



**DEEP GROOVE BALL BEARINGS
AND
ANGULAR CONTACT BALL BEARINGS**



ABOUT US

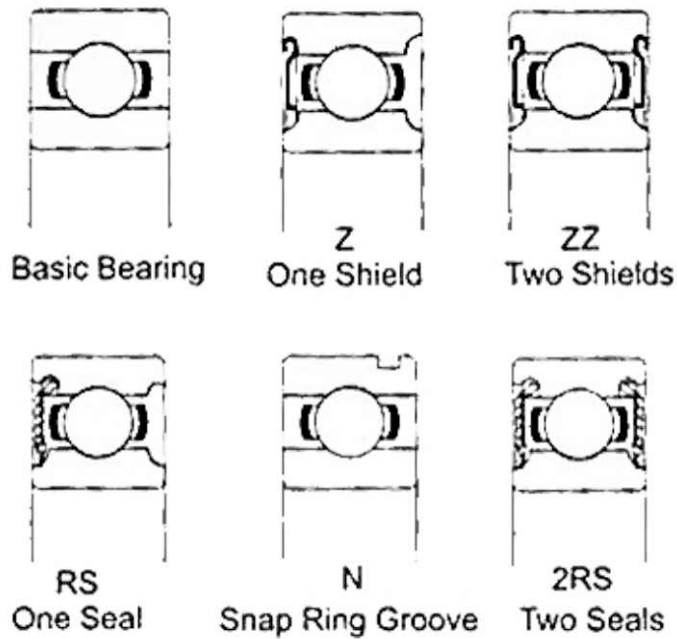
KAPA BEARINGS IS A ONE-STOP DESTINATION FOR ALL TYPES OF BEARING SOLUTIONS.

KAPA Bearings is Known for its unmatched quality made available at affordable prices, KAPA Bearings has made the life of all its customers easy and convenient. It has added value to their lives through its diverse and supreme product line, great teamwork and innovative manufacturing techniques. All these factors have made KAPA Bearings the most preferred manufacturer of bearings all over the world.

Our products are setting new standards for reliability, energy efficiency and durability. We offer almost all types of bearings, including deep-groove ball bearings, spherical & cylindrical roller bearings and super-precision bearings. In addition, we also develop and produce Precision Linear Shafts, Dual Guides, Track Roller Guides, Pillow Bearings & Precision Linear Bushes Bearings etc.



DEEP GROOVE BALL BEARINGS



Different types of basic bearing

SUFFIXES

- C2** Radial internal clearance less than normal - marked C2
- CN** Normal grade of radial internal clearance - not marked
- C3** Radial internal clearance greater than normal- marked C3
- C4** Radial internal clearance greater than C3 - marked C4
- C5** Radial internal clearance greater than C4-marked C5
- N** Snap ring groove on the outer ring outside diameter
- NR** Snap ring groove with snap ring
- RS** One synthetic rubber seal
- 2RS** Two synthetic rubber seals
- Z** One metal shield
- ZZ** Two metal shields

TOLERANCES

KAPA standard metric bearings are manufactured in accordance with normal tolerance class of ISO 492.

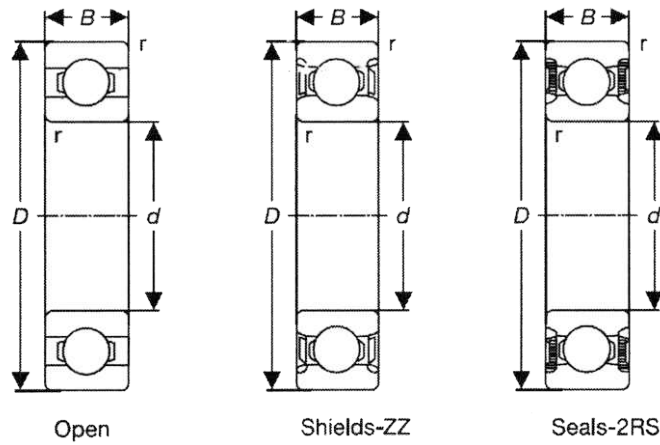
RADIAL INTERNAL CLEARANCE (RIC)

KAPA bearings are generally available in normal radial internal clearances. Bearings in normal radial internal clearances. Bearings in other radial internal clearance groups can be supplied on request. The following table gives the RIC values for standard bearings.

RADIAL INTERNAL CLEARANCE VALUES FOR RADIAL CONTACT GROOVE BALL BEARINGS WITH CYLINDRICAL BORE

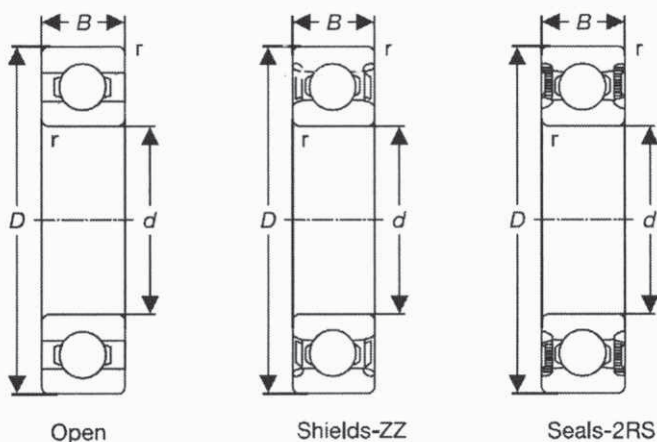
Bore dia m m		Radial internal clearance groups									
		C2		CN		C3		C4		C5	
over	incl	min	max	min	max	min	max	min	max	min	max
2.5	6	0	7	2	13	8	23				
6	10	0	7	2	13	8	23	14	29	20	37
10	18	0	9	3	18	11	25	18	33	25	45
18	24	0	10	5	20	13	28	20	36	28	48
24	30	1	11	5	20	13	28	23	41	30	53
30	40	1	11	6	20	15	33	28	46	40	64
40	50	1	11	6	23	18	36	30	51	45	73
50	65	1	15	8	28	23	43	38	61	55	90
65	80	1	15	10	30	25	51	46	71	65	105
80	100	1	18	12	36	30	58	53	84	75	120
100	120	2	20	15	41	36	66	61	97	90	140
120	140	2	23	18	48	41	81	71	114	105	160

60 Series



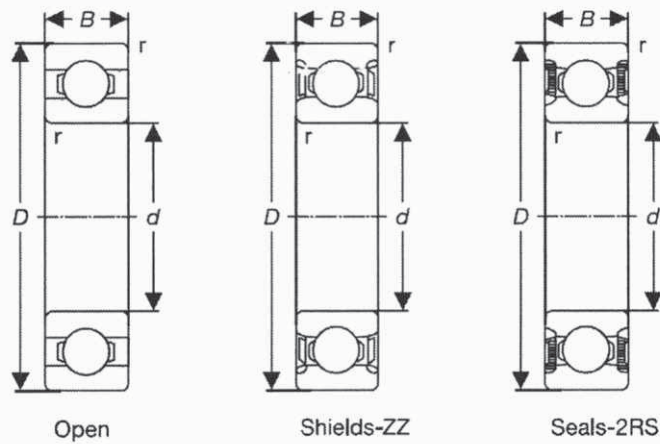
Inner bore d mm	Bearing number			Principal Dimensions			Basic Load Rating (kN)		Limiting Speed (r/min)		Weight kg
	Open	With Shields	With Seals	D	B	r	Dynamic C	Static Co	Grease	Oil	
				mm							
10	6000	6000 ZZ	6000 2RS	26	8	0,3	4.55	1.97	24,000	28,800	0.019
				26	8	0,3	4.55	1.97	15,000	-	0.019
12	6001	6001 ZZ	6001 2RS	28	8	0,3	5.10	2.40	20,800	25,000	0.022
				28	8	0,3	5.10	2.40	13,600	-	0.022
15	6002	6002 ZZ	6002 2RS	32	9	0,3	5.60	2.84	17,600	22,400	0.030
				32	9	0,3	5.60	2.84	11,200	-	0.030
17	6003	6003 ZZ	6003 2RS	35	10	0,3	6.00	3.25	15,200	19,200	0.039
				35	10	0,3	6.00	3.25	10,400	-	0.039
20	6004	6004 ZZ	6004 2RS	42	12	0,6	9.40	5.00	13,600	16,000	0.069
				42	12	0,6	9.40	5.00	8,800	-	0.069
25	6005	6005 ZZ	6005 2RS	47	12	0,6	10.10	5.85	12,000	14,400	0.080
				47	12	0,6	10.10	5.85	7,600	-	0.080
30	6006	6006 ZZ	6006 2RS	55	13	1,0	13.20	8.30	9,600	12,000	0.120
				55	13	1,0	13.20	8.30	6,400	-	0.120
35	6007	6007 ZZ	6007 2RS	62	14	1,0	16.00	10.30	8,000	10,400	0.160
				62	14	1,0	16.00	10.30	5,600	-	0.160
40	6008	6008 ZZ	6008 2RS	68	15	1,0	16.80	11.50	7,600	9,600	0.190
				68	15	1,0	16.80	11.50	5,040	-	0.190
45	6009	6009 ZZ	6009 2RS	75	16	1,0	21.00	15.20	7,200	8,800	0.250
				75	16	1,0	21.00	15.20	4,480	-	0.250
50	6010	6010 ZZ	6010 2RS	80	16	1,0	21.80	16.60	6,800	8,000	0.260
				80	16	1,0	21.80	16.60	4,000	-	0.260
55	6011	6011 ZZ	6011 2RS	90	18	1,1	28.30	21.30	6,000	7,200	0.390
				90	18	1,1	28.30	21.30	3,440	-	0.390
60	6012	6012 ZZ	6012 2RS	95	18	1,1	29.50	23.20	5,360	6,400	0.420
				95	18	1,1	29.50	23.20	3,440	-	0.420
65	6013	6013 ZZ	6013 2RS	100	18	1,1	30.70	25.00	5,040	6,000	0.440
				100	18	1,1	30.70	25.00	3,200	-	0.440

62 Series



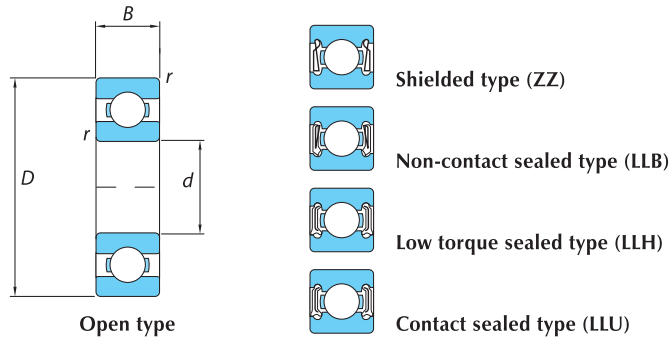
Inner bore d mm	Bearing number			Principal Dimensions			Basic Load Rating (kN)		Limiting Speed (r/min)		Weight kg
	Open	With Shields	With Seals	D	B	r	Dynamic C	Static C ₀	Grease	Oil	
				mm							
10	6200	6200 ZZ	6200 2RS	30	9	0,60	5.10	2.40	19,200	24,000	0.032
				30	9	0,60	5.10	2.40	13,600	-	
12	6201	6201 ZZ	6201 2RS	32	10	0,60	6.80	3.05	17,600	22,400	0.037
				32	10	0,60	6.80	3.05	12,000	-	
15	6202	6202 ZZ	6202 2RS	35	11	0,60	7.65	3.70	15,200	19,200	0.045
				35	11	0,60	7.65	3.70	10,400	-	
17	6203	6203 ZZ	6203 2RS	40	12	0,60	9.55	4.80	13,600	16,000	0.065
				40	12	0,60	9.55	4.80	9,600	-	
20	6204	6204 ZZ	6204 2RS	47	14	1,00	12.80	6.60	12,000	14,400	0.110
				47	14	1,00	12.80	6.60	8,000	-	
25	6205	6205 ZZ	6205 2RS	52	15	1,00	14.00	7.90	9,600	12,000	0.130
				52	15	1,00	14.00	7.90	6,800	-	
30	6206	6206 ZZ	6206 2RS	62	16	1,00	19.50	11.30	8,000	10,400	0.200
				62	16	1,00	19.50	11.30	6,000	-	
35	6207	6207 ZZ	6207 2RS	72	17	1,10	25.70	15.30	7,200	8,800	0.290
				72	17	1,10	25.70	15.30	5,040	-	
40	6208	6208 ZZ	6208 2RS	80	18	1,10	29.10	17.90	6,800	8,000	0.370
				80	18	1,10	29.10	17.90	4,480	-	
45	6209	6209 ZZ	6209 2RS	85	19	1,10	32.50	20.50	6,000	7,200	0.410
				85	19	1,10	32.50	20.50	4,000	-	
50	6210	6210 ZZ	6210 2RS	90	20	1,10	35.00	23.20	5,600	6,800	0.460
				90	20	1,10	35.00	23.20	3,840	-	
55	6211	6211 ZZ	6211 2RS	100	21	1,50	43.30	29.40	5,040	6,000	0.610
				100	21	1,50	43.30	29.40	3,440	-	
60	6212	6212 ZZ	6212 2RS	110	22	1,50	52.50	36.00	4,800	5,600	0.780
				110	22	1,50	52.50	36.00	3,200	5,600	
65	6213	6213 ZZ	6213 2RS	120	23	1,50	57.20	40.00	4,240	5,240	0.990
				120	23	1,50	57.20	40.00	2,880	-	

63 Series



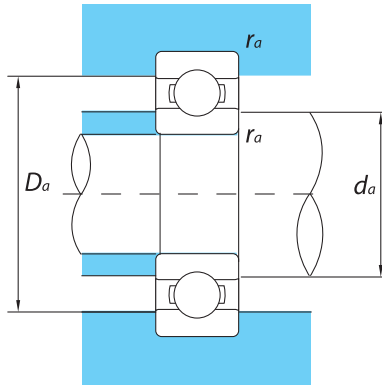
Inner bore d mm	Bearing number			Principal Dimensions			Basic Load Rating (kN)		Limiting Speed (r/min)		Weight kg
	Open	With Shields	With Seals	D	B	r	Dynamic C	Static C ₀	Grease	Oil	
				mm							
10	6300	6300 ZZ	6300 2RS	35	11	0,6	8.10	3.45	24,000	27,200	0.053
				35	11	0,6	8.10	3.45	14,400	-	0.053
12	6301	6301 ZZ	6301 2RS	37	12	1,0	9.80	4.25	19,200	24,000	0.060
				37	12	1,0	9.80	4.25	13,600	-	0.060
15	6302	6302 ZZ	6302 2RS	42	13	1,0	11.40	5.40	15,200	19,200	0.082
				42	13	1,0	11.40	5.40	10,400	-	0.082
17	6303	6303 ZZ	6303 2RS	47	14	1,0	13.60	6.55	13,600	16,000	0.112
				47	14	1.0	13.60	6.55	9,600	-	0.112
20	6304	6304 ZZ	6304 2RS	52	15	1,1	15.90	7.90	12,000	14,400	0.144
				52	15	1,1	15.90	7.90	8,000	-	0.144
25	6305	6305 ZZ	6305 2RS	62	17	1,1	22.20	11.50	9,600	12,000	0.227
				62	17	1,1	22.20	11.50	6,800	-	0.227
30	6306	6306 ZZ	6306 2RS	72	19	1,1	26.70	15.00	8,000	10,400	0.352
				72	19	1,1	26.70	15.00	6,000	-	0.352
35	6307	6307 ZZ	6307 2RS	80	21	1,5	33.50	19.10	7,200	8,800	0.458
				80	21	1,5	33.50	19.10	5,040	-	0.458
40	6308	6308 ZZ	6308 2RS	90	23	1,5	40.50	24.10	6,800	8,000	0.630
				90	23	1,5	40.50	24.10	4,480	-	0.630
45	6309	6309 ZZ	6309 2RS	100	25	1,5	53.00	32.00	6,000	7,200	0.841
				100	25	1,5	53.00	32.00	3,840	-	0.841
50	6310	6310 ZZ	6310 2RS	110	27	2,0	62.00	38.10	5,600	6,800	1.080
				110	27	2,0	62.00	38.10	3,840	-	1.080
55	6311	6311 ZZ	6311 2RS	130	29	2,0	71.00	45.00	5,040	6,000	1.375
				130	29	2,0	71.00	45.00	3,440	-	1.375
60	6312	6312 ZZ	6312 2RS	130	31	2,0	82.00	52.20	4,800	5,600	1.720
				130	31	2,0	82.00	52.20	3,200	5,600	1.720

MINIATURE SERIES



Boundary Dimensions (mm)				Basic Load Ratings (N)		Limiting speeds (rpm)			
d	D	B	$r_{s\ min}$	Dynamic C_r	Static C_{or}	Open Z, ZZ LB, LLB	Grease LLH	LU LLU	Oil Open Z, LB
6	19	6	0.3	2340	885	34000	36500	30000	40000
7	19	6	0.3	2240	910	34000	33300	27800	40000
	22	7	0.3	3350	1400	32000	-	23600	37000
8	22	7	0.3	3350	1400	32000	28000	23000	37000
	24	8	0.3	4000	1590	31000	-	-	36000
	28	9	0.3	5100	2390	29000	-	20700	34000
9	20	6	0.3	2480	1090	32000	-	-	38000
	24	7	0.3	3400	1450	31000	-	22000	36000
	26	8	0.3	4550	1960	30000	-	20700	35000

MINIATURE SERIES



Equivalent bearing load
dynamic

$$P_r = X F_r + Y F_a$$

$\frac{F_a}{C_{or}}$	e	$\frac{F_a}{F_r} \leq e$		$\frac{F_a}{F_r} > e$	
		X	Y	X	Y
0.010	0.18				2.46
0.020	0.20				2.14
0.040	0.24				1.83
0.070	0.27	1	0	0.56	1.61
0.10	0.29				1.48
0.15	0.32				1.35
0.20	0.35				1.25
0.30	0.38				1.13

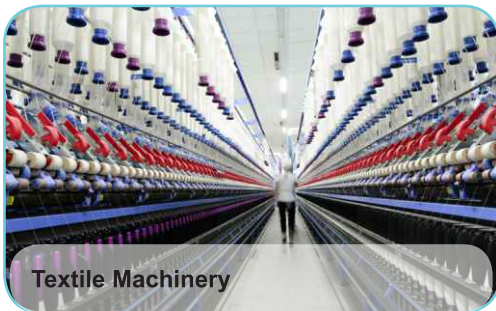
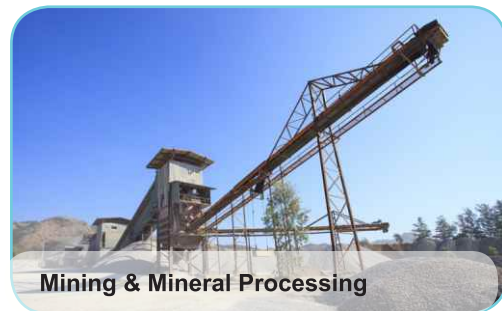
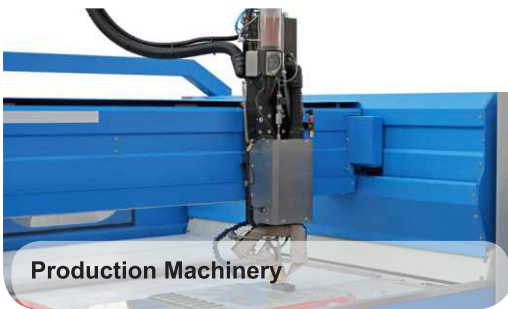
static

$$P_{or} = 0.6 F_r + 0.5 F_a \quad \text{When } P_{or} < F_r \text{ use } P_{or} = F_r$$

Bearing Numbers					Abutment and Fillet Dimensions (mm)				Weight (kg)
Open type	Shield ZZ	Seal non-contact LLB	Low torque type LLH	Seal contact LLU	d_a min	d_a max	D_a max	r_{as} max	Open (Approx)
626	ZZ	LLB	LLH	LLU	8	9.5	17	0.3	0.009
607	ZZ	LLB	LLH	LLU	9	10.4	17	0.3	0.008
627	ZZ	LLB	-	LLU	9	12.2	20	0.3	0.013
608	ZZ	LLB	LLH	LLU	10	12.2	20	0.3	0.012
628	ZZ	-	-	-	10	12.1	22	0.3	0.017
638	ZZ	-	-	LLU	10	13.9	24	0.3	0.027
699	ZZ	LLB	-	-	11	11.6	18	0.3	0.008
609	ZZ	LLB	-	LLU	11	13.1	22	0.3	0.014
629	ZZ	LLB	-	LLU	13	13.9	22	0.3	0.020

APPLICATIONS

KAPA product range has the ability to reach across different applications and industries. Our products are designed to ensure maximum productivity. From light applications like machine tools and food and beverage to heavy machinery, our products are designed to withstand varied temperatures, operating conditions, speeds and loads.

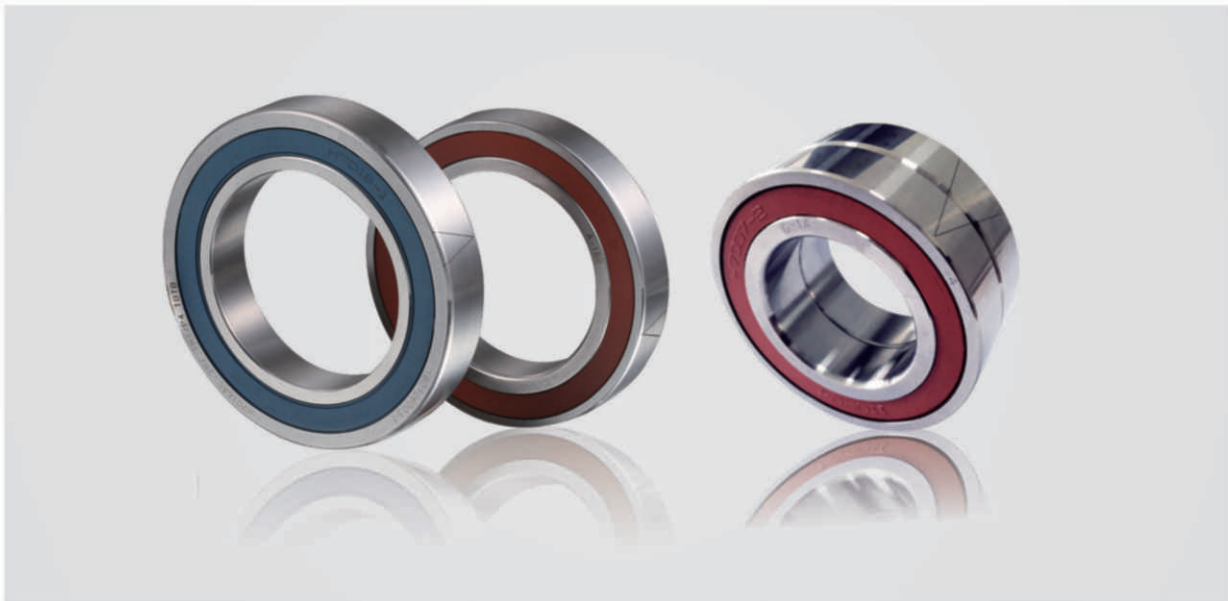




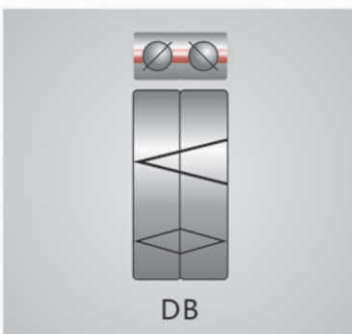
ANGULAR CONTACT BALL BEARINGS

Precise Matched Bearing Sets

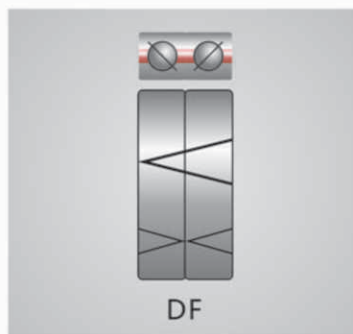
KAPA bearings can be supplied as a complete bearing set with the arrangement of two, three or more bearings. The bearings are matched to each other during the production process. The bore and outside diameters as well as the contact angle are matched within the permitted tolerances. For special applications, even narrower tolerance can be used.



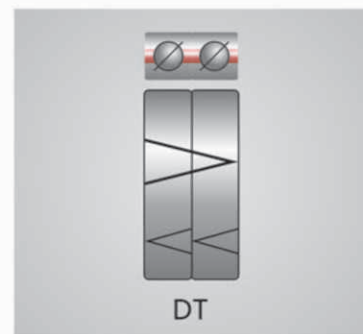
Bearing Arrangements



In a back-to-back arrangement (<>), the load lines diverge along the bearing axis. Axial loads acting in both directions can be accommodated, but only by one bearing or bearing set in each direction. Therefore, bearings result a better stiffness and can handle bigger torque.



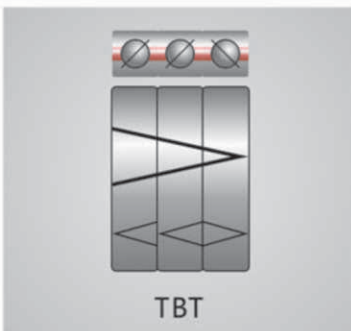
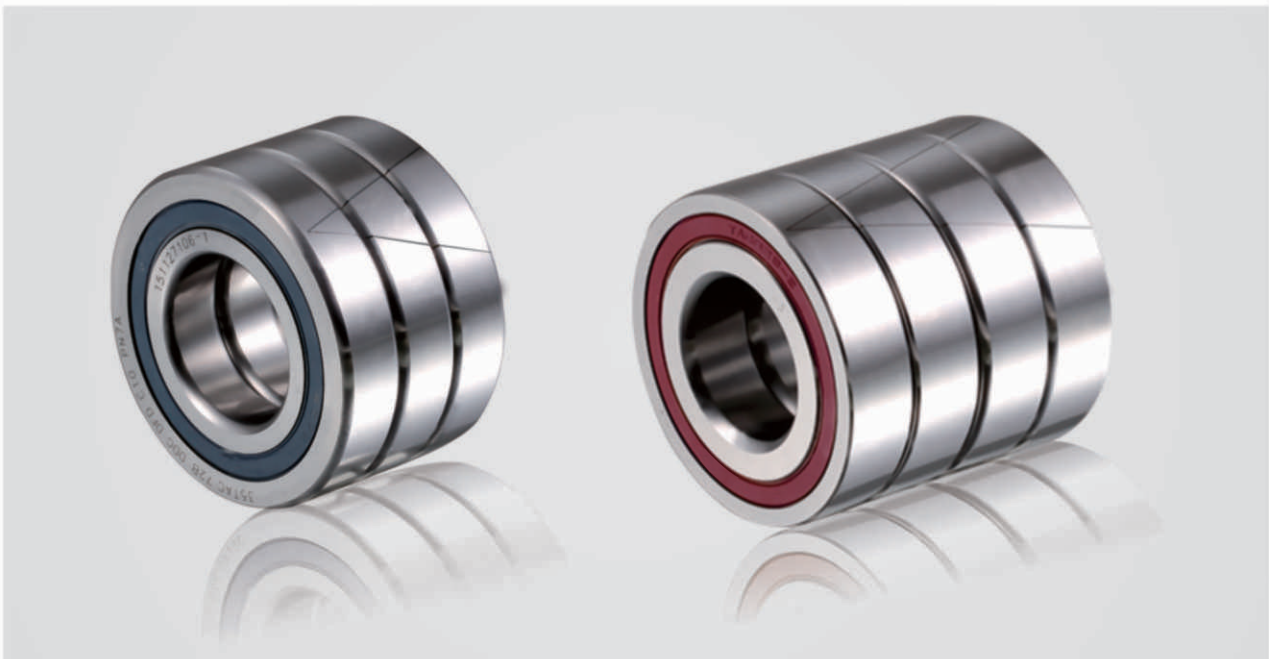
In a face-to-face arrangement (><), the load lines converge along the bearing axis. Axial loads acting in both directions can be accommodated, but only by one bearing or bearing set in each direction. The shorter span between effective bearing centers makes face-to-face arrangements less suitable to support moment loads compared to bearings in a back-to-back arrangement, but support centric alignment.



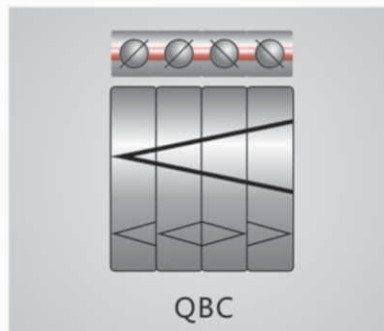
In a tandem arrangement (<<), the load lines are parallel so that radial and axial loads are shared. But the bearing set can only accommodate axial loads acting in one direction. The use of a tandem arrangement provides increased axial and radial load carrying capacity compared to back to back and face to face bearings.

Matching Of Multiple Bearings

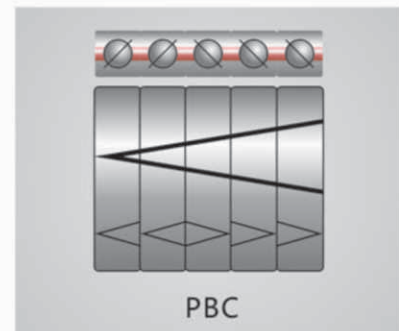
For the matched bearings, the most critical point is the total tolerance of the end-faces, as well as the angle dispersions and ID&OD dispersions. With KAPA precision matched bearings, these problems can be solved. The arrangement can be done of three, four or five depending on the applications for carry out different requirements. The designer can arrange well matched bearings by different features according to the machine requirement, such as loading capacity, stiffness, loading direction, rpm etc.



Three bearings with TBT arrangement (<>>) consist of the function of DT (<<) arrangement, but can accommodate the loading capacity in both directions, thus have a better stiffness. Set of bearings with TFT (><<) arrangement consists the function of DF (><), but can accommodate a higher load in one direction.



Four bearings with QBC (<<>>) arrangement can accommodate the axial load of either directions. Compared to DB arrangement, its loading capacity will be higher, and the stiffness increase significantly. QFC (>><<) arrangement can accommodate the axial load of either directions, and its loading capacity is higher than DF (><) arrangement.



PBC (<<>>>), set of five bearings arranged tandem back-to-back gives good stiffness and loading capacity, compared to QBC (<<>>), it provides a better loading capacity on its loading plan. PFC (>><<<), set of five bearings arranged tandem face-to-face, gives good loading capacity, compared to QFC (>><<), it provides a better loading capacity on its loading plan. PBT (<<>>>>), set of five bearings arranged back-to-back and tandem, gives good loading capacity and reference function, compared to QT (<<<<), it has an extra reference function.

Engineering Plastic Cage

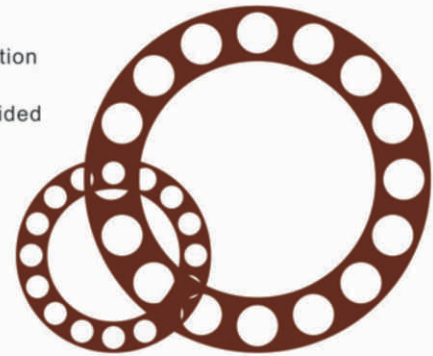
The engineering plastic cage has the characteristics of light weight, low friction coefficient and good self-lubrication performance. The special design of cages by KAPA is able to store the grease and gives a remarkable result especially for the grease lubricated bearings. This results in less friction heat during high speed working condition. Hence it is widely applied to spindle bearing of machine tool.

Polyamide Resin Cage with Ball Guide

Cages made of polyamide resin have features of low density, low coefficient of friction and good self-lubrication. Ball guided cages give more space inside the bearing, which means the bearing can store more grease. Compared with the outer-ring guided cage, the bearing with ball guided polyamide resin cage has a shorter running-in period and a more constant temperature.

Phenolic Cage with Outer Ring Guide

The oil-impregnated phenolic resin cages which KAPA have developed are with high oil content and low coefficient of friction and have the ability to release oil when it reaches certain high temperature during high rpm operation, which means a good self-lubrication function. Bearings with outer ring guided configuration can rotate smoothly during high rpm operation and it is suitable for grease, oil-mist and oil-gas lubrications.



Precision Ceramic Ball Bearing

Ceramic balls made of Si_3N_4 have features of low operating temperature, low density, low thermal expansion coefficient and good electric insulation. Comparing with the steel ball bearings, KAPA ceramic ball bearings can reach the higher speed, higher precision rotation, higher rigidity, and better reliability in certain special applications.



Ball Screw Bearings with Sealings

Features: 60° contact angle and increased quantity of balls which improve the axial rigidity. The 76 series add in-contacted seals on both end-faces, which gives a better sealing for machine tool applications. With this configuration, the bearings have a longer service-life.

- a. Include 7602, 7603 and TAC series
- b. Contact angle 60°
- c. Cage: ball guided polyamide resin cages (TN1)
- d. In-contacted seals on both end-faces (2RS)



Ball Screw Bearings with Sealings

Bearing Type	Dimensions (mm)				Basic Load Ratings (kN)		Ball Limit Speed (r/min)	Weight(kg) (approx.)
	d	D	B	r (min)	Ca	Coa	Grease	≈
760201-2RS	12	32	10	0.6	8.4	14.0	11000	0.040
760202-2RS	15	35	11	0.6	9.1	16.6	10000	0.050
760203-2RS	17	40	12	0.6	12.0	22.6	8700	0.070
760204-2RS	20	47	14	1.0	14.6	27.0	7500	0.130
760205-2RS	25	52	15	1.0	16.7	36.0	6500	0.160
760206-2RS	30	62	16	1.0	20.5	45.8	5500	0.240
760207-2RS	35	72	17	1.1	25.4	60.0	4600	0.340
760208-2RS	40	80	18	1.1	30.9	76.8	4200	0.440
760209-2RS	45	85	19	1.1	35.2	86.5	3800	0.500
760210-2RS	50	90	20	1.1	38.9	89.7	3600	0.570
760304-2RS	20	52	15	1.1	19.1	37.3	7000	0.170
760305-2RS	25	62	17	1.1	23.7	49.6	5600	0.280
760306-2RS	30	72	19	1.1	29.0	64.0	5000	0.410
15TAC47B DDG	15	47	15	1.0	14.5	27.0	7400	0.140
17TAC47B DDG	17	47	15	1.0	14.5	27.0	7400	0.135
20TAC47B DDG	20	47	15	1.0	14.5	27.0	7400	0.130
25TAC62B DDG	25	62	15	1.0	21.2	48.6	5400	0.250
30TAC62B DDG	30	62	15	1.0	21.2	48.6	5400	0.220
35TAC72B DDG	35	72	15	1.0	23.0	59.8	4400	0.310
40TAC72B DDG	40	72	15	1.0	23.0	59.8	4400	0.275
40TAC90B DDG	40	90	20	1.0	48.0	115.7	3800	0.670
45TAC100B DDG	45	100	20	1.0	52.0	152.0	3400	0.840
50TAC100B DDG	50	100	20	1.0	52.0	152.0	3400	0.770

B719 , B70 and SH70 Ultra High-Speed Bearings with Sealings

Features: These bearings are mainly used in high-frequency grinding spindles for bore grinders. In order to fulfill the high frequency spindle requirements, the bearing parameters are specially optimised. Double slopes of bearing rings are adopted for SH70 series.

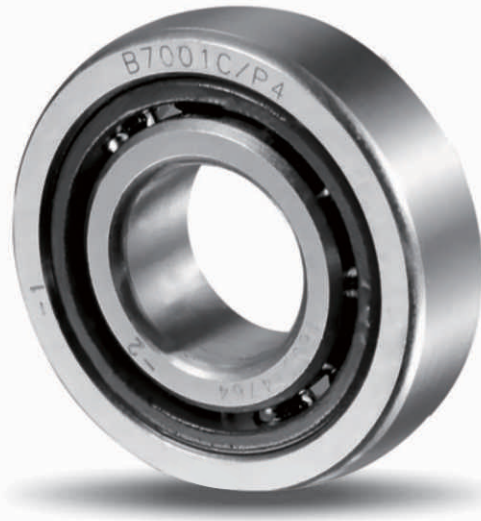
- a. Contact angle 15°
- b. Cages: outer ring guided phenolic resin cage (unmarked)
rolling element guided polyamide resin cage (TN1)
- c. Ball material: steel (unmarked), ceramic (HQ1)
- d. Precision degree: P4, P2
- e. High speed and super high speed suitable for constant preload force.
- f. Non-contacted seals on both end-faces (2RZ).

*If apply the ceramic balls, bearings can reach higher rpm and longer service-life.



B719 Series of Ultra High-Speed Bearings with Sealings

Bearing Type	Dimensions (mm)					Basic Load Ratings(kN)		Steel Ball Limit Speed (r/min)	Ceramic Ball Limit Speed (r/min)	Weight(kg) (approx.) [≈]	
	d	D	B	r (min)	r _i (min)	Ca	Coa	Grease		Steel Balls	Ceramic Balls
B71900C-2RZ	10	22	6	0.3	0.10	2.1	1.0	75000	137500	0.009	0.008
B71901C-2RZ	12	24	6	0.3	0.10	2.3	1.1	67000	120000	0.010	0.009
B71902C-2RZ	15	28	7	0.3	0.10	3.4	1.7	56000	100000	0.015	0.013
B71903C-2RZ	17	30	7	0.3	0.10	3.6	1.9	51000	93000	0.017	0.015
B71904C-2RZ	20	37	9	0.3	0.15	5.2	3.0	42000	77000	0.035	0.031
B71905C-2RZ	25	42	9	0.3	0.15	5.6	3.4	36000	66000	0.046	0.039
B71906C-2RZ	30	47	9	0.3	0.15	6.0	3.9	32000	57000	0.057	0.048
B71907C-2RZ	35	55	10	0.6	0.15	6.9	6.0	27000	48000	0.074	0.065
B71908C-2RZ	40	62	12	0.6	0.15	7.3	6.8	23000	43000	0.123	0.096
B71909C-2RZ	45	68	12	0.6	0.15	10.0	9.3	21000	39000	0.133	0.112
B71910C-2RZ	50	72	12	0.6	0.15	13.0	10.1	20000	36000	0.139	0.116



B70 Series of Ultra High-Speed Bearings

Bearing Type	Dimensions (mm)					Basic Load Ratings(kN)		Steel Ball Limit Speed (r/min)	Ceramic Ball Limit Speed (r/min)	Weight(kg) (approx.)=	
	d	D	B	r (min)	r _i (min)	Ca	Coa	Grease		Steel Balls	Ceramic Balls
B7000C	10	26	8	0.3	0.15	2.4	1.0	84000	130000	0.018	0.016
B7001C	12	28	8	0.3	0.15	2.7	1.2	75000	120000	0.019	0.017
B7002C	15	32	9	0.3	0.15	3.0	1.5	64000	100000	0.032	0.029
B7003C	17	35	10	0.3	0.15	3.2	1.6	58000	92000	0.041	0.036
B7004C	20	42	12	0.6	0.15	4.8	2.7	48000	77000	0.083	0.075
B7005C	25	47	12	0.6	0.15	6.7	4.0	42000	66500	0.094	0.085
B7006C	30	55	13	1.0	0.30	7.5	4.6	36000	56500	0.133	0.122
B7007C	35	62	14	1.0	0.30	10.0	7.0	31000	49500	0.182	0.171
B7008C	40	68	15	1.0	0.30	10.4	7.8	28000	44500	0.222	0.209
B7009C	45	75	16	1.0	0.30	11.6	8.9	25000	40000	0.285	0.271
B7010C	50	80	16	1.0	0.30	15.4	12.0	23000	37000	0.300	0.280
B7011C	55	90	18	1.0	0.30	17.0	14.5	21000	33000	0.440	0.410
B7012C	60	95	18	1.1	0.60	17.6	15.3	19000	31000	0.470	0.430
B7013C	65	100	18	1.1	0.60	20.2	18.6	18000	29000	0.500	0.460
B7014C	70	110	20	1.1	0.60	24.1	21.4	17000	27000	0.690	0.640
B7015C	75	115	20	1.1	0.60	26.2	25.5	16000	25000	0.730	0.670
B7016C	80	125	22	1.1	0.60	34.2	32.7	15000	23400	0.990	0.920
B7017C	85	130	22	1.1	0.60	35.0	35.2	14000	22300	1.030	0.950
B7018C	90	140	24	1.5	0.60	36.4	38.1	13000	21000	1.350	1.250
B7019C	95	145	24	1.5	0.60	44.4	45.2	12500	20000	1.400	1.280
B7020C	100	150	24	1.5	1.00	45.4	48.1	12000	19200	1.460	1.310



SH70 Series of Ultra High-Speed Bearings with Sealings

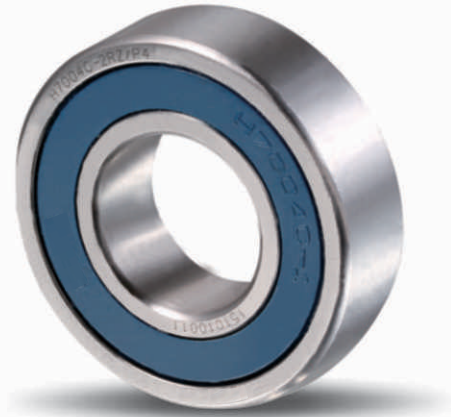
Bearing Type	Dimensions (mm)					Basic Load Ratings(kN)		Steel Ball Limit Speed (r/min)	Ceramic Ball Limit Speed (r/min)	Weight(kg) (approx.)≈	
	d	D	B	r _(min)	r ₁ (min)	Ca	Coa	Grease		Steel Balls	Ceramic Balls
SH708C-2RZ	8	22	7	0.3	0.15	1.90	0.92	80000	130000	0.010	0.009
SH7000C-2RZ	10	26	8	0.3	0.15	2.30	1.20	67000	110000	0.017	0.015
SH7001C-2RZ	12	28	8	0.3	0.15	2.45	1.30	60000	100000	0.019	0.017
SH7002C-2RZ	15	32	9	0.3	0.15	2.80	1.60	51000	85000	0.031	0.026
SH7003C-2RZ	17	35	10	0.3	0.15	4.20	2.50	46000	77000	0.042	0.037
SH7004C-2RZ	20	42	12	0.6	0.15	4.50	2.80	39000	64000	0.073	0.065
SH7005C-2RZ	25	47	12	0.6	0.15	6.30	4.10	33000	55500	0.082	0.072
SH7006C-2RZ	30	55	13	1.0	0.30	8.30	5.60	28000	47000	0.112	0.102
SH7007C-2RZ	35	62	14	1.0	0.30	10.00	7.10	25000	41000	0.153	0.139
SH7008C-2RZ	40	68	15	1.0	0.30	10.40	7.80	22000	37000	0.189	0.178
SH7009C-2RZ	45	75	16	1.0	0.30	10.80	8.90	20000	33000	0.254	0.237
SH7010C-2RZ	50	80	16	1.0	0.30	16.40	12.60	18000	30000	0.260	0.250
SH7011C-2RZ	55	90	18	1.0	0.30	17.20	13.90	16000	27000	0.380	0.350
SH7012C-2RZ	60	95	18	1.1	0.60	18.00	15.00	15000	26000	0.410	0.380
SH7013C-2RZ	65	100	18	1.1	0.60	26.50	21.30	14500	24000	0.450	0.420
SH7014C-2RZ	70	110	20	1.1	0.60	27.50	23.50	13000	22000	0.590	0.540
SH7015C-2RZ	75	115	20	1.1	0.60	28.30	24.50	12500	21000	0.690	0.620
SH7016C-2RZ	80	125	22	1.1	0.60	30.20	27.80	11500	19500	0.900	0.830
SH7017C-2RZ	85	130	22	1.1	0.60	32.90	29.70	11000	18500	0.920	0.840
SH7018C-2RZ	90	140	24	1.5	0.60	36.50	34.50	10500	17000	1.210	1.100
SH7019C-2RZ	95	145	24	1.5	0.60	42.00	38.80	10000	16500	1.270	1.120
SH7020C-2RZ	100	150	24	1.5	1.00	43.90	42.00	9600	16000	1.330	1.150

H70 , H72 High Speed Bearings with Sealings

Features: This series select larger ball diameter to increase the carrying capacity. Two end-face mounted sealing rings with non-contact make it easy to store the lubrication grease.

- a. Include the H70 and H72 series.
- b. Contact angle C (15°), AC (25°)
- c. Cages: outer ring guided Polyamide resin cages (unmarked).
- d. Ball material: steel (unmarked), ceramic (HQ1)
- e. Since both inner and outer ring are with single flange, there is more space for lubrication grease which results in better lubrication and longer service-life.

*Ceramic ball for option, which can fulfil higher speed and longer service life.



H70 Series of High Speed Bearings with Sealings

Bearing Type	Dimensions (mm)					Basic Load Ratings(kN)		Steel Ball Limit Speed (r/min)	Ceramic Ball Limit Speed (r/min)	Weight(kg) (approx.) [≠]	
	d	D	B	r (min)	r _i (min)	Ca	Coa	Grease		Steel Balls	Ceramic Balls
H708C-2RZ	8	22	7	0.3	0.15	2.1	1.0	67000	100000	0.011	0.010
H7000C-2RZ	10	26	8	0.3	0.15	2.5	1.3	55000	83000	0.018	0.016
H7001C-2RZ	12	28	8	0.3	0.15	2.6	1.4	50000	75000	0.020	0.017
H7002C-2RZ	15	32	9	0.3	0.15	3.7	2.1	42500	64000	0.028	0.025
H7003C-2RZ	17	35	10	0.3	0.15	4.9	2.7	38500	58000	0.038	0.034
H7004C-2RZ	20	42	12	0.6	0.15	5.5	3.2	32000	48000	0.072	0.065
H7005C-2RZ	25	47	12	0.6	0.15	7.5	4.6	28000	42000	0.075	0.067
H7006C-2RZ	30	55	13	1.0	0.30	9.2	6.1	23500	35000	0.110	0.094
H7007C-2RZ	35	62	14	1.0	0.30	10.5	7.3	20500	31000	0.145	0.134
H7008C-2RZ	40	68	15	1.0	0.30	11.2	8.1	18500	28000	0.175	0.161
H7009C-2RZ	45	75	16	1.0	0.30	13.8	10.2	16700	25000	0.245	0.230
H7010C-2RZ	50	80	16	1.0	0.30	18.0	14.0	15000	23000	0.260	0.240
H7010AC-2RZ	50	80	16	1.0	0.30	17.0	13.2	13000	18400	0.262	0.242
H7011C-2RZ	55	90	18	1.0	0.30	22.0	17.7	13800	21000	0.380	0.350
H7011AC-2RZ	55	90	18	1.0	0.30	20.8	16.7	11500	16800	0.382	0.352
H7012C-2RZ	60	95	18	1.1	0.60	22.4	18.6	13000	19000	0.410	0.376
H7012AC-2RZ	60	95	18	1.1	0.60	21.2	17.5	11050	15200	0.413	0.380
H7013C-2RZ	65	100	18	1.1	0.60	27.0	22.9	12000	18000	0.450	0.420
H7013AC-2RZ	65	100	18	1.1	0.60	25.8	21.6	10200	14400	0.456	0.426
H7014C-2RZ	70	110	20	1.1	0.60	30.6	26.3	11000	17000	0.590	0.530
H7014AC-2RZ	70	110	20	1.1	0.60	28.9	24.7	9350	13600	0.597	0.540
H7015C-2RZ	75	115	20	1.1	0.60	31.8	28.5	10500	16000	0.688	0.620
H7015AC-2RZ	75	115	20	1.1	0.60	29.8	27.7	9000	12800	0.693	0.625
H7016C-2RZ	80	125	22	1.1	0.60	33.2	31.1	9700	15000	0.897	0.820
H7016AC-2RZ	80	125	22	1.1	0.60	31.6	30.3	8200	12000	0.902	0.825
H7017C-2RZ	85	130	22	1.1	0.60	36.0	33.0	9300	14000	0.913	0.824
H7017AC-2RZ	85	130	22	1.1	0.60	34.0	31.0	7900	11200	0.918	0.832
H7018C-2RZ	90	140	24	1.5	0.60	40.1	38.2	8600	13000	1.200	1.100
H7018AC-2RZ	90	140	24	1.5	0.60	37.8	36.0	7300	10400	1.207	1.106
H7019C-2RZ	95	145	24	1.5	0.60	46.0	43.0	8300	12500	1.220	1.113
H7019AC-2RZ	95	145	24	1.5	0.60	43.5	40.5	7000	10000	1.230	1.120
H7020C-2RZ	100	150	24	1.5	1.00	48.0	46.6	8000	12000	1.280	1.128
H7020AC-2RZ	100	150	24	1.5	1.00	45.3	43.8	6800	9600	1.300	1.136



H72 Series of High Speed Bearings with Sealings

Bearing Type	Dimensions (mm)					Basic Load Ratings (kN)		Steel Ball Limit Speed (r/min)	Weight (kg) (approx.)
	d	D	B	r (min)	r _i (min)	Ca	Coa	Grease	≈
H728C-2RZ	8	24	8	0.3	0.15	3.10	2.00	62500	0.022
H728AC-2RZ	8	24	8	0.3	0.15	2.95	1.90	50000	0.024
H7200C-2RZ	10	30	9	0.6	0.15	3.50	2.30	50000	0.033
H7200AC-2RZ	10	30	9	0.6	0.15	3.40	2.20	40000	0.035
H7201C-2RZ	12	32	10	0.6	0.15	3.70	2.43	45000	0.042
H7201AC-2RZ	12	32	10	0.6	0.15	3.54	2.35	36000	0.044
H7202C-2RZ	15	35	11	0.6	0.15	4.70	2.76	40000	0.051
H7202AC-2RZ	15	35	11	0.6	0.15	4.56	2.59	32000	0.054
H7203C-2RZ	17	40	12	0.6	0.30	5.20	3.20	35000	0.070
H7203AC-2RZ	17	40	12	0.6	0.30	5.00	3.02	28000	0.075
H7204C-2RZ	20	47	14	1.0	0.30	6.92	4.03	30000	0.110
H7204AC-2RZ	20	47	14	1.0	0.30	6.59	3.80	23000	0.113
H7205C-2RZ	25	52	15	1.0	0.30	8.53	5.32	26000	0.150
H7205AC-2RZ	25	52	15	1.0	0.30	8.12	5.02	21000	0.155
H7206C-2RZ	30	62	16	1.0	0.30	9.41	6.40	21000	0.210
H7206AC-2RZ	30	62	16	1.0	0.30	8.93	6.04	17000	0.215
H7207C-2RZ	35	72	17	1.1	0.60	13.51	10.38	18000	0.300
H7207AC-2RZ	35	72	17	1.1	0.60	12.88	9.73	15000	0.305
H7208C-2RZ	40	80	18	1.1	0.60	16.39	12.81	16700	0.380
H7208AC-2RZ	40	80	18	1.1	0.60	15.56	12.02	13000	0.385
H7209C-2RZ	45	85	19	1.1	0.60	19.48	15.50	15000	0.430
H7209AC-2RZ	45	85	19	1.1	0.60	18.50	14.54	12000	0.440
H7210C-2RZ	50	90	20	1.1	0.60	24.70	20.66	14000	0.480
H7210AC-2RZ	50	90	20	1.1	0.60	23.40	19.38	11000	0.490
H7211C-2RZ	55	100	21	1.5	0.60	26.04	22.83	13000	0.630
H7211AC-2RZ	55	100	21	1.5	0.60	24.64	21.42	10000	0.640
H7212C-2RZ	60	110	22	1.5	0.60	30.07	26.80	11000	0.820
H7212AC-2RZ	60	110	22	1.5	0.60	28.46	25.15	9400	0.840
H7213C-2RZ	65	120	23	1.5	0.60	36.69	33.29	10000	1.020
H7213AC-2RZ	65	120	23	1.5	0.60	34.73	31.23	8600	1.040
H7214C-2RZ	70	125	24	1.5	0.60	38.65	36.45	10000	1.120
H7214AC-2RZ	70	125	24	1.5	0.60	36.56	34.20	8200	1.140
H7215C-2RZ	75	130	25	1.5	0.60	43.84	40.59	9700	1.220
H7215AC-2RZ	75	130	25	1.5	0.60	41.50	38.09	7800	1.240
H7216C-2RZ	80	140	26	2.0	1.00	46.05	44.06	9000	1.470
H7216AC-2RZ	80	140	26	2.0	1.00	43.54	41.71	7200	1.500
H7217C-2RZ	85	150	28	2.0	1.00	48.10	48.30	8500	1.820
H7217AC-2RZ	85	150	28	2.0	1.00	45.45	45.34	6800	1.850
H7218C-2RZ	90	160	30	2.0	1.00	50.75	50.19	8000	2.270
H7218AC-2RZ	90	160	30	2.0	1.00	47.94	47.09	6400	2.300
H7219C-2RZ	95	170	32	2.1	1.10	53.05	54.56	7500	2.720
H7219AC-2RZ	95	170	32	2.1	1.10	50.08	51.19	6000	2.760
H7220C-2RZ	100	180	34	2.1	1.10	55.22	58.90	7100	3.270
H7220AC-2RZ	100	180	34	2.1	1.10	52.10	55.29	5700	3.310



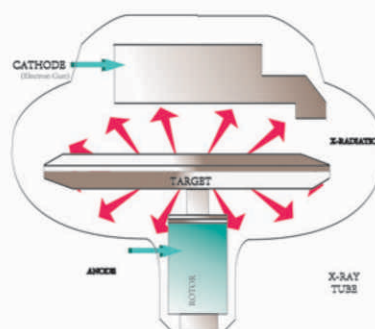
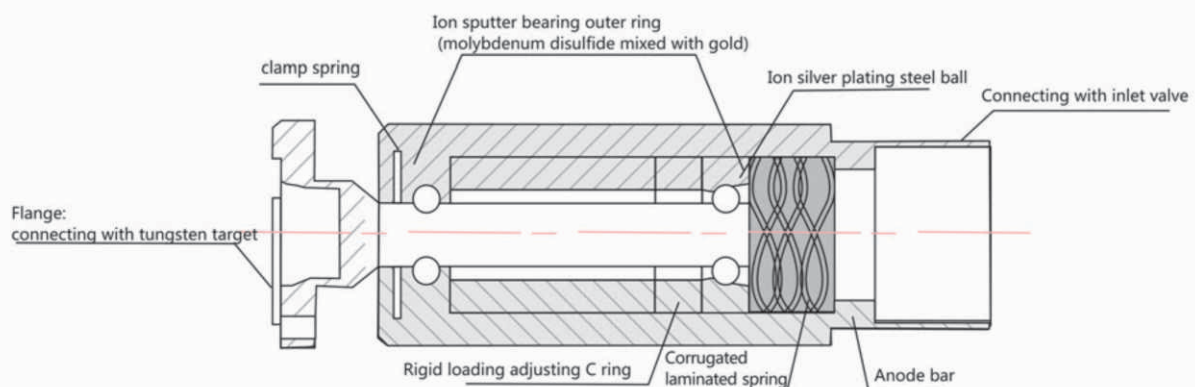
Special Bearings for CT and X-ray Tube

Features :

- The structure of inner integral ball bearings with no inner ring, no cage and completely filled with balls is adopted to solve the problem of low rotation accuracy and unstable dynamic performance of the bearing.
- Preload with fixed pressure by means of high temperature resistant spring is adopted to solve the problem of bearing jammed under wide temperature range 25°C~500°C.
- Solid lubrication and ion plating silver can solve the problem with difficult working conditions like high temperature, high vacuum, high operating speed and non-oil or grease lubrication.

Main Technical Parameters:

- Operating speed: 12000 Rev/min
- Work temperature: 450°C -550°C
- Vacuum: 1×10^{-8} Pa;
- Vibration requirements: less than 1g;
- Lifetime: exposure approximately 50, 000 times.





ANGULAR CONTACT BALL BEARINGS

EXCELLENT QUALITY, UNIQUE TECHNOLOGY

National Standards Unit of Precision Angular Contact Matching Bearings





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