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- **Precision cross roller bearings, rotary table bearings and various non-standard bearings**

A manufacturer specializing in R&D and producing precision bearings



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Luoyang E-find Precision Bearing Manufacturing Co.,Ltd



OPENNESS, PROFESSIONALISM AND RESPONSIBILITY



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+Company Profiles >>>

Luoyang EFANT Precision Bearing Manufacturing Co., Ltd. is located in China's bearing manufacturing base---Luoyang. Our company specializes in R&D and manufacturing of precision cross roller bearings, rotary table bearings and various non-standard bearings. The machining accuracy is P5, P4 and P2.

Benefits from Luoyang's unique bearing industry foundation, our company has established a complete quality management system and has an excellent technical team. At the same time, sophisticated production process equipment and perfect test equipment are necessary conditions for the production of precision bearings, and the high precision,high reliability of products are guaranteed. All kinds of bearings produced by our company are widely used in the automation industry, CNC machine tool industry and robot industry.

The company adheres to the concept of "openness, professionalism and responsibility", actively participate in competition and cooperation, strives to become a professional bearing application service provider, and shoulders its due social responsibilities.



 Research and development

 Manufacturing

+Service concept >>>



Create value for customers

Professional team, quick response, pre-sale consultation, sales support, and after-sales service full process guarantee



+ Cross roller bearing

In crossed cylindrical roller bearings, the cylindrical rollers are arranged in two 90° V-shaped raceways at a 90° included angle 1:1, and the cylindrical rollers are separated by the spacer block. This structure makes a set of bearings It can bear radial load, axial load and overturning load at the same time.

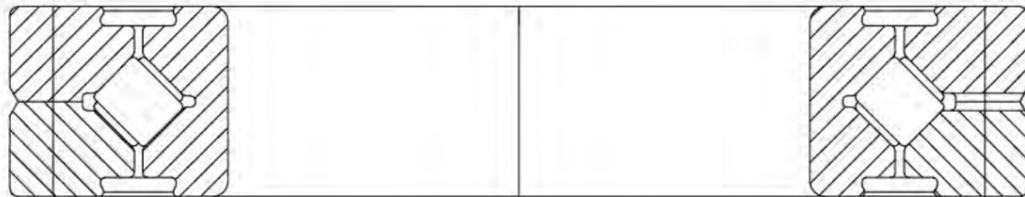
This kind of combined bearing has a compact structure, and at the same time greatly simplifies the structure design of the bearing under the premise of ensuring structural rigidity. Most bearings can be pre-loaded before leaving the factory, which further facilitates installation and maintenance work. Therefore, cross cylindrical roller bearings It has the characteristics of high precision, high load and high rigidity, which is very suitable for the occasions where the space size is clearly restricted, such as the rotating part of the robot, the joint part of the manipulator, the numerical control indexing table, the medical equipment, and the measuring instrument.



Product category

ERBC standard type

This model is a standard type of crossed cylindrical roller bearings. The outer ring is divided into two parts in the axial direction, and the inner ring is integral. It is most suitable for parts that require the rotation accuracy of the inner ring.



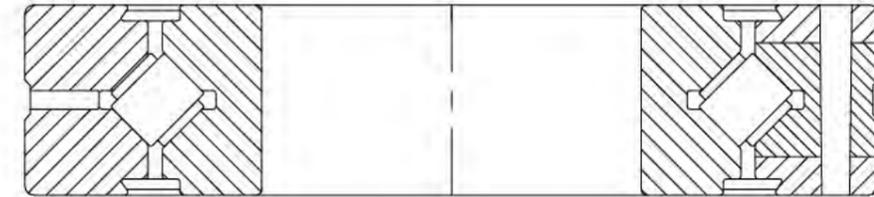
ERBS compact type

This model is a compact model obtained by reducing the thickness of the RB type inner ring and outer ring. Similarly, the outer ring is divided into two parts in the axial direction, and the inner ring is integral. Most suitable for parts with lightweight and small space requirements.



ERBH high rigidity type

The inner and outer rings of this type of bearing are of an integral structure, which has higher structural rigidity than the RB-type separate outer ring. This type of bearing is widely used in robots, machine tools and medical equipment that require small, high rigidity and high rotational accuracy And other rotating parts.



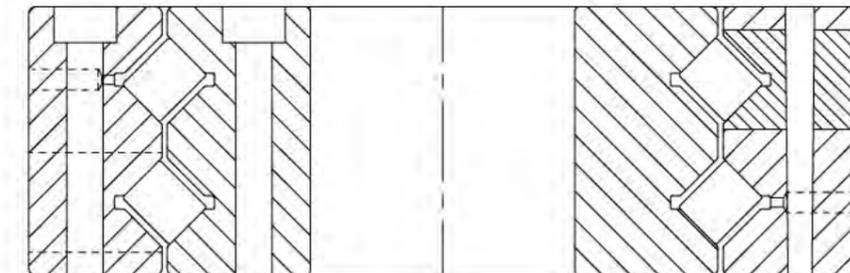
ERBF end face mount type

This model is the overall structure of the inner and outer rings. Compared with the ERBH model, there are mounting holes on the end face, which is convenient for the structural design application of end face installation. It can be installed and used without the shaft or bearing seat.



EDRX dual row type

This model is a cross cylindrical roller structure with a double-row raceway structure. The inner and outer rings are integral structures. The single row rollers are arranged in one direction crossing. The two rows of cylindrical rollers are arranged 90° cross in two 90° V-shaped raceways, inside and outside. Mounting holes are designed on the end face of the ring to facilitate the structural design of the end face installation.



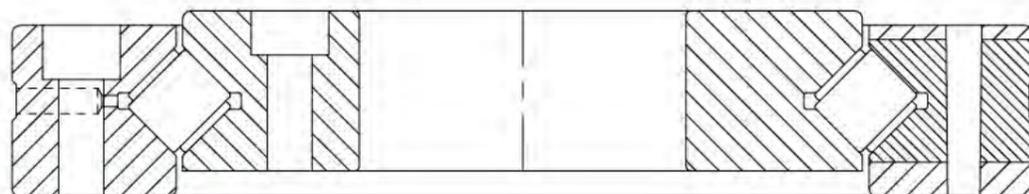
EFSX type

This type of crossed cylindrical roller bearing is designed in accordance with the deep groove ball bearing 618 series. The cylindrical rollers are arranged at a 90° included angle and are arranged in a 1:1 cross between two 90° V-shaped raceways. The inner ring is an integral structure, the outer ring is divided into two parts in the axial direction up and down, connected by 3 connecting rings in the circumferential direction, and there is no sealing ring between the inner and outer rings.



EFXU and EXSU European standard

The inner and outer rings of these two types of crossed cylindrical roller bearings are of integral structure and can be directly mounted on the end face.



Model name rules

Nominal model	Inner diameter	Width	Structure code	Sealed	Clearance	Runout accuracy grade
ERBC	80	16		UU	CC0/C0/C1	P5/P4/P2
ERBS	50	08		UU	CC0/C0	P5/P4
ERBH	90	16		UU	CC0/C0/C1	P5/P4/P2
ERBF	35	15	G/X	UU	CC0/C0	P5/P4/P2
EDRX	100	20	G	UU	CC0	P5/P4/P2

Nominal model	Inner diameter	Width	Sealed	Clearance	Runout accuracy grade
EFSX	70	10	No sealed by default	VSP/RL0/RL1	P5 (Can be omitted)
EFXU	40	22	With sealed by default	VSP/RL0/RL1	P5 (Can be omitted)
EXSU	130	25	With sealed by default	VSP/RL0/RL1	P5 (Can be omitted)

Comment:

1. Sealing: UU inner and outer ring diameters are sealed on both sides, blank means no seal.
2. Bearing clearance: CC0 preload, C0 positive clearance, C1 large clearance;
VSP preload, RL0 positive clearance, RL1 large clearance;
Bearing clearance only represents radial clearance. In special cases, axial clearance shall be explained separately.
3. Runout accuracy grade: P5, P4, P2 are limited to the runout accuracy of the bearing (Kea, Sea, Kia, Sia).
4. All bearing dimensional tolerance grades are P5.
5. For ERBF and EDRX, the structure code blank means that the inner and outer ring end faces are counterbore holes in the same direction, G means that the inner and outer ring end faces are counterbore holes in different direction, X means that the outer ring end faces are counterbore holes and the inner ring end faces are threaded holes.
6. For products that are not in the range of standard models, please consult our company. When conditions permit, our company can customize non-standard bearings.

Customized according to the size range of the sample book, such as internal teeth, external teeth, additional flanges, surface heat treatment, and bearing housings and shafts that match the bearings can be customized and processed, and the drawings agreed and confirmed by both parties shall prevail.

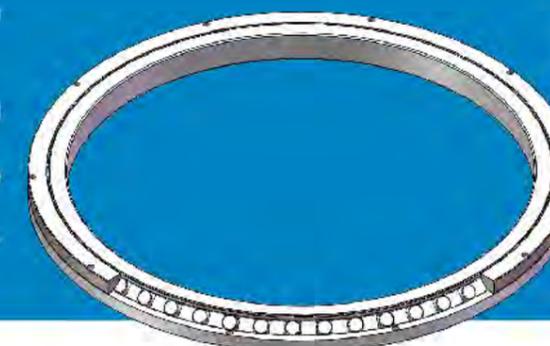
Customization process:

1. The customer informs the working condition or the sample drawing
2. Technical personnel of both parties communicate technical details
3. We will issue confirmation drawings for customers to confirm
4. Both parties confirm the drawings and sign a technical agreement (the technical agreement and the contract have the same legal effect)



Bearing selection

1. Determine the conditions of use and fill in the application condition table;
2. Determine the bearing model category;
3. Select the bearing size according to life calculation and determine bearing model;
4. Determine the bearing runout accuracy and clearance according to the used accuracy and rigidity requirements;
5. Combined with structural design, determine special conditions such as lubrication method and starting torque.



Life calculation

Bearing rating life

Bearing rating life refers to the total number of revolutions that a batch of bearings of the same model can operate under the same conditions, 90% of the bearings do not peel off the raceway surface due to rolling fatigue. It is often expressed in L, and the unit is the revolution. Calculated as follows:

$$L = (C/f_w P)^{10/3} \times 10^6$$

C The rated dynamic load of the bearing

P Equivalent dynamic load under working conditions

f_w Load factor under working conditions, see the table below for details

Working conditions	f_w
Smooth operation	1-1.2
Normal operation (changes in load direction and size)	1.2-1.5
Severe shock and vibration	1.5-3

The calculation formula of equivalent dynamic load P is as follows:

$$P = X * (F_r + 2 * M / D_{pw}) + Y * F_a$$

X dynamic radial coefficient (see the table below for specific values)

Y dynamic axial coefficient

F_r radial load

F_a axial load

M overturning moment

D_{pw} cylindrical roller movement pitch circle diameter

Calculation conditions	X	Y
$F_a / (F_r + 2 * M / D_{pw}) \leq 1.5$	1	0.45
$F_a / (F_r + 2 * M / D_{pw}) > 1.5$	0.67	0.67
$F_r = 0, M = 0$	0.67	0.67

Static safety factor

The static load rating of a bearing refers to a static load with a certain direction and size. At this time, the maximum contact stress at the center point of the contact area between the cylindrical roller and the raceway surface reaches the limit value of the contact stress of the material itself, and the bearing can move slowly (approximately Static state) without failure. Therefore, when the bearing is subjected to external loads in a static manner, the static safety factor must be considered. The static safety factor of the bearing is represented by S_0 , and its calculation formula is as follows:

$$S_0 = C_0 / P_0$$

C_0 Bearing static load rating

P_0 Equivalent static load under working conditions

Static safety factor value table

Load condition	S_0
Normal load	1-2
Impact load	2-3

Considering the dynamic performance of the bearing life, it is recommended that the static safety factor be at least 7 or more.

The calculation formula of equivalent static load P_0 is as follows:

$$P_0 = (F_r + 2 * M / D_{pw}) + 0.44 * F_a$$

F_r Radial load

M Overturning moment

D_{pw} Cylindrical roller movement pitch circle diameter

F_a Axial load

For crossed roller bearings, there is not only the influence of static radial load, but also the influence of static allowable axial load and static allowable overturning moment.

Static allowable axial load $F_{a0} = C_0 / 0.44$

Static allowable overturning moment $M_0 = C_0 * D_{pw} / 2$

C_0 Bearing static load rating

D_{pw} Pitch circle diameter of cylindrical roller

Matching

For ERBC、ERBS、ERBH、EFSX bearings without end face mounting holes, the recommended matching relationship is shown in the following table:

Radial clearance	Application conditions	Axis	Bearing seat
CC0	Regardless of conditions	g5	H7
C0	Inner ring rotation	h5	H7
	Outer ring rotation	g5	Js7
C1	Ordinary load of inner ring rotation	J5	H7
	Rotating impact load of inner ring	K5	Js7
	Ordinary load of outer ring rotation	g5	Js7
	Rotating impact load of outer ring	h5	K7

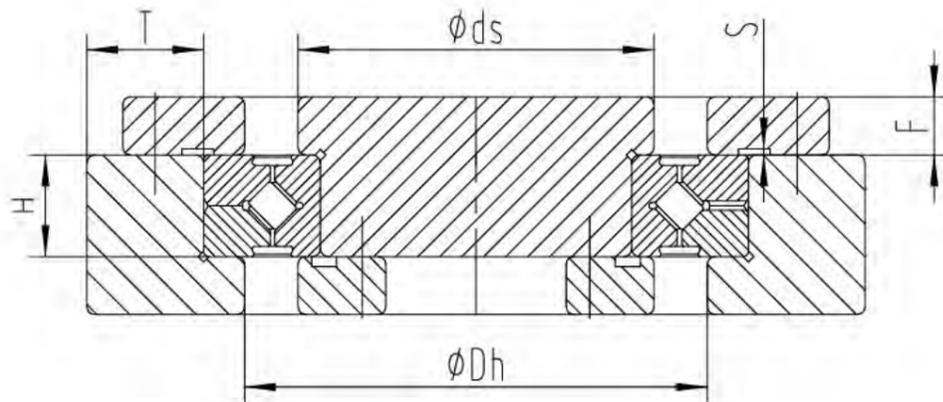
The matching relationship of bearings with CC0 clearance is generally selected as a clearance fit, but a small interference fit relationship can be used when rigidity and accuracy are higher requirements. At the same time, special attention should be paid to the change of bearing clearance under application conditions. It is best to select the corresponding shaft and bearing seat according to the bearing inner diameter tolerance and outer diameter tolerance to achieve a small interference fit.

For ERBF、EFXU、EXSU、EDRX bearings with end-face mounting holes, the matching relationship is basically not required, but the recommended matching relationship is: shaft h7 and bearing seat H7 when the accuracy of the installation position is required.

Installation

Shaft shoulder diameter size

In the bearing size specification table, we list the corresponding installation shoulder diameter Dh and ds of each bearing. In the design of the shaft structure, please design the shaft, bearing seat and step size of axial end cover according to our recommended shaft shoulder diameter, to ensures smooth bearing application.



Shaft shoulder depth dimension

In order to ensure the effective axial positioning of the bearing during installation, the depth dimension H of the shaft shoulder should be matched according to the bearing width tolerance. The specific relationship is as follows:

$$H=B-0.1$$

Bearing seat wall thickness design

In order to ensure the structural strength, we recommend that the wall thickness dimension T of the bearing seat should be at least 0.6 or more of the radial cross-sectional dimension of the bearing, is

$$T= (D-d) /2*0.6$$

Axial end cover design

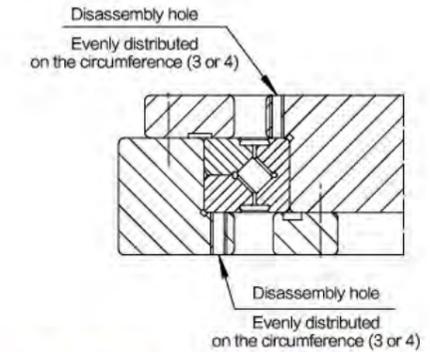
In order to ensure the structural strength, we recommend the thickness of the axial end cover $F= (0.5--1.2) *B$,

The depth of the annular groove on the mounting surface of the axial end cover is $S=0.5$; the effect of the annular groove on the axial end cover can effectively solve the problem that the end cover cannot compress the bearing.

The H, F, S and T involved in the installation dimensions of the inner ring that are not expressed in the installation diagram above (when the diameter of the shaft exceeds 100mm, the shaft can be made into a hollow shaft, and T should be designed according to the recommended value). The same applies to the above formula.

Disassembly screw hole

The compact structure of the crossed cylindrical roller bearing makes it difficult to disassemble the bearing. We recommend that you avoid the necessary design positions in the bearing structure design and add disassembly screw holes. Once the bearing needs to be disassembled, you can use screws to separate the bearings through the screw holes. Push out from the shaft and the bearing seat, and the disassembly screw hole is best divided into three or four equal circumferences.



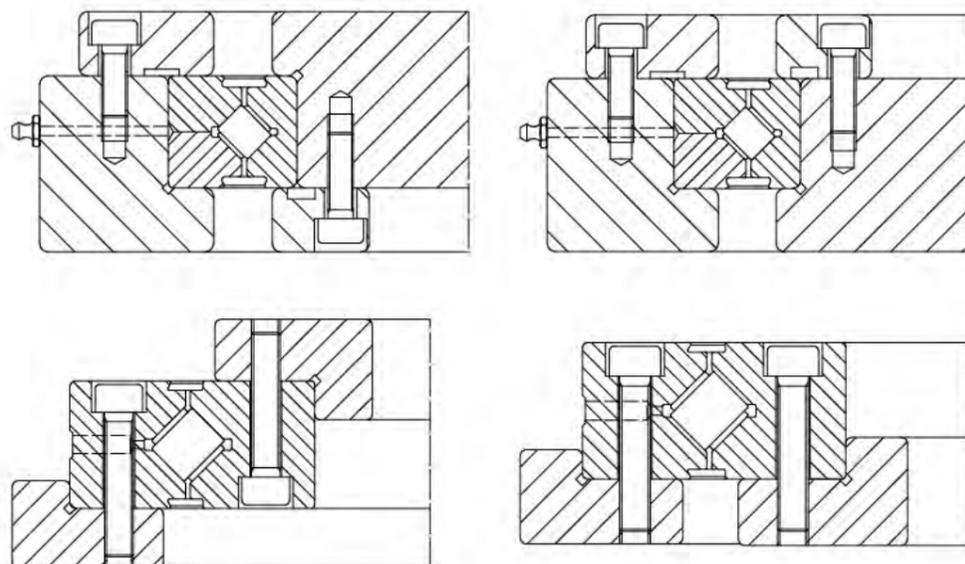
Axial end cover fixing screw design

Outer ring outer diameter size D	Quantity of screws	Screw specifications
Exceed	To	
100	≥ 8	M3、M4、M5
200	≥ 12	M4、M5、M6、M8
500	≥ 16	M5、M6、M8、M10、M12
	≥ 24	$\geq M12$

Screw tightening torque

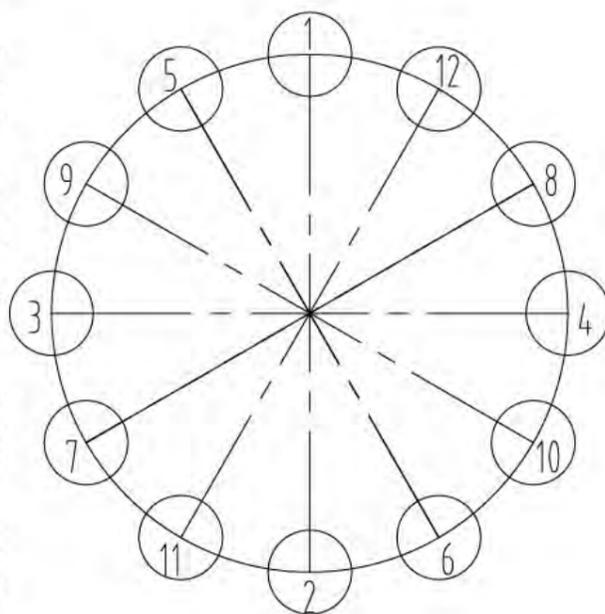
Screw specifications (level 10.9)	Tightening torque	Screw specifications (level 10.9)	Tightening torque
M3	2	M10	70
M4	4	M12	120
M5	8.5	M16	200
M6	14	M20	390
M8	34	M22	530

Typical installation structure



Installation process

1. Prepare installation tools, including brush, cleaning cloth, cleaning fluid, vernier caliper, feeler gauge, heater or installation tooling, torque wrench, magnetic gauge holder, dial indicator, etc.
2. Use brushes, cleaning cloths, and cleaning fluid to clean the installation parts and tools used.
3. Use heaters or installation tools to install the bearings on the shaft, or use heaters or installation tools to install the bearings into the bearing housing. The sequence of this process can be determined according to the specific cooperation and structural design.
4. It is strictly forbidden to force the rolling elements during the installation process, and it is strictly prohibited to knock the outer ring when installing the inner ring, and it is also strictly prohibited to knock the inner ring when installing the outer ring.
5. Use vernier calipers and feeler gauges to inspect the size of the installation and matching positions, focusing on ensuring the correct depth of the shaft shoulder.
6. Install the axial end cover, use a torque wrench to tighten the fixing screws three times, and tighten the screws step by step in the order of 40%, 70%, and 100% of the standard torque of the screw and the "cross method" each time.
7. After the inner ring and the shaft are installed or the outer ring and the bearing seat are installed, check the installation accuracy with a magnetic meter seat and a dial indicator. Once a problem is found, it needs to be removed and reinstalled.
8. For the installation with the lubricating oil hole, pay special attention to the corresponding installation of the lubricating oil hole position.



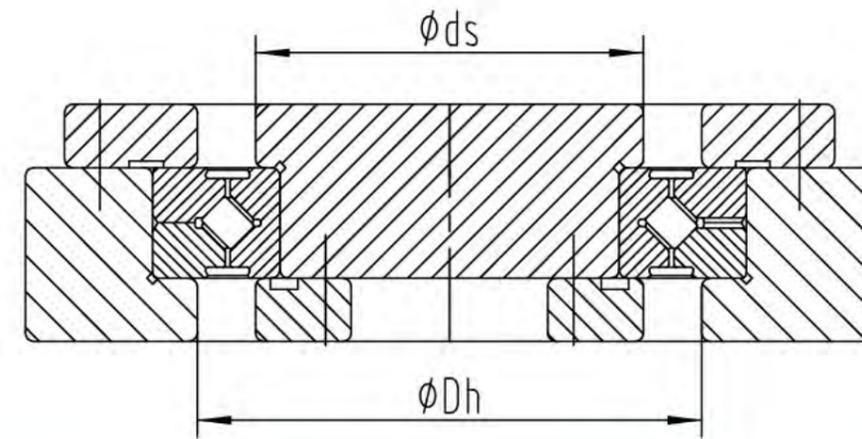
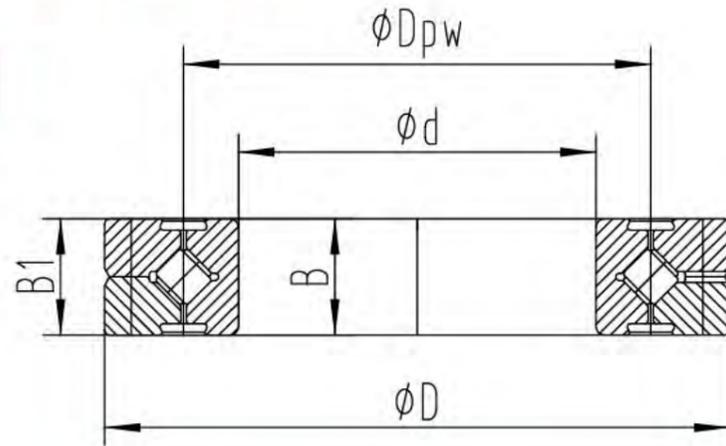
Precautions

1. The bearing has been filled with grease, and there is no need to add grease during installation; after installation and long-term operation, the same brand of grease can be refilled through the lubricating hole.
2. When handling bearings weighing more than 20KG, it is best to work together to prevent bumps and injuries.
3. The working temperature should not exceed 80° C to prevent the sealing ring from aging and failing too quickly.
4. When installing the split ferrule, do not loosen the connecting screws or rivets, just install the bearing directly on the shaft or in the bearing seat.
5. For the bearings installed on the end face, the axial end cover is not necessary, and the screws fixed on the end face still have to be tightened three times according to the "cross method".

Lubrication

1. Do not mix greases of different brands to prevent premature failure due to reactions.
2. For special application conditions such as low temperature, high temperature, vibration and impact load, the corresponding grease should be selected to ensure that the bearing will not fail in long-term use.
3. The replenishment period of grease can be determined according to the specific working conditions. Under normal load conditions, 3-6 months is a more appropriate replenishment period.
4. Bearings installed on the end face can be installed with grease nipple to directly replenish grease when the outer diameter of the bearing is not positioned.

Size specification table



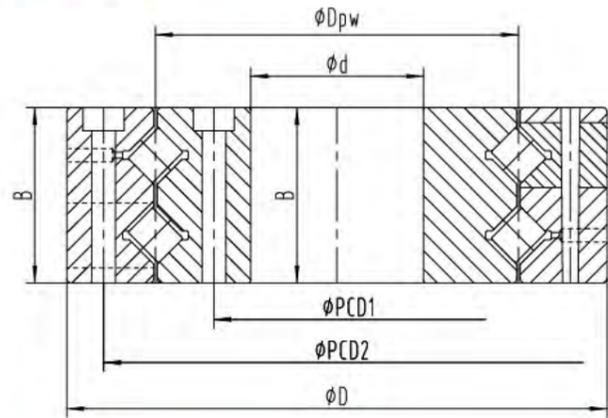
Model	Inside diameter	Tolerance	Outer diameter	Tolerance	Inner ring Width	Tolerance	Outer ring Width	Tolerance	Pitch diameter	Inner ring shaft shoulder	Outer ring shaft shoulder
	d (mm)	δd (mm)	D (mm)	δD (mm)	B (mm)	δB (mm)	B1 (mm)	$\delta B1$ (mm)	Dpw (mm)	ds (mm)	Dh (mm)
ERBC2008	20	0/-0.005	36	0/-0.006	8	0/-0.075	8	0/-0.100	27	23.5	30.5
ERBC2508	25	0/-0.005	41	0/-0.006	8	0/-0.075	8	0/-0.100	32	28.5	35.5
ERBC3010	30	0/-0.006	55	0/-0.009	10	0/-0.075	10	0/-0.100	41.5	37	47
ERBC3510	35	0/-0.008	60	0/-0.009	10	0/-0.075	10	0/-0.100	46.5	41	51.5
ERBC4010	40	0/-0.008	65	0/-0.009	10	0/-0.075	10	0/-0.100	51.2	47.5	57.5
ERBC4510	45	0/-0.008	70	0/-0.009	10	0/-0.075	10	0/-0.100	56.5	51	61.5
ERBC5013	50	0/-0.008	80	0/-0.009	13	0/-0.075	13	0/-0.100	64	57.4	72
ERBC6013	60	0/-0.009	90	0/-0.010	13	0/-0.075	13	0/-0.100	74	68	82
ERBC7013	70	0/-0.009	100	0/-0.010	13	0/-0.075	13	0/-0.100	84	78	92
ERBC8016	80	0/-0.008	120	0/-0.010	16	0/-0.075	16	0/-0.100	96.6	91	111
ERBC9016	90	0/-0.008	130	0/-0.010	16	0/-0.075	16	0/-0.100	106.9	98	118
ERBC10016	100	0/-0.010	140	0/-0.011	16	0/-0.075	16	0/-0.100	117	109	129
ERBC10020	100	0/-0.010	150	0/-0.011	20	0/-0.075	20	0/-0.100	122	113	133
ERBC11012	110	0/-0.010	135	0/-0.011	12	0/-0.075	12	0/-0.100	120.2	117	127
ERBC11015	110	0/-0.010	145	0/-0.011	15	0/-0.075	15	0/-0.100	126.3	122	136
ERBC11020	110	0/-0.010	160	0/-0.013	20	0/-0.075	20	0/-0.100	130.5	120	143
ERBC12016	120	0/-0.010	150	0/-0.011	16	0/-0.075	16	0/-0.100	132.6	127	141
ERBC12025	120	0/-0.010	180	0/-0.013	25	0/-0.075	25	0/-0.100	148.3	133	164
ERBC13015	130	0/-0.013	160	0/-0.013	15	0/-0.100	15	0/-0.120	142.8	137	152
ERBC13025	130	0/-0.013	190	0/-0.015	25	0/-0.100	25	0/-0.120	158	143	174
ERBC14016	140	0/-0.013	175	0/-0.013	16	0/-0.100	16	0/-0.120	154.8	147	162
ERBC14025	140	0/-0.013	200	0/-0.015	25	0/-0.100	25	0/-0.120	168	154	185

Model	Static load	Dynamic load	Inner ring runout P5	Inner ring runout P4	Inner ring runout P2	Preload	Positive clearance	Large clearance	Weight
	Cor (KN)	Cr (KN)	Kia/Sia (mm)	Kia/Sia (mm)	Kia/Sia (mm)	CC0 (mm)	C0 (mm)	C1 (mm)	m (Kg)
ERBC2008	3.1	3.23	0.004	0.003	0.0025	0/-0.008	0/0.015	0.015/0.035	0.04
ERBC2508	3.83	3.63	0.004	0.003	0.0025	0/-0.008	0/0.025	0.025/0.050	0.05
ERBC3010	8.36	7.35	0.004	0.003	0.0025	0/-0.008	0/0.025	0.025/0.050	0.12
ERBC3510	9.12	7.64	0.005	0.004	0.0025	0/-0.008	0/0.025	0.025/0.050	0.13
ERBC4010	10.6	8.33	0.005	0.004	0.0025	0/-0.010	0/0.030	0.030/0.060	0.16
ERBC4510	11.3	8.62	0.005	0.004	0.0025	0/-0.010	0/0.030	0.030/0.060	0.17
ERBC5013	20.9	16.7	0.005	0.004	0.0025	0/-0.010	0/0.030	0.030/0.060	0.27
ERBC6013	24.3	18	0.005	0.004	0.0025	0/-0.010	0/0.030	0.030/0.060	0.3
ERBC7013	27.7	19.4	0.005	0.004	0.0025	0/-0.010	0/0.040	0.040/0.070	0.35
ERBC8016	42.1	30.1	0.005	0.004	0.0025	0/-0.010	0/0.040	0.040/0.070	0.7
ERBC9016	45.3	31.4	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.070	0.75
ERBC10016	48.6	31.7	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.070	0.83
ERBC10020	50.9	33.1	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.080	1.45
ERBC11012	24.1	12.5	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.080	0.4
ERBC11015	41.5	23.7	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.080	0.75
ERBC11020	54	34	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.080	1.56
ERBC12016	43.2	24.2	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.080	0.72
ERBC12025	100	66.9	0.006	0.005	0.0025	0/-0.010	0/0.040	0.040/0.090	2.62
ERBC13015	46.7	25	0.008	0.006	0.0025	0/-0.010	0/0.040	0.040/0.090	0.72
ERBC13025	107	69.5	0.008	0.006	0.0025	0/-0.010	0/0.040	0.040/0.090	2.82
ERBC14016	50.1	25.9	0.008	0.006	0.0025	0/-0.010	0/0.040	0.040/0.090	1
ERBC14025	121	75.8	0.008	0.006	0.0025	0/-0.010	0/0.050	0.050/0.100	2.96

Model	Inside diameter	Tolerance	Outer diameter	Tolerance	Inner ring Width	Tolerance	Outer ring Width	Tolerance	Pitch diameter	Inner ring shaft shoulder	Outer ring shaft shoulder
	d (mm)	δd (mm)	D (mm)	δD (mm)	B (mm)	δB (mm)	B1 (mm)	$\delta B1$ (mm)	Dpw (mm)	ds (mm)	Dh (mm)
ERBC15013	150	0/-0.013	180	0/-0.013	13	0/-0.100	13	0/-0.120	164	157	172
ERBC15025	150	0/-0.013	210	0/-0.015	25	0/-0.100	25	0/-0.120	178	164	194
ERBC15030	150	0/-0.013	230	0/-0.015	30	0/-0.100	30	0/-0.120	187.5	173	211
ERBC16025	160	0/-0.013	220	0/-0.015	25	0/-0.100	25	0/-0.120	188	173	204
ERBC17020	170	0/-0.013	220	0/-0.015	20	0/-0.100	20	0/-0.120	191	184	198
ERBC18025	180	0/-0.013	240	0/-0.015	25	0/-0.100	25	0/-0.120	208	195	225
ERBC19025	190	0/-0.015	240	0/-0.015	25	0/-0.100	25	0/-0.120	211.9	202	222
ERBC20025	200	0/-0.015	260	0/-0.018	25	0/-0.100	25	0/-0.120	228	215	245
ERBC20030	200	0/-0.015	280	0/-0.018	30	0/-0.100	30	0/-0.120	237.5	221	258
ERBC20035	200	0/-0.015	295	0/-0.018	35	0/-0.100	35	0/-0.120	247.7	225	270
ERBC22025	220	0/-0.015	280	0/-0.018	25	0/-0.100	25	0/-0.120	248	235	265
ERBC24025	240	0/-0.015	300	0/-0.018	25	0/-0.100	25	0/-0.120	269	256	281
ERBC25025	250	0/-0.015	310	0/-0.018	25	0/-0.100	25	0/-0.120	277.5	265	290
ERBC25030	250	0/-0.015	330	0/-0.020	30	0/-0.100	30	0/-0.120	287.5	269	306
ERBC25040	250	0/-0.015	355	0/-0.020	40	0/-0.100	40	0/-0.120	301.6	275	326
ERBC30025	300	0/-0.018	360	0/-0.020	25	0/-0.120	25	0/-0.150	330	315	340
ERBC30035	300	0/-0.018	395	0/-0.020	35	0/-0.120	35	0/-0.150	347.7	322	368
ERBC30040	300	0/-0.018	405	0/-0.023	40	0/-0.120	40	0/-0.150	351.6	326	377
ERBC35020	350	0/-0.023	400	0/-0.020	20	0/-0.150	20	0/-0.200	373	363	383
ERBC40035	400	0/-0.023	480	0/-0.023	35	0/-0.150	35	0/-0.200	437	422	459
ERBC40040	400	0/-0.023	510	0/-0.028	40	0/-0.150	40	0/-0.200	451	428	479
ERBC45025	450	0/-0.035	500	0/-0.023	25	0/-0.150	25	0/-0.200	474	464	484
ERBC50025	500	0/-0.035	550	0/-0.028	25	0/-0.150	25	0/-0.200	524.2	514	534
ERBC50040	500	0/-0.035	600	0/-0.028	40	0/-0.150	40	0/-0.200	548.8	526	572
ERBC50050	500	0/-0.035	625	0/-0.028	50	0/-0.150	50	0/-0.200	561.6	536	587
ERBC60040	600	0/-0.040	700	0/-0.035	40	0/-0.150	40	0/-0.200	647	627	673
ERBC70045	700	0/-0.075	815	0/-0.100	45	0/-0.150	45	0/-0.200	753.5	731	777
ERBC80070	800	0/-0.075	950	0/-0.100	70	0/-0.150	70	0/-0.200	868.1	836	900
ERBC90070	900	0/-0.100	1050	0/-0.125	70	0/-0.300	70	0/-0.400	968	937	1001
ERBC1000110	1000	0/-0.100	1250	0/-0.125	110	0/-0.300	110	0/-0.400	1114	1057	1171
ERBC1250110	1250	0/-0.125	1500	0/-0.160	110	0/-0.300	110	0/-0.400	1365.8	1308	1423

Model	Static load	Dynamic load	Inner ring runout P5	Inner ring runout P4	Inner ring runout P2	Preload	Positive clearance	Large clearance	Weight
	Cor (KN)	Cr (KN)	Kia/Sia (mm)	Kia/Sia (mm)	Kia/Sia (mm)	CC0 (mm)	C0 (mm)	C1 (mm)	m (Kg)
ERBC15013	55.3	27	0.008	0.006	0.0025	0/-0.010	0/0.040	0.040/0.090	0.68
ERBC15025	128	76.8	0.008	0.006	0.0025	0/-0.010	0/0.050	0.050/0.100	3.16
ERBC15030	156	100	0.008	0.006	0.0025	0/-0.010	0/0.050	0.050/0.110	5.3
ERBC16025	135	81.7	0.008	0.006	0.005	0/-0.010	0/0.050	0.050/0.110	3.14
ERBC17025	62.1	29	0.008	0.006	0.005	0/-0.010	0/0.050	0.050/0.110	2.21
ERBC18025	143	84	0.008	0.006	0.005	0/-0.010	0/0.060	0.060/0.120	3.44
ERBC19025	82.9	41.7	0.010	0.008	0.005	0/-0.010	0/0.060	0.060/0.120	2.99
ERBC20025	150	80	0.010	0.008	0.005	0/-0.010	0/0.060	0.060/0.130	4
ERBC20030	200	114	0.010	0.008	0.005	0/-0.010	0/0.060	0.060/0.130	6.7
ERBC20035	252	151	0.010	0.008	0.005	0/-0.010	0/0.060	0.060/0.130	9.6
ERBC22025	171	92.3	0.010	0.008	0.005	0/-0.015	0/0.080	0.080/0.150	4.1
ERBC24025	145	68	0.010	0.008	0.005	0/-0.015	0/0.080	0.080/0.150	4.5
ERBC25025	150	69.3	0.010	0.008	0.005	0/-0.015	0/0.080	0.080/0.150	5
ERBC25030	244	126	0.010	0.008	0.005	0/-0.015	0/0.100	0.100/0.170	8.1
ERBC25040	348	195	0.010	0.008	0.005	0/-0.015	0/0.100	0.100/0.170	14.8
ERBC30025	178	76.3	0.013	0.010	0.006	0/-0.015	0/0.110	0.110/0.190	5.9
ERBC30035	367	183	0.013	0.010	0.006	0/-0.015	0/0.110	0.110/0.190	13.4
ERBC30040	409	212	0.013	0.010	0.006	0/-0.015	0/0.110	0.110/0.190	17.2
ERBC35020	130	54	0.015	0.012	0.007	0/-0.015	0/0.120	0.120/0.210	3.9
ERBC40035	370	156	0.015	0.012	0.007	0/-0.020	0/0.130	0.130/0.230	14.5
ERBC40040	568	255	0.015	0.012	0.007	0/-0.020	0/0.130	0.130/0.250	23.5
ERBC45025	140	86	0.018	0.014	0.009	0/-0.020	0/0.130	0.130/0.250	6.6
ERBC50025	145	68	0.018	0.014	0.009	0/-0.020	0/0.150	0.150/0.280	7.3
ERBC50040	560	225	0.018	0.014	0.009	0/-0.020	0/0.150	0.150/0.280	26
ERBC50050	465	187	0.018	0.014	0.009	0/-0.020	0/0.170	0.170/0.310	41.7
ERBC60040	580	230	0.020	0.016	0.010	0/-0.020	0/0.190	0.190/0.350	29
ERBC70045	820	270	0.023	0.018	0.011	0/-0.030	0/0.210	0.210/0.390	46
ERBC80070	1330	468	0.023	0.018	0.011	0/-0.030	0/0.230	0.230/0.430	105
ERBC90070	1490	494	0.025	0.020	0.012	0/-0.030	0/0.260	0.260/0.480	120
ERBC1000110	3220	1220	0.025	0.020	0.012	0/-0.030	0/0.290	0.290/0.530	360
ERBC1250110	3970	1350	0.028	0.022	0.016	0/-0.030	0/0.350	0.350/0.630	440

EDRX

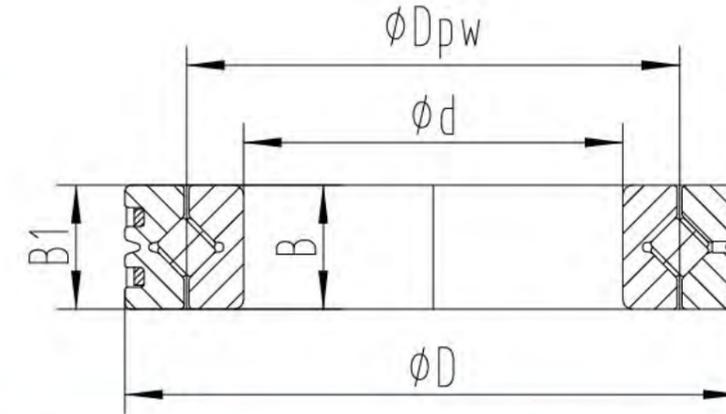


Model	Inside diameter	Tolerance	Outer diameter	Tolerance
	d (mm)	δd (mm)	D (mm)	δD (mm)
EDRX10020(G)	100	0/-0.020	185	0/-0.030
EDRX12030(G)	120	0/-0.200	210	0/-0.030
EDRX15030(G)	150	0/-0.025	240	0/-0.030
EDRX18040(G)	180	0/-0.025	280	0/-0.035
EDRX20040(G)	200	0/-0.030	300	0/-0.035
EDRX26050(G)	260	0/-0.035	385	0/-0.040
EDRX32550(G)	325	0/-0.040	450	0/-0.045
EDRX39550(G)	395	0/-0.040	525	0/-0.050
EDRX46050(G)	460	0/-0.045	600	0/-0.050
EDRX58060(G)	580	0/-0.050	750	0/-0.075
EDRX65060(G)	650	0/-0.075	870	0/-0.100

Model	Width	Tolerance	Pitch diameter	Shoulder of inner ring	Shoulder of outer ring	Mounting holes of inner ring		Mounting holes of outer ring	
	B (mm)	δB (mm)	Dpw (mm)	ds (mm)	Dh (mm)	PCD1 (mm)	φ (mm)	PCD2 (mm)	φ (mm)
EDRX10020(G)	20	0/-0.075	142.5	136.5	148.5	115	12-5.6-φ10±5.5	170	12-5.6-φ10±5.5
EDRX12030(G)	30	0/-0.020	165	156	174	138	12-7-φ11±6.5	192	12-7-φ11±6.5
EDRX15030(G)	30	0/-0.100	195	186	204	168	16-7-φ11±6.5	222	12-7-φ11±6.5
EDRX18040(G)	40	0/-0.100	230	218	242	200	18-7-φ11±6.5	260	18-7-φ11±6.5
EDRX20040(G)	40	0/-0.100	250	238	262	220	20-7-φ11±6.5	280	20-7-φ11±6.5
EDRX26050(G)	50	0/-0.120	322.5	307.5	337.5	282	24-9.3-φ15±9	363	24-9.3-φ15±9
EDRX32550(G)	50	0/-0.150	387.5	372.5	402.5	347	30-9.3-φ15±9	428	30-9.3-φ15±9
EDRX39550(G)	50	0/-0.150	460	445	475	418	36-10-φ15±9	502	36-10-φ15±9
EDRX46050(G)	50	0/-0.150	530	515	545	486	40-10-φ15±9	574	40-10-φ15±9
EDRX58060(G)	60	0/-0.150	665	647	683	610	32-12-φ18±11	720	32-12-φ18±11
EDRX65060(G)	60	0/-0.150	760	742	778	690	32-14-φ20±13	830	32-14-φ20±13

Model	Static load	Dynamic load	Inner ring runout P5	Outer ring runout P5	Inner ring runout P4	Outer ring runout P4	Inner ring runout P2	Outer ring runout P2	Preload	Weight
	Cor (KN)	Cr (KN)	Kia/Sia (mm)	Kea/Sea (mm)	Kia/Sia (mm)	Kea/Sea (mm)	Kia/Sia (mm)	Kea/Sea (mm)	CC0 (mm)	m (Kg)
EDRX10020(G)	59.3	24.6	0.006	0.015	0.005	0.01	0.0025	0.007	0.004	1.3
EDRX12030(G)	112	48.6	0.006	0.015	0.005	0.01	0.0025	0.007	0.004	2.3
EDRX15030(G)	136	54.1	0.006	0.015	0.005	0.01	0.0025	0.007	0.004	2.7
EDRX18040(G)	215	87	0.008	0.018	0.006	0.011	0.005	0.007	0.005	4.7
EDRX20040(G)	231	89.7	0.008	0.018	0.006	0.011	0.005	0.007	0.005	5.1
EDRX26050(G)	422	168	0.010	0.020	0.008	0.013	0.005	0.008	0.006	10.3
EDRX32550(G)	558	199	0.010	0.020	0.008	0.013	0.005	0.008	0.006	12.4
EDRX39550(G)	634	208	0.015	0.025	0.012	0.016	0.007	0.010	0.007	15.3
EDRX46050(G)	771	233	0.015	0.025	0.012	0.016	0.007	0.010	0.007	18.9
EDRX58060(G)	1120	334	0.020	0.035	0.015	0.020	0.012	0.012	0.009	34.6
EDRX65060(G)	1290	360	0.020	0.035	0.015	0.020	0.012	0.012	0.009	51.1

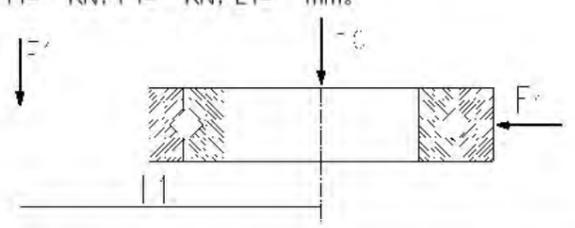
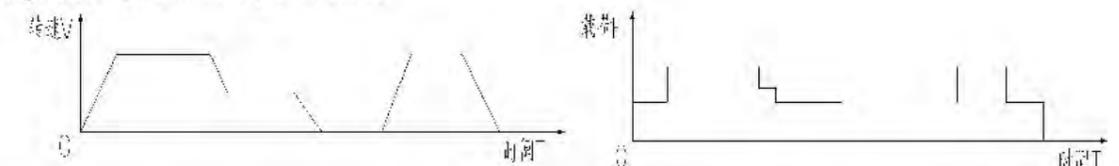
EFSX



Model	ID	Tolerance	OD	Tolerance	Inner ring Width	Tolerance	Outer ring Width	Tolerance	Pitch diameter	Shoulder of inner ring	Shoulder of outer ring
	d (mm)	δd (mm)	D (mm)	δD (mm)	B (mm)	δB (mm)	B1 (mm)	δB1 (mm)	Dpw (mm)	ds (mm)	Dh (mm)
EFSX7010	70	0.004/-0.015	90	0/-0.027	10	0/-0.010	10	±0.060	80	77	83
EFSX9013	90	0.004/-0.018	115	0/-0.022	13	0/-0.010	13	±0.060	102	98.1	105.9
EFSX10013	100	0.004/-0.018	125	0/-0.025	13	0/-0.010	13	±0.060	112	108.1	115.9
EFSX12016	120	0.004/-0.018	150	0/-0.025	16	0/-0.010	16	±0.060	135	130.2	139.8
EFSX14018	140	0.004/-0.021	175	0/-0.025	18	0/-0.010	18	±0.060	157	151.6	162.4
EFSX16020	160	0.004/-0.021	200	0/-0.029	20	0/-0.025	20	±0.100	180	174	186
EFSX18022	180	0.004/-0.021	225	0/-0.029	22	0/-0.025	22	±0.100	202	195.4	208.6
EFSX20024	200	0.004/-0.024	250	0/-0.029	24	0/-0.025	24	±0.100	225	217.8	232.2
EFSX24028	240	0.005/-0.024	300	0/-0.032	28	0/-0.025	28	±0.100	270	261.6	278.4
EFSX30038	300	0.005/-0.027	380	0/-0.036	38	0/-0.050	38	±0.140	340	328.6	351.4
EFSX34038	340	0.007/-0.039	420	0/-0.040	38	0/-0.050	38	±0.140	380	368.6	391.4
EFSX40046	400	0.007/-0.029	500	0/-0.040	46	0/-0.050	46	±0.150	450	436.2	463.8
EFSX50056	500	0.008/-0.032	620	0/-0.044	56	0/-0.050	56	±0.160	560	543.2	576.8

Model	Static load	Dynamic load	Inner ring radial runout P4	Inner ring end face runout P4	Preload	Clearance	Large clearance	Weight
	Cor (KN)	Cr (KN)	Kia (mm)	Sia (mm)	VSP (mm)	RL0 (mm)	RL1 (mm)	m (Kg)
EFSX7010	30	12	0.010	0.010	-0.003/-0.015	-0.003/0.003	0.003/0.015	0.3
EFSX9013	47	17	0.010	0.010	-0.003/-0.015	-0.003/0.003	0.003/0.015	0.4
EFSX10013	52	18	0.010	0.010	-0.005/-0.020	-0.005/0.004	0.005/0.020	0.5
EFSX12016	75	26	0.010	0.010	-0.005/-0.020	-0.005/0.004	0.005/0.020	0.8
EFSX14018	116	41	0.015	0.010	-0.005/-0.020	-0.005/0.004	0.005/0.020	1.1
EFSX16020	133	44	0.015	0.010	-0.005/-0.020	-0.005/0.004	0.005/0.020	1.7
EFSX18022	187	63	0.015	0.010	-0.005/-0.025	-0.005/0.005	0.005/0.025	2.3
EFSX20024	208	68	0.015	0.010	-0.005/-0.025	-0.005/0.005	0.005/0.025	3.1
EFSX24028	300	95	0.020	0.010	-0.005/-0.025	-0.005/0.005	0.005/0.030	5.3
EFSX30038	504	156	0.020	0.010	-0.005/-0.025	-0.005/0.005	0.005/0.040	12
EFSX34038	563	167	0.025	0.010	-0.005/-0.025	-0.005/0.005	0.005/0.040	13.5
EFSX40046	833	244	0.030	0.010	-0.005/-0.025	-0.005/0.005	0.005/0.050	24
EFSX50056	1244	355	0.040	0.010	-0.005/-0.030	-0.005/0.006	0.006/0.060	44

Working Condition Requirement Sheet

I Contact Info.			
1.Name:	2.Position:	3.Tel.:	4.E-mail:
5.Company:		6.Industry:	
II Application conditions			
1.Equipment type: ①Machining center ②grinding machine non-standard equipment ④testing equipment ⑤other equipment			
2.application site: ①NC rotary table ②Angular milling head ③Direct drive motor ④Others			
3.Precision and material of parts to be machined: ①Cast iron, semi-finishing ②Steel, precision processing ③Aluminum alloy, precision machining ④Handling,positioning			
4.Mode of power transmission: ①manual ②Motor direct drive ③Motor, worm gear drive ④Motor, gear reducer ⑤Motor, belt ⑥Hydraulic transmission ⑦Other			
5.Loading conditions: $F_a =$ KN, $F_r =$ KN, $F_1 =$ KN, $L_1 =$ mm.			
			
6.Bearing rotating speed and working hours: Limit speed= RPM, Working speed= RPM, Working hours: ①Intermittent ②continuous.			
			
7.Working environment & temperature conditions: ①Indoor, 10℃--60℃ ②Outdoor, -20℃--50℃ ③Other			
III Primary selection of bearing model			
1.Dimension: ID mm, OD mm, H mm.			
2.Precision: ①P5 ②P4 ③P2			
IV Special requirements			
Note: Above information will be protected by our company as confidential secret of both parties. Please rest assured when filling in the information.			

Customized according to the size range of the sample book, such as internal teeth, external teeth, additional flanges, surface heat treatment, and bearing housings and shafts that match the bearings can be customized and processed, and the drawings agreed and confirmed by both parties shall prevail.

Customization process:

1. The customer informs the working condition or the sample drawing
2. Technical personnel of both parties communicate technical details
3. We will issue confirmation drawings for customers to confirm
4. Both parties confirm the drawings and sign a technical agreement (the technical agreement and the contract have the same legal effect)

Model comparison table

EFANT	THK	IKO	EFANT	THK	IKO
ERBC	RB	CRB	ERBC	RB	CRB
ERBC2008	RB2008	CRBC208	ERBC30025	RB30025	CRBC30025
ERBC2508	RB2508	CRBC258	ERBC30035	RB30035	CRBC30035
ERBC3010	RB3010	CRBC3010	ERBC30040	RB30040	CRBC30040
ERBC3510	RB3510	CRBC3510	ERBC35020	RB35020	CRBC35020
ERBC4010	RB4010	CRBC4010	ERBC40035	RB40035	CRBC40035
ERBC4510	RB4510	CRBC4510	ERBC40040	RB40040	CRBC40040
ERBC5013	RB5013	CRBC5013	ERBC45025	RB45025	CRBC45025
ERBC6013	RB6013	CRBC6013	ERBC50025	RB50025	CRBC50025
ERBC7013	RB7013	CRBC7013	ERBC50040	RB50040	CRBC50040
ERBC8016	RB8016	CRBC8016	ERBC50050	RB50050	CRBC50050
ERBC9016	RB9016	CRBC9016	ERBC60040	RB60040	CRBC60040
ERBC10016	RB10016	CRBC10016	ERBC70045	RB70045	CRBC70045
ERBC10020	RB10020	CRBC10020	ERBC80070	RB80070	CRBC80070
ERBC11012	RB11012	CRBC11012	ERBC90070	RB90070	
ERBC11015	RB11015	CRBC11015	ERBC1000110	RB1000110	
ERBC11020	RB11020	CRBC11020	ERBC1250110	RB1250110	
ERBC12016	RB12016	CRBC12016			
ERBC12025	RB12025	CRBC12025			
ERBC13015	RB13015	CRBC13015			
ERBC13025	RB13025	CRBC13025			
ERBC14016	RB14016	CRBC14016			
ERBC14025	RB14025	CRBC14025			
ERBC15013	RB15013	CRBC15013			
ERBC15025	RB15025	CRBC15025			
ERBC15030	RB15030	CRBC15030			
ERBC16025	RB16025	CRBC16025			
ERBC17020	RB17020	CRBC17020			
ERBC18025	RB18025	CRBC18025			
ERBC19025	RB19025	CRBC19025			
ERBC20025	RB20025	CRBC20025			
ERBC20030	RB20030	CRBC20030			
ERBC20035	RB20035	CRBC20035			
ERBC22025	RB22025	CRBC22025			
ERBC24025	RB24025	CRBC24025			
ERBC25025	RB25025	CRBC25025			
ERBC25030	RB25030	CRBC25030			
ERBC25040	RB25040	CRBC25040			

EFANT	THK	IKO
ERBS	RA	CRBS
ERBS5008	RA5008	CRBS508A
ERBS6008	RA6008	CRBS608A
ERBS7008	RA7008	CRBS708A
ERBS8008	RA8008	CRBS808A
ERBS9008	RA9008	CRBS908A
ERBS10008	RA10008	CRBS1008A
ERBS11008	RA11008	CRBS1108A
ERBS12008	RA12008	CRBS1208A
ERBS13008	RA13008	CRBS1308A
ERBS14008	RA14008	CRBS1408A
ERBS15008	RA15008	CRBS1508A
ERBS16013	RA16013	CRBS16013A
ERBS17013	RA17013	CRBS17013A
ERBS18013	RA18013	CRBS18013A
ERBS19013	RA19013	CRBS19013A
ERBS20013	RA20013	CRBS20013A

EFANT	IKO
ERBH	CRBH
ERBH2008	CRBHV208A
ERBH2508	CRBHV258A
ERBH3010	CRBHV3010A
ERBH3510	CRBHV3510A
ERBH4010	CRBHV4010A
ERBH4510	CRBHV4510A
ERBH5013	CRBHV5013A
ERBH6013	CRBHV6013A
ERBH7013	CRBHV7013A
ERBH8016	CRBHV8016A
ERBH9016	CRBHV9016A
ERBH10020	CRBHV10020A
ERBH11020	CRBHV11020A
ERBH12025	CRBHV12025A
ERBH13025	CRBHV13025A
ERBH14025	CRBHV14025A
ERBH15025	CRBHV15025A
ERBH20025	CRBHV20025A
ERBH25025	CRBHV25025A

EFANT	THK	IKO
ERBF	RU	CRBF
ERBF1008	RU28	CRBFV1008AT
ERBF2012	RU42	CRBFV2012AT
ERBF3515	RU66	CRBFV3515AT
ERBF5515	RU85	CRBFV5515AT
ERBF8022(G)	RU124(G)	CRBFV8022A(AD)
ERBF8022X	RU124X	CRBFV8022AT
ERBF9025(G)	RU148(G)	CRBFV9025A(AD)
ERBF9025X	RU148X	CRBFV9025AT
ERBF11528(G)	RU178(G)	CRBFV11528A(AD)
ERBF11528X	RU178X	CRBFV11528AT
ERBF16035(G)	RU228(G)	
ERBF16035X	RU228X	
ERBF21040(G)	RU297(G)	
ERBF21040X	RU297X	
ERBF35045(G)	RU445(G)	
ERBF35045X	RU445X	

EFANT	THK
RW	RW
EDRX10020(G)	RW145
EDRX12030(G)	RW164
EDRX15030(G)	RW195
EDRX18040(G)	RW230
EDRX20040(G)	RW250
EDRX26050(G)	RW323
EDRX32550(G)	RW388
EDRX39550(G)	RW463
EDRX46050(G)	RW530
EDRX58060(G)	RW665
EDRX65060(G)	RW760

EFANT	INA
EFSX	SX
EFSX7010	SX011814
EFSX9013	SX011818
EFSX10013	SX011820
EFSX12016	SX011824
EFSX14018	SX011828
EFSX16020	SX011832
EFSX18022	SX011836
EFSX20024	SX011840
EFSX24028	SX011848
EFSX30038	SX011860
EFSX34038	SX011868
EFSX40046	SX011880
EFSX50056	SX0118/500

EFANT	INA
EFXU	XU
EFXU4022	XU050077
EFXU5726	XU060094
EFXU7616	XU060111
EFXU6930	XU080120
EFXU10222	XU080149
EFXU12535	XU120179
EFXU12535ZT	XU120179
EFXU14036	XU120222
EFXU19146	XU160260
EFXU19146ZT	XU160260ZT
EFXU21626	XU080264
EFXU33646	XU160405
EFXU33646ZT	XU160405ZT
EFXU38026	XU080430
EFXU38486	XU300515
EFXU38486ZT	XU300515ZT

EFANT	INA
EXSU	XSU
EXSU13025	XSU080168
EXSU15025	XSU080188
EXSU18025	XSU080218
EXSU22025	XSU080258
EXSU28025	XSU080318
EXSU36025	XSU080398
EXSU34456	XSU140414
EXSU47456	XSU140544
EXSU57456	XSU140644
EXSU67456	XSU140744
EXSU77456	XSU140844
EXSU87456	XSU140944
EXSU102456	XSU141094

EFANT	INA
EFRT	YRT
EFRT50	YRTC50
EFRT80	YRTC80
EFRT100	YRTC100
EFRT120	YRTC120
EFRT150	YRTC150
EFRT180	YRTC180
EFRT200	YRTC200
EFRT260	YRTC260
EFRT325	YRTC325
EFRT395	YRTC395
EFRT460	YRTC460
EFRT580	YRTC580
EFRT650	YRTC650
EFRT850	YRTC850
EFRT950	YRTC950
EFRT1030	YRTC1030
EFRT1200	YRTC1200

EFANT	INA
ERTS	YRTS
ERTS200	YRTS200
ERTS260	YRTS260
ERTS325	YRTS325
ERTS395	YRTS395
ERTS460	YRTS460

EFANT	INA
EKLDF100	ZKLDF100
EKLDF120	ZKLDF120
EKLDF150	ZKLDF150
EKLDF180	ZKLDF180
EKLDF200	ZKLDF200
EKLDF260	ZKLDF260
EKLDF325	ZKLDF325
EKLDF395	ZKLDF395
EKLDF460	ZKLDF460
EKLDF580	ZKLDF580
EKLDF650	ZKLDF650