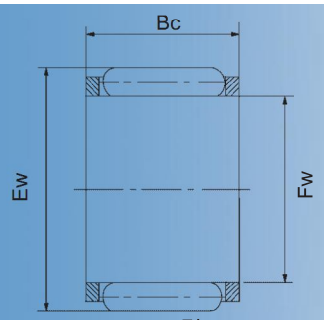


KBK 型

轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating	
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static
mm			g	mm			N	
8	KZK8 × 12 × 8	19242/8	1.9	8	12	8	4700	4580
10	KZK10 × 14 × 10	29242/10	3.3	10	14	10	5000	5160
12	KZK12 × 15 × 13	49241/12	3.6	12	15	13	5300	7400
	KZK12 × 16 × 10	29242/12	3.5	12	16	10	6100	6900
	KZK12 × 16 × 11		3.7	12	16	11	6200	7100
	KZK12 × 17 × 10	19243/12	5	12	17	10	7020	7020
	KZK12 × 18 × 10	19242/12	7.8	12	18	10	7400	7200
14	KZK14 × 18 × 10	29241/14	4	14	18	10	7100	8500
	KZK14 × 19 × 10	19242/14	5.5	14	19	10	7300	7600
	KZK14 × 19 × 10		7.5	14	19	12	7460	7950
	KZK14.4 × 20.4 × 10		6.5	14.4	20.4	10	8100	7800
15	KZK15 × 19 × 9		5	15	19	9	6800	7100
	KZK15 × 19 × 10	29241/15	6	15	19	10	7200	8400
	KZK15 × 20 × 10	19242/15	7.5	15	20	10	7800	9100
	KZK15 × 21 × 10		8.5	15	21	10	8400	10500
	KZK15 × 21 × 11		9.5	15	21	11	8500	10700
	KZK15.2 × 22.2 × 12		11.5	15.2	22.2	12	8600	11100
16	KZK16 × 20 × 10	29241/16	5.8	16	20	10	8200	9200
	KZK16 × 20 × 24	79241/16	6.3	16	20	24	8700	9400
	KZK16 × 21 × 10	19242/16	5.8	16	21	10	8800	9800
	KZK16 × 22 × 12	19243/16	9.5	16	22	12	11000	11900
	KZK16 × 22 × 14		11	16	22	14	13200	13930
17	KZK17 × 21 × 10	29241/17	6.7	17	21	10	7600	9000
	KZK17 × 23 × 11		9.5	17	23	11	8100	11300
18	KZK18 × 22 × 10	29241/18	6.9	18	22	10	7600	9800
	KZK18 × 22 × 24		7.2	18	22	24	10100	17200
	KZK18 × 24 × 11.6	19243/18	10	18	24	11.6	11600	13100
	KZK18 × 24 × 12	19243/18	10	18	24	12	11600	13100
	KZK18 × 24 × 13.3		12.4	18	24	13.3	9000	10700
	KZK18 × 24 × 13.5		12.4	18	24	13.5	9000	10700
	KZK18 × 24 × 15	29243/18	14	18	24	15	13200	15500
19	KZK19 × 25 × 16	19244/19K	13.9	19	25	16	12100	15500
	KZK19 × 28 × 14		20	19	28	14	12100	15000
20	KZK20 × 25 × 16		12	20	25	16	9900	12300
	KZK20 × 26 × 12	19243/20	9.6	20	26	12	10100	12500
	KZK20 × 26 × 14		12	20	26	14	12600	16700
	KZK20 × 26 × 17	9246/20	17	20	26	17	12700	17600
22	KZK22 × 28 × 13		15	22	28	13	11900	16500
	KZK22 × 28 × 14		16	22	28	14	12600	16800

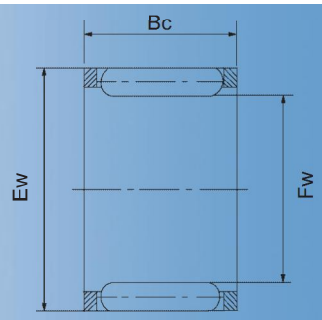


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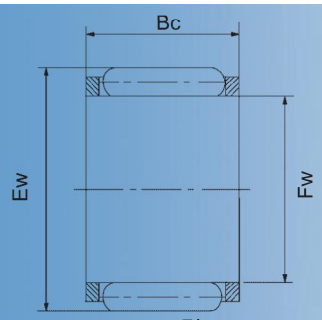


KBK 型

轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating	
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static
mm			g	mm			N	
22	KZK22 × 28 × 15	29242/22	16.7	22	28	15	13500	18500
	KZK22 × 28 × 16	29243/22K	18	22	28	16	14400	20100
	KZK22 × 29 × 15		15.2	22	29	15	17800	21800
	KZK22 × 29 × 16	19244/32	19	22	29	16	17800	21800
	KZK22 × 30 × 16	SZ-432	25.7	22	30	16	18700	22300
23	KZK23 × 29 × 13		12	23	29	13	10000	11300
	KZK23 × 30 × 14		19.4	23	30	14	9350	10100
	KZK23 × 30 × 16		22	23	30	16	9780	11800
23.1	KZK23.1 × 28.1 × 14	29242/23.1	12.9	23.1	28.1	14	10600	15800
24	KZK24 × 30 × 15		17	24	30	15	11200	13700
	KZK24 × 30 × 16		18	24	30	16	11200	13700
25	KZK25 × 30 × 28	69245/25	24	25	30	28	13300	15200
	KZK25 × 31 × 12	19243/25K	16	25	31	12	8700	8800
	KZK25 × 31 × 17	39243/25	23	25	31	17	9200	9750
	KZK25 × 31 × 20	49243/25	26	25	31	20	9700	10600
	KZK25 × 32 × 16	19244/25	22.7	25	32	16	18200	23100
25.1	KZK25.1 × 30.1 × 14		14.1	25.1	30.1	14	13700	19000
26	KZK26 × 34 × 16	9248/26	25	26	34	16	11700	17500
28	KZK28 × 33 × 14		15.7	28	33	14	13200	21900
	KZK28 × 34 × 14		20	28	34	14	16500	20700
	KZK28 × 35 × 15		25	28	35	15	18000	22000
	KZK28 × 35 × 16	19243/28	27	28	35	16	18900	23000
	KZK28 × 36 × 16		29.1	28	36	16	19500	27000
	KZK28 × 38 × 13.6		40	28	38	13.6	17300	20300
30	KZK30 × 36 × 16		28.5	30	36	16	18900	22800
	KZK30 × 37 × 16	19243/30	29	30	37	16	21500	30500
	KZK30 × 38 × 16		34.4	30	38	16	22700	32600
	KZK30 × 38 × 18		38.8	30	38	18	26200	39600
32	KZK32 × 40 × 22	19244/32K	50	32	40	22	27800	39300
	KZK32 × 42 × 20		54	32	42	20	29000	41000
35	KZK35 × 42 × 20	29243/35	10	35	42	20	26000	40200
38	KZK38 × 46 × 20	19244/38	50	38	46	20	31100	43000
40	KZK40 × 48 × 17		50	40	48	17	29000	39000
	KZK40 × 48 × 20	19244/40	54	40	48	20	32500	51000

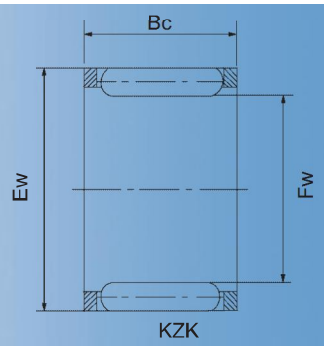


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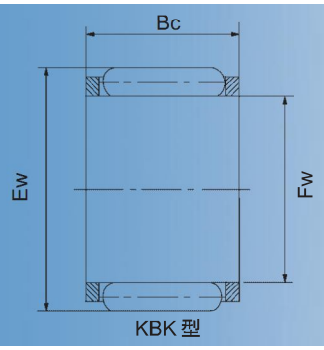


KBK 型

轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating	
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static
mm			g	mm			N	
8	KBK8 × 11 × 10	39241/8	1.85	8	11	10	3500	4000
	KBK8 × 12 × 10	29242/8	2	8	12	10	3700	4100
9	KBK9 × 12 × 11.5		2.4	9	12	11.5	4200	4800
	KBK9 × 12 × 13	49241/9	2.75	9	12	13	4600	5800
	KBK9 × 12 × 14		3.5	9	12	14	4700	5900
	KBK9 × 13 × 12	39242/9	4.1	9	13	12	5300	5700
	KBK9 × 13 × 12.5		4.9	9	13	12.5	5300	5700
	KBK9 × 13 × 13	39242/9	5.1	9	13	13	5350	5600
10	KBK10 × 13 × 8	29241/10	2	10	13	8	4000	5000
	KBK10 × 13 × 10	39241/10	2.4	10	13	10	4200	5200
	KBK10 × 13 × 14.5	59241/10	5.1	10	13	14.5	5400	6600
	KBK10 × 13 × 16		5.7	10	13	16	6800	7700
	KBK10 × 14 × 10	29242/10	3.4	10	14	10	4400	4600
	KBK10 × 14 × 11		4	10	14	11	5200	5700
	KBK10 × 14 × 12		4.5	10	14	12	5400	6000
	KBK10 × 14 × 12.5		4.85	10	14	12.5	5600	6200
	KBK10 × 14 × 13	39242/10	5.4	10	14	13	5600	6200
11	KBK11 × 15 × 17		5	11	15	17	5200	7000
12	KBK12 × 15 × 13	49241/12	4.6	12	15	13	5500	7300
	KBK12 × 15 × 14.3		5.4	12	15	14.3	5800	7700
	KBK12 × 15 × 15	59241/12	5.6	12	15	15	5900	7800
	KBK12 × 15 × 16.5		6.2	12	15	16.6	6800	9900
	KBK12 × 15 × 17	69241/12	6.3	12	15	17	7000	10000
	KBK12 × 15 × 17.5		6.5	12	15	17.5	7000	10000
	KBK12 × 16 × 13	39242/12	6.7	12	16	13	6300	7600
	KBK12 × 16 × 15	149242/12KY	7.9	12	16	15	7500	9000
	KBK12 × 16 × 15.5		8.3	12	16	15.5	7600	10000
	KBK12 × 16 × 16	59241/12	8.5	12	16	16	7800	9300
	KBK12 × 16 × 17	59242/12	9.2	12	16	17	7900	9400
	KBK12 × 17 × 14		8	12	17	14	8000	9500
	KBK12 × 17 × 14.3		8.4	12	17	14.3	8000	9500
	KBK19 × 17 × 14.8		8.8	12	17	14.8	8300	9800
13	KBK13 × 17 × 14.5		7.1	13	17	14.5	8300	10200
	KBK13 × 17 × 17.5		8.6	13	17	17.5	9500	12100
14	KBK14 × 18 × 10	29241/14	4.6	14	18	10	6260	7400
	KBK14 × 18 × 12		6.6	14	18	12	6380	7570
	KBK14 × 18 × 13	39241/14	7.6	14	18	13	7300	8700
	KBK14 × 18 × 14		6.33	14	18	14	7400	8800
	KBK14 × 18 × 14.5		8	14	18	14.5	7400	8800



KZK



KBK 型

轴径 Shaft Diameter	轴承型号 Bearing Designation		重量 Mass 近似 Approx	外形尺寸 Boundary Dimensions			基本额定负荷 Basic Load Rating	
	现型号 Current Code	原型号 Original Code		Fw	Ew	Bc	动 Dynamic	静 Static
mm			g	mm			N	
14	KBK14 × 18 × 15	49241/14	8.3	14	18	15	7600	8990
	KBK14 × 18 × 16.5		9.6	14	18	16.5	8800	9700
	KBK14 × 18 × 17	59241/14	10.1	14	18	17	8900	9800
	KBK14 × 18 × 20	69241/14	12	14	18	20	9000	10100
	KBK14 × 18 × 21		13	14	18	21	10500	12400
	KBK14 × 19 × 22		14	14	18	22	11100	13100
	KBK14 × 18 × 17	49242/14K	10.3	14	19	17	11100	13100
15	KBK15 × 19 × 10	29241/15Y	5	15	19	10	6500	8600
	KBK15 × 19 × 18		11	15	19	18	9900	11300
	KBK15 × 19 × 19		12	15	19	19	10100	12800
	KBK15 × 19 × 20	69241/15	12.9	15	19	20	11300	15500
	KBK15 × 20 × 24		18.6	15	20	24	14100	20000
16	KBK16 × 20 × 19	SZ-433	12	16	20	19	11700	16800
	KBK16 × 20 × 20	69241/16Y	13.4	16	20	20	12900	17600
	KBK16 × 20 × 21		14	16	20	21	12900	17600
	KBK16 × 20 × 22		15	16	20	22	13000	18700
	KBK16 × 21 × 19	59242/16	16	16	21	19	13000	18700
17.5	KBK17.5 × 22 × 16		9.3	17.5	22	16	11000	16300
18	KBK18 × 22 × 22		16.9	18	22	22	11500	17700
	KBK18 × 22 × 23.5		18	18	22	23.5	11900	19000
	KBK18 × 22 × 24		18.4	18	22	24	12000	20000
	KBK18 × 22 × 25		19.1	18	22	25	12700	20100
	KBK18 × 23 × 21		18	18	23	21	9900	10100
	KBK18 × 23 × 23	69242/18	20	18	23	23	10500	12000
	KBK18 × 24 × 20	49243/18	20	18	24	20	20000	25000
20	KBK20 × 24 × 30		22.1	20	24	30	14900	25500
	KBK20 × 25 × 22		19.5	20	25	22	15200	22300
	KBK20 × 25 × 25		23	20	25	25	17100	24000