YOSO
LINEAR MOTION

CROSSED ROLLER BEARING

About Us

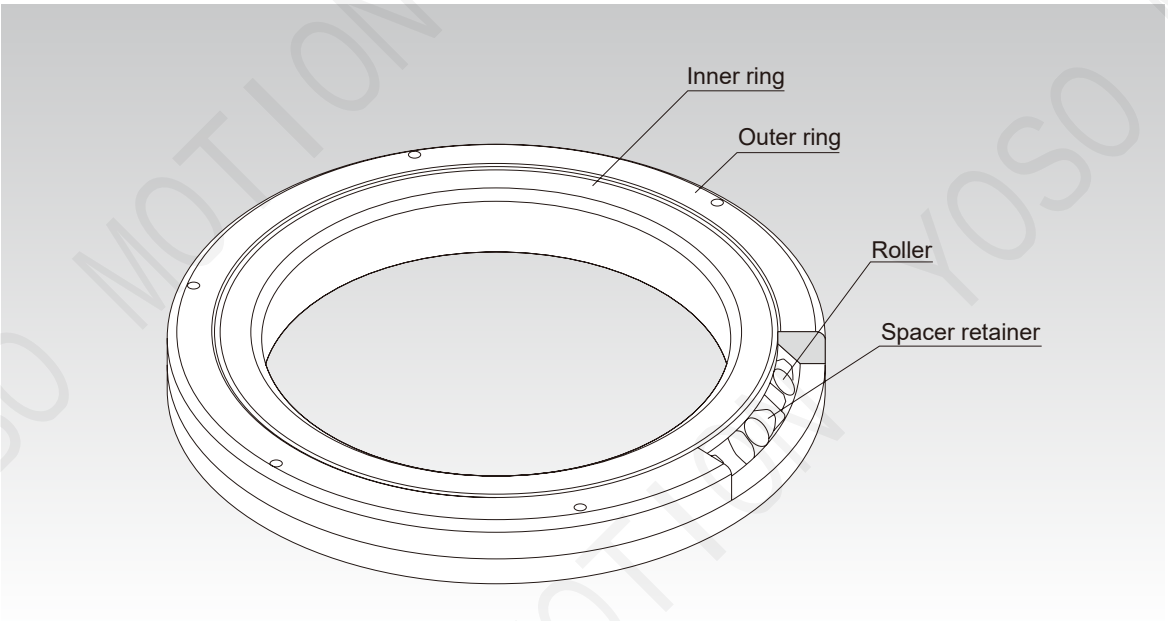
Jingpeng Machinery Equipment (Shanghai) Co., Ltd. was established in 2015. Its main products include ball screws, linear guides, cross guides, precision ball screws/splines, single-axis actuators, medium and large bearings, racks, couplings, support units, servo motors and drivers, etc. In cooperation with the German YOSO company, Jingpeng has independent import and export rights. Jingpeng has completed trademark registration and continues to promote its use. Now YOSO is one of the world's well-known brands. The company's products are sold all over the world and exported to the United States, Spain, Turkey, Italy, Austria, Brazil and other countries. Jingpeng Machinery learns German production technology, combines European and Japanese design concepts, and has specially established an independent R&D center, introducing advanced manufacturing equipment and high-precision testing equipment at home and abroad, and has completed an annual output value of 1.5 million sets of screw guides.

The product application areas are as follows: Automation industry Robotics industry Semiconductor industry Industrial machinery Medical equipment Green energy industry Machine tools Automatic storage system products have outstanding performance in various industrial fields. Jingpeng Machinery integrates global resources, continues to innovate, and works tirelessly for the better welfare of mankind and a better working environment. In the field of transmission components, Jingpeng Machinery has become the best partner with high-quality professional manufacturing and solutions, and provides technical support and industry analysis to meet customer needs. At the same time, we have a solid business team to ensure the stability of the foreign trade sales system and strong market development capabilities, so that our products can be exported to all parts of the world at the fastest speed. Jingpeng Machinery is a global professional manufacturer of transmission control products and system technology products.

CONTENT—YOSO MOTION

Features of the Crossed Roller Bearing

Structure and Features



With the crossed roller bearing, cylindrical rollers are arranged with each roller perpendicular to the adjacent roller, in a 90° V groove, separated from each other by a spacer retainer. This design allows just one bearing to receive loads in all directions including radial, axial, and moment loads.Since the crossed roller bearing achieves high rigidity despite the minimum possible dimensions of the inner and outer rings, it is optimal for applications such as joints and swiveling units of industrial robots, swiveling tables of machining centers, rotary units of manipulators, precision rotary tables, medical equipment, measuring instruments, and IC manufacturing machines.

High Rotation Accuracy

The spacer retainer fit between the orthogonally arrayed rollers prevents the rollers from skewing and the rotational torque from increasing due to friction between rollers. Unlike conventional types using steel sheet retainers, the crossed roller bearing does not cause unilateral contact or seizure of the rollers. Thus, even under a preload, the crossed roller bearing provides stable rotation.Since the inner and outer rings are designed to be separable, the preload can be adjusted, and this feature enables accurate rotation.

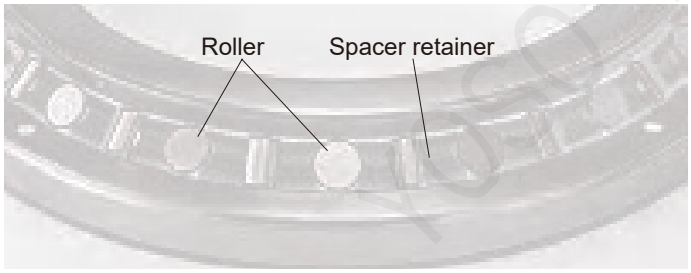
Features of the Crossed Roller Bearing

Easy Handling

The separate inner and outer rings are secured after the rollers and spacer retainers are installed in order to prevent the rings from separating from each other, making for easy handling during installation.

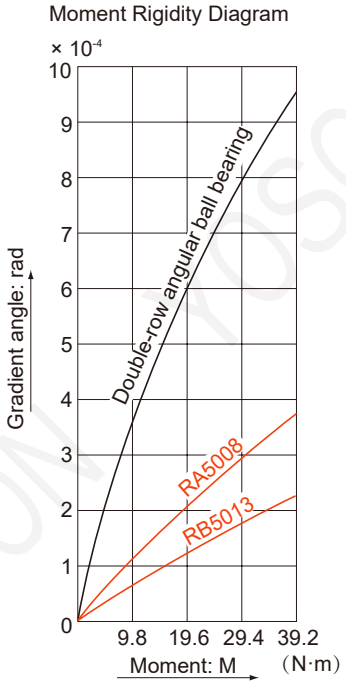
Skewing Prevention

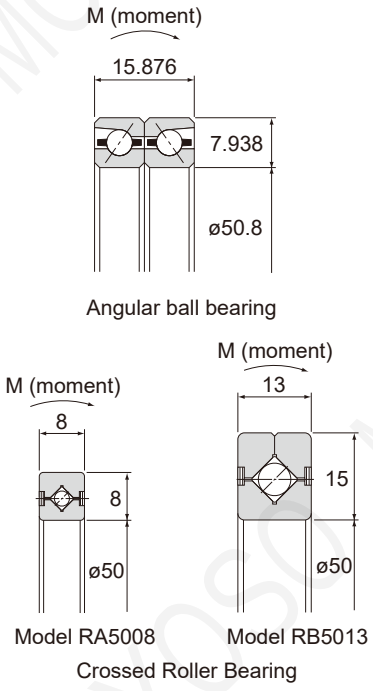
The spacer retainer keeps rollers in their proper positions, thereby preventing them from skewing (tilting). This eliminates friction between rollers, and therefore secures a stable rotational torque.



Increased Rigidity (Three to Four Times Greater than the Conventional Type)

Unlike applications with thin angular ball bearings installed in double rows, the orthogonal array of rollers allows a single crossed roller bearing unit to receive loads in all directions, increasing the rigidity to three to four times that of conventional types.



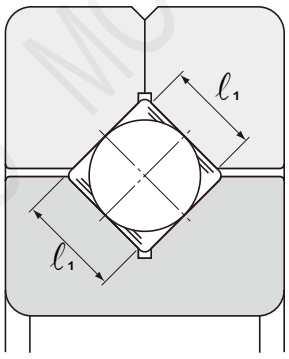


Features of the Crossed Roller Bearing

Large Load Capacity

(1) Compared with conventional steel sheet retainers, the spacer retainer allows a longer effective contact length of each roller, significantly increasing the load capacity.

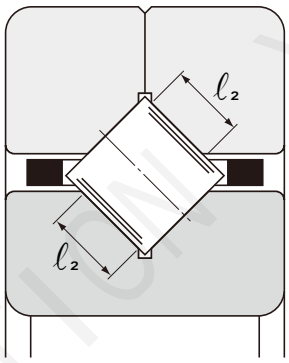
The spacer retainer guides rollers by supporting them over the entire length of each roller, whereas the conventional type of retainer supports them only at a point at the center of each roller. Such one-point contact cannot sufficiently prevent skewing.



With a spacer retainer

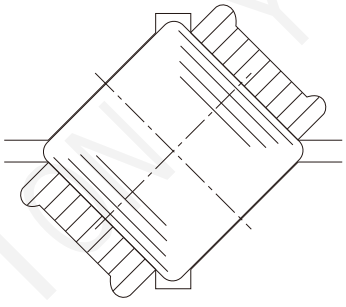
Roller contact length

$\ell_1 > \ell_2$

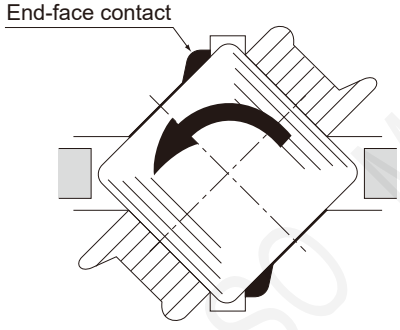


With a steel sheet retainer (conventional type)

(2) As illustrated below, in conventional types the loaded areas between the outer ring and the inner ring are asymmetrical with regard to the center of the length of the roller. The greater the load applied, the greater the moment becomes, leading to end-face contact. This causes frictional resistance, which hinders smooth rotation and quickens wear.



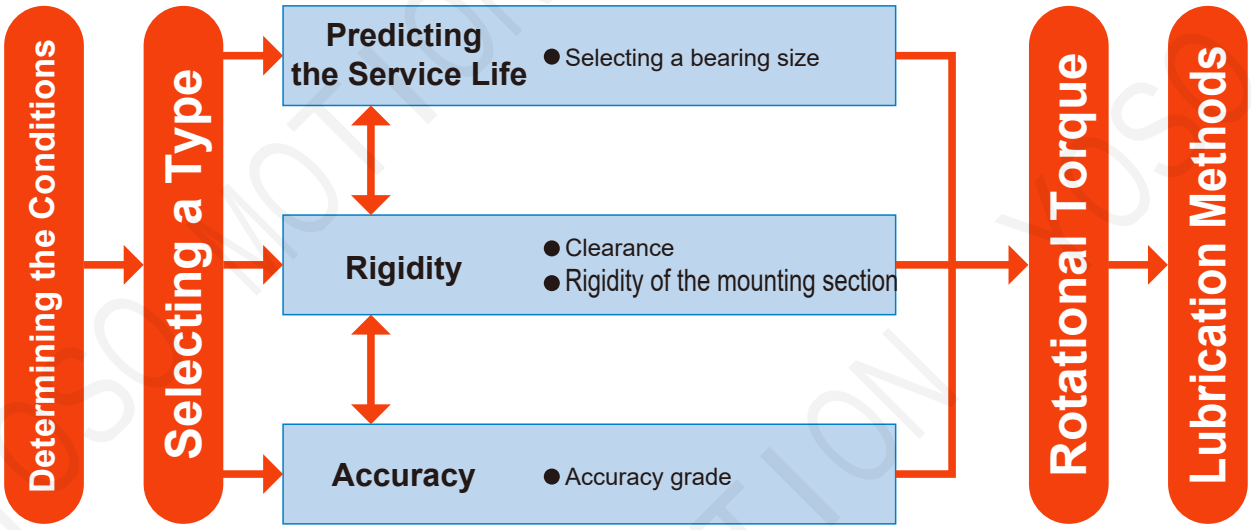
Loaded areas symmetrical
With a spacer retainer



Loaded areas asymmetrical
With a steel sheet retainer (conventional type)

Selecting a Crossed Roller Bearing

The following diagram shows a typical procedure for selecting a crossed roller bearing.



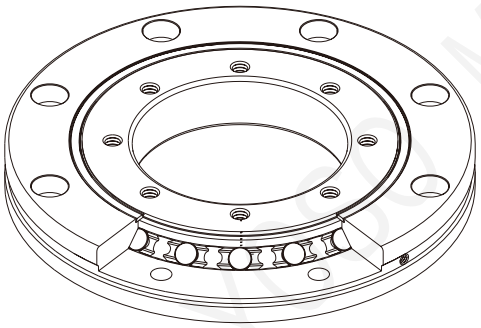
- Inner ring rotating …… Model RB
- Outer ring rotating …… Model RE
- Mounting space …… Models RAU, RA, and RA-C
- Mounting holes …… Model RU

Types of Crossed Roller Bearing

Model RU (Solid Inner/Outer Ring Type)

The solid design of the unit's inner and outer rings, with mounting holes on both rings, eliminates the need for a special flange or housing and enables easy installation. Mounting has virtually no effect on performance, which ensures stable, accurate rotation and torque.

This model can be used for both outer and inner ring rotation.

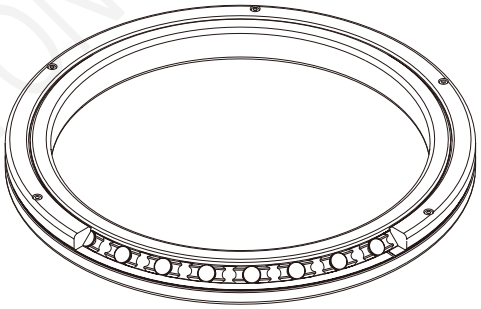


Model RU

Model RB (Two-Piece Outer Ring Type for Inner Ring Rotation)

This model is the basic type of crossed roller bearing, with a two-piece outer ring, and an inner ring integrated with the main body. It is used in locations where the rotational accuracy of the inner ring is required.

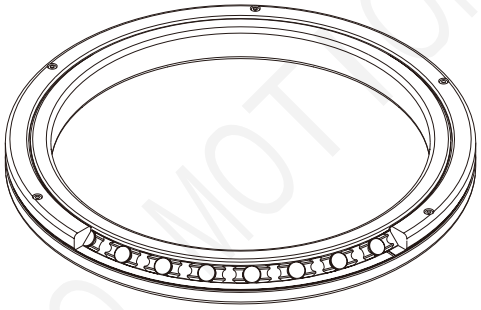
It is used, for example, in the swivel portions of index tables of machine tools.



Model RB

Model RE (Two-Piece Inner Ring Type for Outer Ring Rotation)

The main dimensions are the same as model RB. This model is used in locations where the rotational accuracy of the outer ring is required.

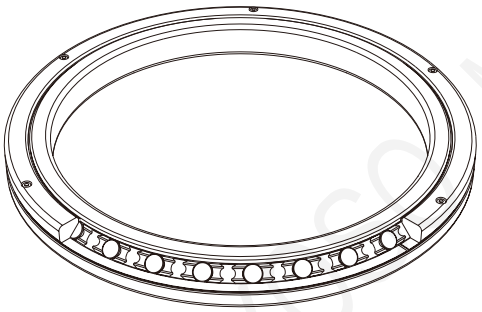


Model RE

Types of Crossed Roller Bearing

USP-Grade Series of Models RB and RE

The rotation accuracy of the USP-grade series achieves the ultra precision grade that surpasses the world's highest accuracy standards such as JIS Class 2, ISO Class 2, DIN P2, and AFBMA ABCE9.

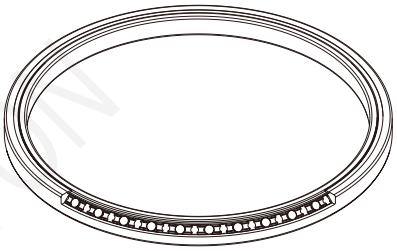


Model RAU (Solid Inner/Outer Ring Type)

The extremely small cross-sectional area allows it to be used in lightweight, compact devices.

The solid inner/outer ring structure can be used for both inner and outer ring rotation.

There is a 5 mm thin type and an RA interchangeable type. The thin type product lineup starts at a micro-sized 10 mm inner diameter.

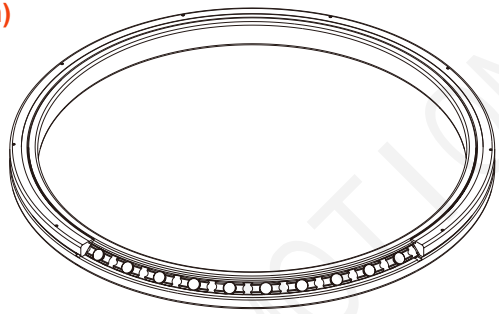


Model RAU

Model RA (Two-Piece Outer Ring Type for Inner Ring Rotation)

A compact type similar to Model RB with the thinnest possible inner and outer rings.

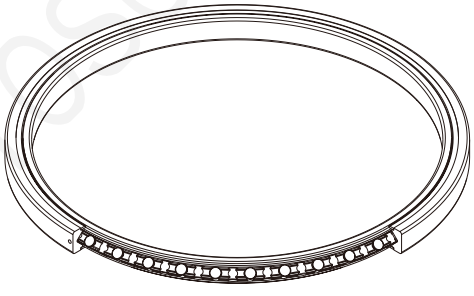
It enables lightweight and compact designs for the swiveling hand portions of manipulators and robots.



Model RA

Model RA-C (Single-Split Type)

The main dimensions are the same as those of Model RA. Owing to its single-split outer ring structure with a highly rigid outer ring, this model can be used for outer ring rotation.



Model RA-C

Model Number Coding

Crossed Roller Bearings with Solid Inner and Outer Rings.

● **Model RU**

RU124 UU CC0 P2 B G -N

Model No.

Seal symbol
No Symbol :Without seal
UU :Seal attached on both ends
U :Seal attached on either end (counterbore side of the outer ring)
UT :Seal attached on either end (opposite to the counterbore side of the outer ring)

Radial clearance symbol

Accuracy symbol

Sub-part Accuracy symbol
No Symbol : Rotational Accuracy of the Inner Ring
R :Rotational Accuracy of the Outer Ring
B :Rotational Accuracy of the Inner/Outer Rings

Mounting Hole Symbol
[Applicable Models : RU124 to RU445(RU42 to RU85 do not apply)]
No Symbol :The counterbore holes of the inner and outer rings face the same direction
G :The counterbore holes of the inner and outer rings face opposite direction
X :Inner ring tapped hole (through hole)

Grease nipple symbol
No Symbol :No grease nipples included
-N :Grease nipples attached
RU42 to RU 178:NP3.2×3.5
RU228 to RU 445:NP6×5

● **Model RU**

RAU5008 UU CC0 P4 B

Model No.

Seal symbol
No Symbol :Without seal
UU :Seal attached on both ends
U : Seal attached on one end (marked side)
UT : Seal attached on one end (unmarked side)

Radial clearance symbol
CC0 : Negative clearance (preload)
C0 : Positive clearance (without preload)

Accuracy symbol
No Symbol : Normal Grade (Grade 0)
P6 : 6-grade rotational accuracy
P5 : 5-grade rotational accuracy
P4 : 4-grade rotational accuracy

Component accuracy symbol
No symbol : Rotational accuracy of the inner ring
R : Rotational accuracy of the outer ring
B : Rotational accuracy of the inner/outer rings

Precautions for the Model RAU (Small-Diameter, 5 mm Thin Type)

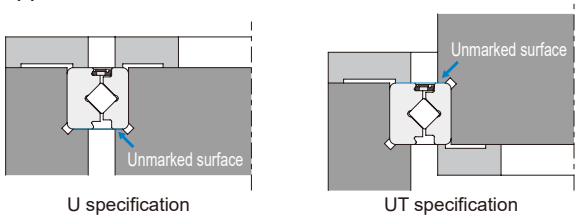
Note: Seals are not supported. Only available with radial clearance C0. Only available with normal grade accuracy (0)

Precautions for Selecting Seals on One Side

Because the unmarked surface is used as the machining reference surface, we recommend installing the cross-roller ring so that its unmarked surface is what makes contact with the mounting surface on the rotating axis. Choose a seal orientation to match your specifications.

(The marked surface is stamped with the model number.)

Example: For inner ring rotation when the seal is attached to the upper surface



U specification　　UT specification

Model Number Coding

Crossed Roller Bearing

● Models RB, RE, RA, and RA-C

RB2030 C UU CC0 P2

Model No.

Symbol
No Symbol :Models RB, RE, and RA
C :Model RA-C

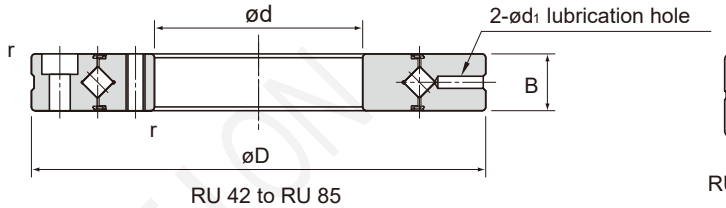
Seal symbol
No Symbol :Without seal
UU :Seal attached on both ends
U :Seal attached on either end

Accuracy symbol
(Models RB and RE only.)
No Symbol :Normal Grade (Grade 0)
P6 :6-grade rotational accuracy, PE6: 6-grade rotational accuracy + 6-grade dimensional accuracy
P5 :5-grade rotational accuracy, PE5: 5-grade rotational accuracy + 5-grade dimensional accuracy
P4 :4-grade rotational accuracy, PE4: 4-grade rotational accuracy + 4-grade dimensional accuracy
P2 :2-grade rotational accuracy, PE2: 2-grade rotational accuracy + 2-grade dimensional accuracy
USP-grade rotational accuracy

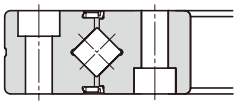
Radial clearance symbol
CC0 : Minus clearance (preload)
C0 : Plus clearance
C1:Plus clearance (larger than C0)

Note: When selecting U: Seal attached on one end, please specify whether the seal will be attached on the marked surface or unmarked surface. (The marked urface is stamped with the model number.)

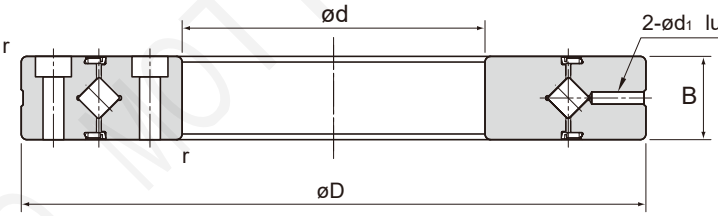
Model RU (Integrated Inner/Outer Ring Type)



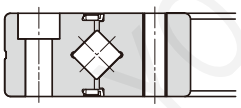
RU 42 to RU 85



RU 124G to RU 445G



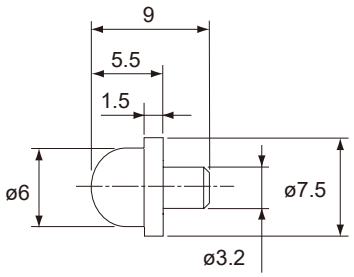
RU 124 to RU 445



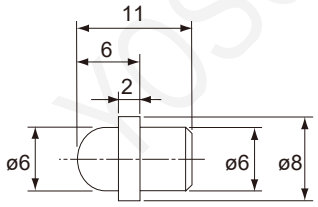
RU 124X to RU 445X

Shaft diameter	Model No.	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B	Lubrication hole d_1	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
20	RU 42	20	70	41.5	12	3.1	0.6	36	47	7.35	8.35	0.29
35	RU 66	35	95	66	15	3.1	0.6	59	74	17.5	22.3	0.62
55	RU 85	55	120	85	15	3.1	0.6	77	93	20.3	29.5	1
80	RU 124(G) RU 124X	80	165	124	22	3.1	1	114	134	33.1	50.9	2.6
90	RU 148(G) RU 148X	90	210	147.5	25	3.1	1.5	133	162	49.1	76.8	4.9
115	RU 178(G) RU 178X	115	240	178	28	3.1	1.5	161	195	80.3	135	6.8
160	RU 228(G) RU 228X	160	295	227.5	35	6	2	208	246	104	173	11.4
210	RU 297(G) RU 297X	210	380	297.3	40	6	2.5	272	320	156	281	21.3
350	RU 445(G) RU 445X	350	540	445.4	45	6	2.5	417	473	222	473	35.4

Note:Optional grease nipple available for model RU. (See figure below.)
To indicate that you want grease nipples, add "-N" to the end of the model number

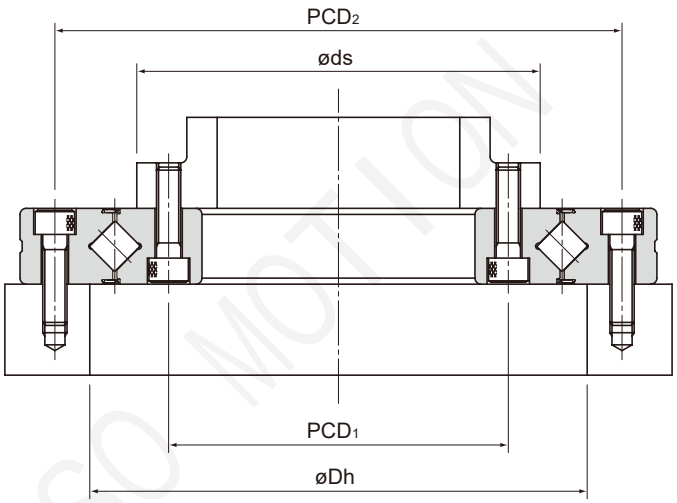


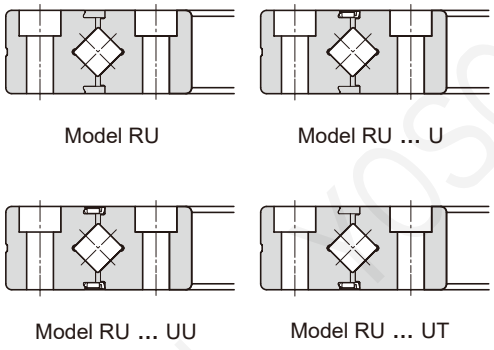
NP3.2 × 3.5



NP6 × 5

Model RU (Integrated Inner/Outer Ring Type)

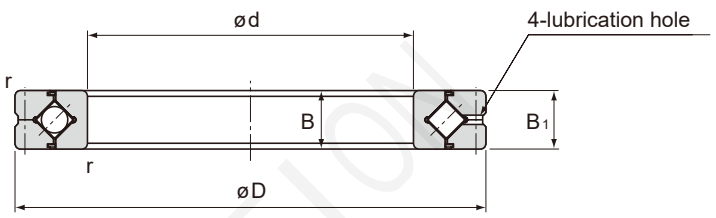


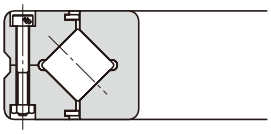


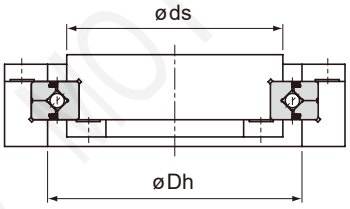
Unit: mm

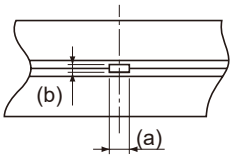
	Mounting hole related			
	Inner ring		Outer ring	
	PCD_1	Mounting hole	PCD_2	Mounting hole
	28	6-M3 through	57	6-ø3.4 drilled through,ø6.5 counterbore depth 3.3
	45	8-M4 through	83	8-ø4.5 drilled through,ø8 counterbore depth 4.4
	65	8-M5 through	105	8-ø5.5 drilled through,ø9.5 counterbore depth 5.4
	97	10-ø5.5 drilled through,ø9.5 counterbore depth 5.4 10-M5 through	148	10-ø5.5 drilled through,ø9.5 counterbore depth 5.4
	112	12-ø9 drilled through,ø14 counterbore depth 8.6 12-M8 through	187	12-ø9 drilled through,ø14counterbore depth 8.6
	139	12-ø9 drilled through,ø14 counterbore depth 8.6 12-M8 through	217	12-ø9 drilled through,ø14 counterbore depth 8.6
	184	12-ø11 drilled through,ø17.5 counterbore depth 10.8 12-M10 through	270	12-ø11 drilled through,ø17.5 counterbore depth 10.8
	240	16-ø14 drilled through,ø20 counterbore depth 13 16-M12 through	350	16-ø14 drilled through,ø20 counterbore depth 13
	385	24-ø14 drilled through,ø20 counterbore depth 13 24-M12 through	505	24-ø14 drilled through,ø20 counterbore depth 13

Model RB (Separable Outer Ring Type)

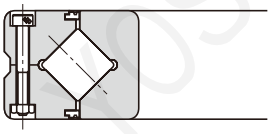



Model RB





Detail view of the lubrication hole

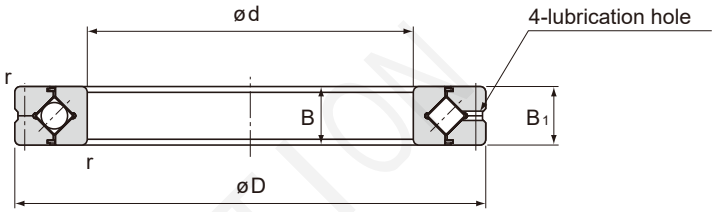

Model RB …UU

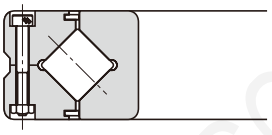
Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Lubrication hole					C	C₀	
		d	D	dp	B B₁	a	b	rmin	ds (max)	Dh (min)	kN	kN	kg
20	RB 2008	20	36	27	8	2	0.8	0.5	23.5	30.5	3.23	3.1	0.04
25	RB 2508	25	41	32	8	2	0.8	0.5	28.5	35.5	3.63	3.83	0.05
30	RB 3010	30	55	41.5	10	2.5	1	0.6	37	47	7.35	8.36	0.12
35	RB 3510	35	60	46.5	10	2.5	1	0.6	41	51.5	7.64	9.12	0.13
40	RB 4010	40	65	51.5	10	2.5	1	0.6	46.5	57.5	8.33	10.6	0.16
45	RB 4510	45	70	56.5	10	2.5	1	0.6	51	61.5	8.62	11.3	0.17
50	RB 5013	50	80	64	13	2.5	1.6	0.6	57	72	16.7	20.9	0.27
60	RB 6013	60	90	74	13	2.5	1.6	0.6	67	82	18	24.3	0.3
70	RB 7013	70	100	84	13	2.5	1.6	0.6	77	92	19.4	27.7	0.35
80	RB 8016	80	120	98	16	3	1.6	0.6	88	110	30.1	42.1	0.7
90	RB 9016	90	130	108	16	3	1.6	1	98	118	31.4	45.3	0.75
100	RB 10016	100	140	119.3	16	3.5	1.6	1	109	129	31.7	48.6	0.83
	RB 10020		150	123	20	3.5	1.6	1	113	133	33.1	50.9	1.45
110	RB 11012	110	135	121.8	12	2.5	1	0.6	117	128	12.5	24.1	0.4
	RB 11015		145	126.5	15	3.5	1.6	0.6	119	136	23.7	41.5	0.75
	RB 11020		160	133	20	3.5	1.6	1	120	143	34	54	1.56
120	RB 12016	120	150	134.2	16	3.5	1.6	0.6	127	141	24.2	43.2	0.72
	RB 12025		180	148.7	25	3.5	2	1.5	133	164	66.9	100	2.62
130	RB 13015	130	160	144.5	15	3.5	1.6	0.6	137	152	25	46.7	0.72
	RB 13025		190	158	25	3.5	2	1.5	143	174	69.5	107	2.82

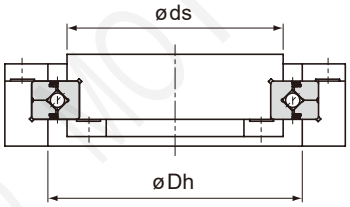
Notes: The model number of a type with seals attached is RB…UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values.

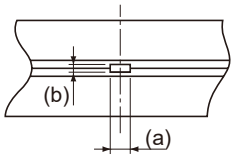
Model RB (Separable Outer Ring Type)



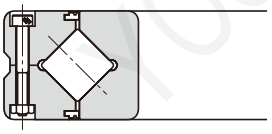


Model RB





Detail view of the lubrication hole



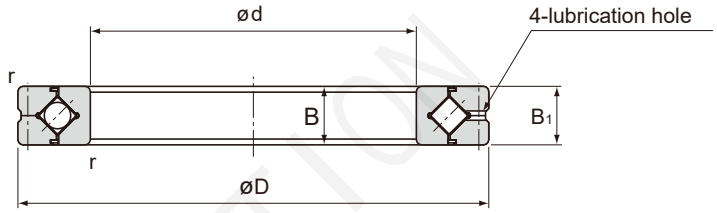
Model RB …UU

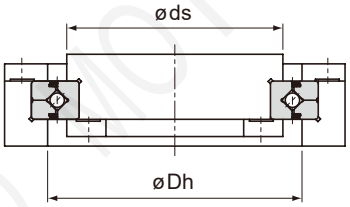
Unit: mm

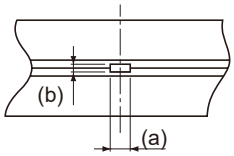
Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Lubrication hole a	Lubrication hole b	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
140	RB 14016	140	175	154.8	16	2.5	1.6	1	147	162	25.9	50.1	1
	RB 14025		200	168	25	3.5	2	1.5	154	185	74.8	121	2.96
150	RB 15013	150	180	164	13	2.5	1.6	0.6	157	172	27	53.5	0.68
	RB 15025		210	178	25	3.5	2	1.5	164	194	76.8	128	3.16
	RB 15030		230	188	30	4.5	3	1.5	169	211	100	156	5.3
160	RB 16025	160	220	188.6	25	3.5	2	1.5	173	204	81.7	135	3.14
170	RB 17020	170	220	191	20	3.5	1.6	1.5	184	198	29	62.1	2.21
180	RB 18025	180	240	210	25	3.5	2	1.5	195	225	84	143	3.44
190	RB 19025	190	240	211.9	25	3.5	1.6	1	202	222	41.7	82.9	2.99
200	RB 20025	200	260	230	25	3.5	2	2	215	245	84.2	157	4
	RB 20030		280	240	30	4.5	3	2	221	258	114	200	6.7
	RB 20035		295	247.7	35	5	3	2	225	270	151	252	9.6
220	RB 22025	220	280	250.1	25	3.5	2	2	235	265	92.3	171	4.1
240	RB 24025	240	300	269	25	3.5	2	2.5	256	281	68.3	145	4.5
250	RB 25025	250	310	277.5	25	3.5	2	2.5	265	290	69.3	150	5
	RB 25030		330	287.5	30	4.5	3	2.5	269	306	126	244	8.1
	RB 25040		355	300.7	40	6	3.5	2.5	275	326	195	348	14.8
300	RB 30025	300	360	328	25	3.5	2	2.5	315	340	76.3	178	5.9
	RB 30035		395	345	35	5	3	2.5	322	368	183	367	13.4
	RB 30040		405	351.6	40	6	3.5	2.5	326	377	212	409	17.2
350	RB 35020	350	400	373.4	20	3.5	1.6	2.5	363	383	54.1	143	3.9

Notes: The model number of a type with seals attached is RB…UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values

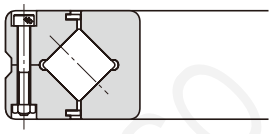
Model RB (Separable Outer Ring Type)



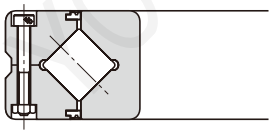




Detail view of the lubrication hole



Model RB



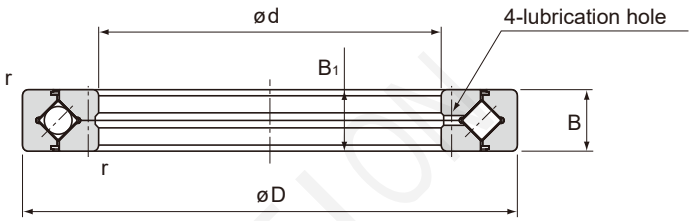
Model RB …UU

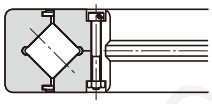
Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Lubrication hole a	Lubrication hole b	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
400	RB 40035	400	480	440.3	35	5	3	2.5	422	459	156	370	14.5
	RB 40040		510	453.4	40	6	3.5	2.5	428	479	241	531	23.5
450	RB 45025	450	500	474	25	3.5	1.6	1	464	484	61.7	182	6.6
500	RB 50025	500	550	524.2	25	3.5	1.6	1	514	534	65.5	201	7.3
	RB 50040		600	548.8	40	6	3	2.5	526	572	239	607	26
	RB 50050		625	561.6	50	6	3.5	2.5	536	587	267	653	41.7
600	RB 60040	600	700	650	40	6	3	3	627	673	264	721	29
700	RB 70045	700	815	753.5	45	6	3	3	731	777	281	836	46
800	RB 80070	800	950	868.1	70	6	4	4	836	900	468	1330	105
900	RB 90070	900	1050	969	70	6	4	4	937	1001	494	1490	120
1000	RB 1000110	1000	1250	1114	110	6	6	5	1057	1171	1220	3220	360
1250	RB 1250110	1250	1500	1365.8	110	6	6	5	1308	1423	1350	3970	440

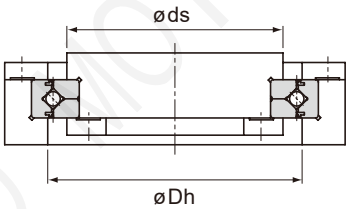
Notes: The model number of a type with seals attached is RB…UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values.

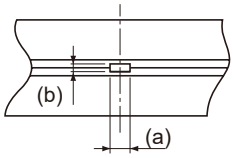
Model RE (Two-Piece Inner Ring Type)



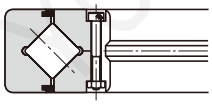


Model RE





Detail view of the lubrication hole



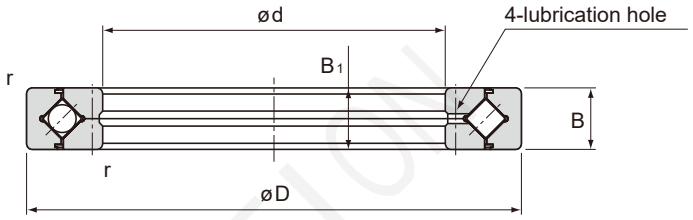
Model RE …UU

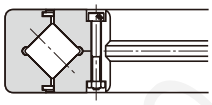
Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Lubrication hole							
		d	D	dp	B B_1	a	b	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
20	RE 2008	20	36	29	8	2	0.8	0.5	24.5	32.5	3.23	3.1	0.04
25	RE 2508	25	41	34	8	2	0.8	0.5	29.5	37.5	3.63	3.83	0.05
30	RE 3010	30	55	43.5	10	2.5	1	0.6	37.5	48.5	7.35	8.36	0.12
35	RE 3510	35	60	48.5	10	2.5	1	0.6	42.5	53.5	7.64	9.12	0.13
40	RE 4010	40	65	53.5	10	2.5	1	0.6	47.5	58.5	8.33	10.6	0.16
45	RE 4510	45	70	58.5	10	2.5	1	0.6	52.5	63.5	8.62	11.3	0.17
50	RE 5013	50	80	66	13	2.5	1.6	0.6	57.5	73	16.7	20.9	0.27
60	RE 6013	60	90	76	13	2.5	1.6	0.6	68	83	18	24.3	0.3
70	RE 7013	70	100	86	13	2.5	1.6	0.6	78	93	19.4	27.7	0.35
80	RE 8016	80	120	101.4	16	3	1.6	0.6	91	111	30.1	42.1	0.7
90	RE 9016	90	130	112	16	3	1.6	1	100	122	31.4	45.3	0.75
100	RE 10016	100	140	121.1	16	3	1.6	1	109	131	31.7	48.6	0.83
	RE 10020		150	127	20	3.5	1.6	1	115	137	33.1	50.9	1.45
110	RE 11012	110	135	123.3	12	2.5	1	0.6	117	128	12.5	24.1	0.4
	RE 11015		145	129	15	3	1.6	0.6	122	136	23.7	41.5	0.75
	RE 11020		160	137	20	3.5	1.6	1	125	147	34	54	1.56
120	RE 12016	120	150	136	16	3	1.6	0.6	127	143	24.2	43.2	0.72
	RE 12025		180	152	25	3.5	2	1.5	135	166	66.9	100	2.62
130	RE 13015	130	160	146	15	3	1.6	0.6	137	153	25	46.7	0.72
	RE 13025		190	162	25	3.5	2	1.5	145	176	69.5	107	2.82

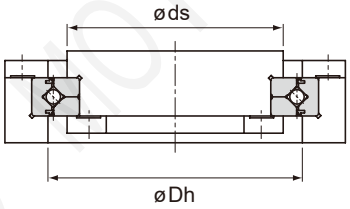
Notes: The model number of a type with seals attached is RE…UU.
If a certain level of accuracy is required, this model is used for outer ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values

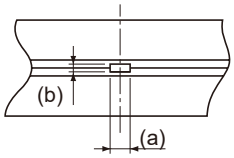
Model RE (Two-Piece Inner Ring Type)



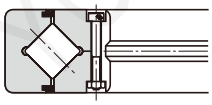


Model RE





Detail view of the lubrication hole



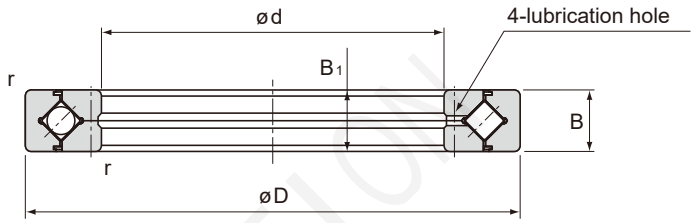
Model RE …UU

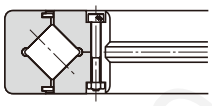
Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Lubrication hole							
		d	D	dp	B B_1	a	b	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
140	RE 14016	140	175	156.8	16	3	1.6	1	151	167	25.9	50.1	1
	RE 14025		200	172	25	3.5	2	1.5	154	186	74.8	121	2.96
150	RE 15013		180	166	13	2.5	1.6	0.6	158	173	27	53.5	0.68
	RE 15025	150	210	182	25	3.5	2	1.5	164	196	76.8	128	3.16
	RE 15030		230	192	30	4.5	3	1.5	173	210	100	156	5.3
160	RE 16025	160	220	192	25	3.5	2	1.5	174	206	81.7	135	3.14
170	RE 17020	170	220	196.1	20	3.5	1.6	1.5	187	204	29	62.1	2.21
180	RE 18025	180	240	210	25	3.5	2	1.5	195	225	84	143	3.44
190	RE 19025	190	240	219	25	3.5	1.6	1	207	229	41.7	82.9	2.99
200	RE 20025		260	230	25	3.5	2	2	215	245	84.2	157	4
	RE 20030	200	280	240	30	4.5	3	2	221	258	114	200	6.7
	RE 20035		295	247.7	35	5	3	2	225	270	151	252	9.6
220	RE 22025	220	280	250.1	25	3.5	2	2	235	265	92.3	171	4.1
240	RE 24025	240	300	272.5	25	3.5	2	2.5	258	284	68.3	145	4.5
250	RE 25025	250	310	280.9	25	3.5	2	2.5	268	293	69.3	150	5
	RE 25030		330	287.5	30	4.5	3	2.5	269	306	126	244	8.1
	RE 25040		355	300.7	40	6	3.5	2.5	275	326	195	348	14.8
300	RE 30025	300	360	332	25	3.5	2	2.5	319	344	75.5	178	5.9
	RE 30035		395	345	35	5	3	2.5	322	368	183	367	13.4
	RE 30040		405	351.6	40	6	3.5	2.5	326	377	212	409	17.2
350	RE 35020	350	400	376.6	20	3.5	1.6	2.5	365	386	54.1	143	3.9

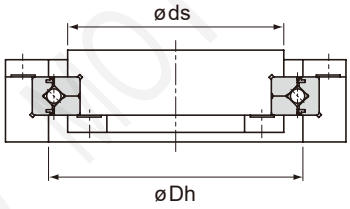
Notes: The model number of a type with seals attached is RE…UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values.

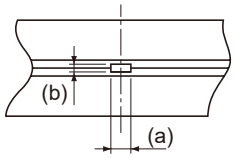
Model RE (Two-Piece Inner Ring Type)



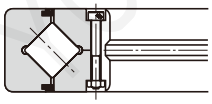


Model RE





Detail view of the lubrication hole



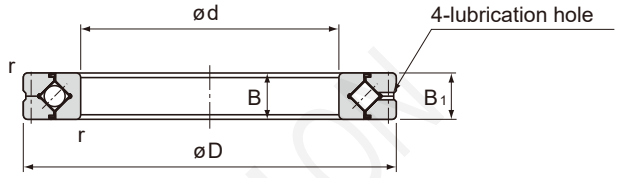
Model RE …UU

Unit: mm

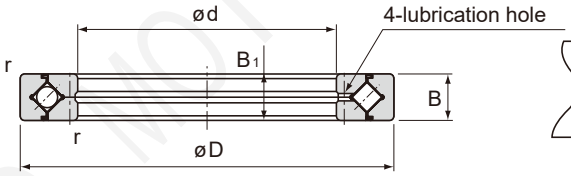
Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Lubrication hole a	Lubrication hole b	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
400	RE 40035	400	480	440.3	35	5	3	2.5	422	459	156	370	14.5
	RE 40040		510	453.4	40	6	3.5	2.5	428	479	241	531	23.5
450	RE 45025	450	500	476.6	25	3.5	1.6	1	465	486	61.7	182	6.6
500	RE 50025	500	550	526.6	25	3.5	1.6	1	515	536	65.5	201	7.3
	RE 50040		600	548.8	40	6	3	2.5	526	572	239	607	26
	RE 50050		625	561.6	50	6	3.5	2.5	536	587	267	653	41.7
600	RE 60040	600	700	650	40	6	3	3	627	673	264	721	29

Notes: The model number of a type with seals attached is RE…UU.
If a certain level of accuracy is required, this model is used for outer ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values

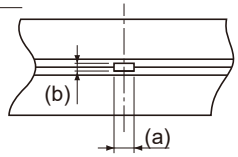
USP-Grade Models RB and RE



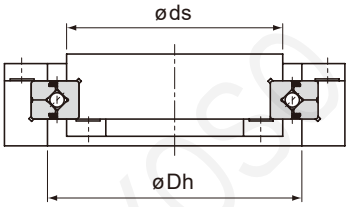
RB-USP (RB … UU-USP)



RE-USP (RE … UU-USP)



Detail view of the lubrication hole

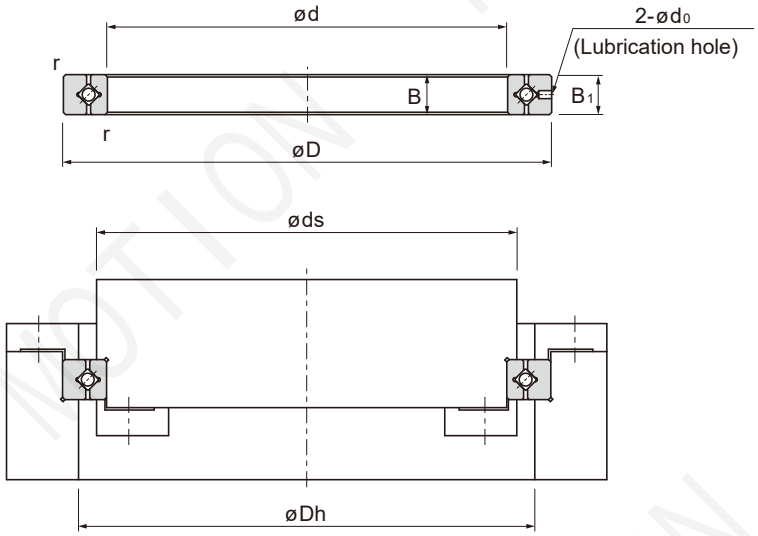


Unit: mm

Model No.	Main dimensions								Shoulder height		Basic load rating (radial)		Mass
	Inner diameter	Outer diameter	Roller pitch circle diameter		Width	Lubrication hole							
	d	D	RB	RE	B B1	a	b	rmin	ds (max)	Dh (min)	C kN	C0 kN	kg
RB 10020USP RE 10020USP	100	150	123	127	20	3.5	1.6	1	113	133	33.1	50.9	1.45
RB 12025USP RE 12025USP	120	180	148.7	152	25	3.5	2	1.5	133	164	66.9	100	2.62
RB 15025USP RE 15025USP	150	210	178	182	25				164	194	76.8	128	3.16
RB 20030USP RE 20030USP	200	280	240	240	30	4.5	3	2	221	258	114	200	6.7
RB 25030USP RE 25030USP	250	330	287.5	287.5	30			2.5	269	306	126	244	8.1
RB 30035USP RE 30035USP	300	395	345	345	35	5	3		322	368	183	367	13.4
RB 40040USP RE 40040USP	400	510	453.4	453.4	40	6	3.5		428	479	241	531	23.5
RB 50040USP RE 50040USP	500	600	548.8	548.8	40	6	3		526	572	239	607	26
RB 60040USP RE 60040USP	600	700	650	650	40			3	627	673	264	721	29

Notes: The model number of a type with seals attached is RB…UU-USP or RE…UU-USP.
If a certain level of rotational accuracy is required for the inner ring, select Model RB; if a certain level of rotational ac- curacy is required for the outer ring, select Model RE.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values.

Model RAU (Small-Diameter, 5 mm Thin Type)

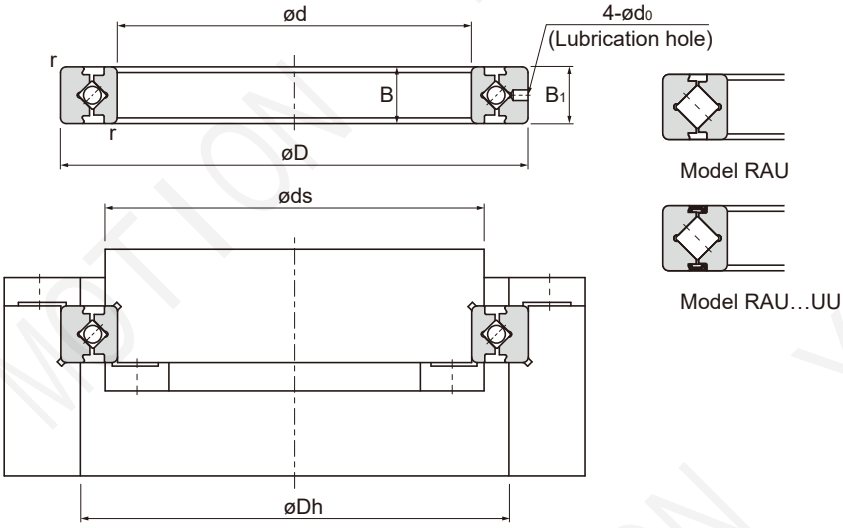


Unit: mm

Shaft diameter	Model No.	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Lubrication hole d0	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
10	RAU 1005	10	21	14.7	5	1	0.15	12.5	17	1.12	0.809	9
15	RAU 1505	15	26	19.7	5	1	0.15	17.5	22	1.32	1.1	12
20	RAU 2005	20	31	24.7	5	1	0.15	22.5	27	1.49	1.4	15
30	RAU 3005	30	41	34.7	5	1	0.15	32.5	37	1.89	2.14	21
40	RAU 4005	40	51	44.7	5	1	0.15	42.5	47	2.14	2.74	27
50	RAU 5005	50	61	54.7	5	1	0.15	52.5	57	2.43	3.49	32
60	RAU 6005	60	71	64.7	5	1	0.15	62.5	67	2.63	4.09	38
70	RAU 7005	70	81	74.7	5	1	0.15	72.5	77	2.81	4.68	44
80	RAU 8005	80	91	84.7	5	1	0.15	82.5	87	3.05	5.43	50
90	RAU 9005	90	101	94.7	5	1	0.15	92.5	97	3.19	6.03	56
100	RAU 10005	100	111	104.7	5	1	0.15	102.5	107	3.37	6.63	61

Notes: Precautions for the Model RAU (Small-Diameter, 5 mm Thin Type)
Seals are not supported. Only available with C0 radial clearance. Only available with normal grade accuracy (0).

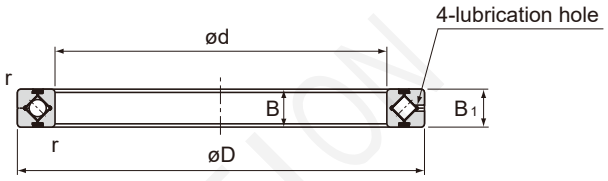
Model RAU (Model RA Interchangeable Type)

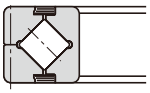


Unit: mm

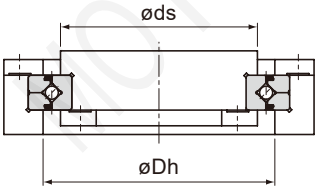
Shaft diameter	Model No.	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Lubrication hole d0	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
50	RAU 5008	50	66	57	8	1.5	0.5	53.5	60.5	5.10	7.19	0.08
60	RAU 6008	60	76	67	8	1.5	0.5	63.5	70.5	5.68	8.68	0.09
70	RAU 7008	70	86	77	8	1.5	0.5	73.5	80.5	5.98	9.80	0.1
80	RAU 8008	80	96	87	8	1.5	0.5	83.5	90.5	6.37	11.3	0.11
90	RAU 9008	90	106	97	8	1.5	0.5	93.5	100.5	6.76	12.4	0.12
100	RAU 10008	100	116	107	8	1.5	0.5	103.5	110.5	7.15	13.9	0.14
110	RAU 11008	110	126	117	8	1.5	0.5	113.5	120.5	7.45	15	0.15
120	RAU 12008	120	136	127	8	1.5	0.5	123.5	130.5	7.84	16.5	0.17
130	RAU 13008	130	146	137	8	1.5	0.5	133.5	140.5	7.94	17.6	0.18
140	RAU 14008	140	156	147	8	1.5	0.5	143.5	150.5	8.33	19.1	0.19
150	RAU 15008	150	166	157	8	1.5	0.5	153.5	160.5	8.82	20.6	0.2
160	RAU 16013	160	186	172	13	2	0.8	165	179	23.3	44.9	0.59
170	RAU 17013	170	196	182	13	2	0.8	175	189	23.5	46.5	0.64
180	RAU 18013	180	206	192	13	2	0.8	185	199	24.5	49.8	0.68
190	RAU 19013	190	261	202	13	2	0.8	195	209	24.9	51.5	0.69
200	RAU 20013	200	226	212	13	2	0.8	205	219	25.8	54.7	0.71

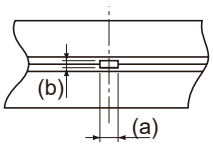
Model RA (Separable Outer Ring Type)



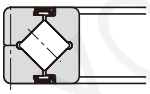


Model RA





Detail view of the lubrication hole



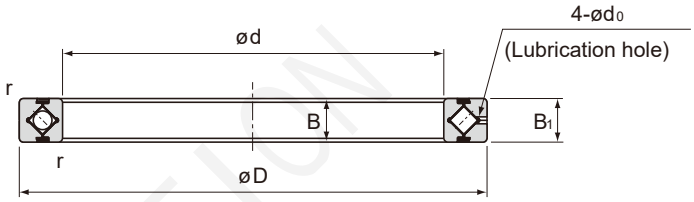
Model RA…UU

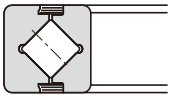
Unit: mm

Shaft diameter	Model No.	Main dimensions							Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Lubrication hole							
		d	D	dp	B B_1	a	b	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
50	RA5008	50	66	57	8	2	0.8	0.5	53.5	60.5	5.10	7.19	0.08
60	RA 6008	60	76	67	8	2	0.8	0.5	63.5	70.5	5.68	8.68	0.09
70	RA7008	70	86	77	8	2	0.8	0.5	73.5	80.5	5.98	9.80	0.1
80	RA8008	80	96	87	8	2	0.8	0.5	83.5	90.5	6.37	11.3	0.11
90	RA9008	90	106	97	8	2	0.8	0.5	93.5	100.5	6.76	12.4	0.12
100	RA 10008	100	116	107	8	2	0.8	0.5	103.5	110.5	7.15	13.9	0.14
110	RA 11008	110	126	117	8	2	0.8	0.5	113.5	120.5	7.45	15	0.15
120	RA 12008	120	136	127	8	2	0.8	0.5	123.5	130.5	7.84	16.5	0.17
130	RA 13008	130	146	137	8	2	0.8	0.5	133.5	140.5	7.94	17.6	0.18
140	RA 14008	140	156	147	8	2	0.8	0.5	143.5	150.5	8.33	19.1	0.19
150	RA 15008	150	166	157	8	2	0.8	0.5	153.5	160.5	8.82	20.6	0.2
160	RA 16013	160	186	172	13	2.5	1.6	0.8	165	179	23.3	44.9	0.59
170	RA 17013	170	196	182	13	2.5	1.6	0.8	175	189	23.5	46.5	0.64
180	RA 18013	180	206	192	13	2.5	1.6	0.8	185	199	24.5	49.8	0.68
190	RA 19013	190	216	202	13	2.5	1.6	0.8	195	209	24.9	51.5	0.69
200	RA 20013	200	226	212	13	2.5	1.6	0.8	205	219	25.8	54.7	0.71

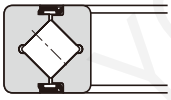
Notes: The model number of a type with seals attached is RA…UU.
If a certain level of accuracy is required, this model is used for inner ring rotation.
(a) and (b) dimensions of the lubrication hole in the detailed diagram are reference values.

Model RA-C (Single-Split Type)

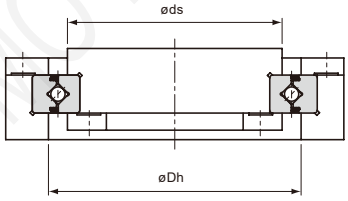




Model RA…C



Model RA…CUU



Unit: mm

Shaft diameter	Model No.	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter d	Outer diameter D	Roller pitch circle diameter dp	Width B B_1	Lubrication hole d0	r_{min}	ds (max)	Dh (min)	C kN	C_0 kN	kg
50	RA5008C	50	66	57	8	1.5	0.5	53.5	60.5	5.1	7.19	0.08
60	RA6008C	60	76	67	8	1.5	0.5	63.5	70.5	5.68	8.68	0.09
70	RA7008C	70	86	77	8	1.5	0.5	73.5	80.5	5.98	9.8	0.1
80	RA 8008C	80	96	87	8	1.5	0.5	83.5	90.5	6.37	11.3	0.11
90	RA 9008C	90	106	97	8	1.5	0.5	93.5	100.5	6.76	12.4	0.12
100	RA 10008C	100	116	107	8	1.5	0.5	103.5	110.5	7.15	13.9	0.14
110	RA 11008C	110	126	117	8	1.5	0.5	113.5	120.5	7.45	15	0.15
120	RA 12008C	120	136	127	8	1.5	0.5	123.5	130.5	7.84	16.5	0.17
130	RA 13008C	130	146	137	8	1.5	0.5	133.5	140.5	7.94	17.6	0.18
140	RA 14008C	140	156	147	8	1.5	0.5	143.5	150.5	8.33	19.1	0.19
150	RA 15008C	150	166	157	8	1.5	0.5	153.5	160.5	8.82	20.6	0.2
160	RA 16013C	160	186	172	13	2	0.8	165	179	23.3	44.9	0.59
170	RA 17013C	170	196	182	13	2	0.8	175	189	23.5	46.5	0.64
180	RA 18013C	180	206	192	13	2	0.8	185	199	24.5	49.8	0.68
190	RA 19013C	190	216	202	13	2	0.8	195	209	24.9	51.5	0.69
200	RA 20013C	200	226	212	13	2	0.8	205	219	25.8	54.7	0.71

MEMO

Model Number Coding (CRB Series)

CRBD 080 22 A WW C8 P5

Model code:
CRBA: Split outer ring
CRBB: Split inner ring
CRBC: High rigidity
CRBD: Split outer ring with mounting holes
CRBE: High rigidity with mounting holes
CRBX: Customized

Bore diameter:
EX: 080: Diameter 80mm
100: Diameter 100mm

Width:
EX: 22: Width 22mm

Mounting Holes:
Blank: Without mounting holes
A: With mounting screw holes
B: With same direction counter-bored holes
C: With opposite direction counter-bored holes

Seal symbol:
WW: Sealed type (seals on both sides)
NN : Open type (without seals)
*Both types have oil holes for lubrication

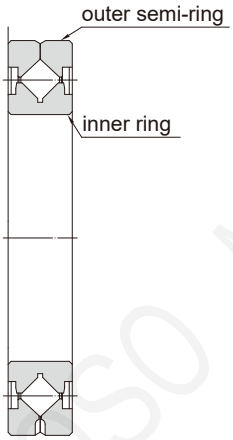
Axial internal clearance:
C1: Positive clearance with less friction force
C8: Negative clearance without backlash, which will result in an increase of friction force during unloading conditions

Accuracy class:
P5
P4
P2
PD5
PD4
PD2

Types of Crossed Roller Bearing

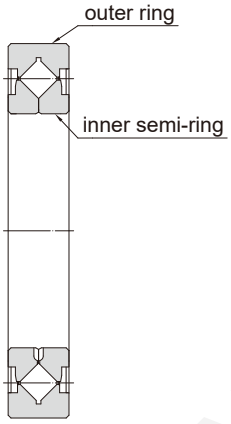
Model CRBA (Split Outer Ring Type)

Consists of an inner ring and two outer semi-rings, which is suitable for inner ring rotation.



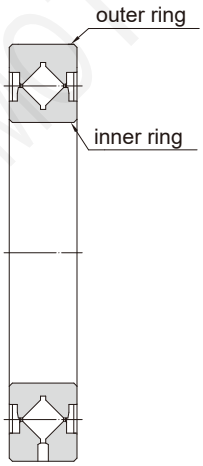
Model CRBB (Split Inner Ring Type)

Consists of two inner semi-rings and an outer ring, which is suitable for outer ring rotation.



Model CRBC (High Rigidity Type)

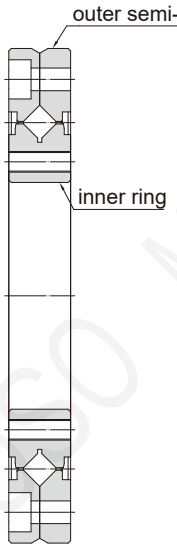
Consists of an inner ring and an outer ring, which is suitable for both inner and outer ring rotation.



Types of Crossed Roller Bearing

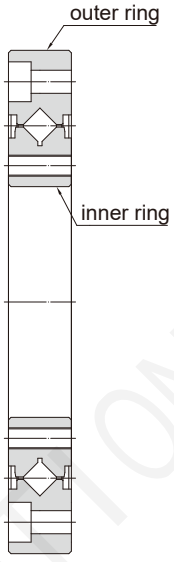
Model CRBD (Split Outer Ring with Mounting Holes)

Consists of an inner ring and two outer semi-rings with mounting holes. The mounting holes enable the bearing to be fixed and it is suitable for inner ring rotation .



Model CRBE (High Rigidity with Mounting Holes)

Consists of an inner ring and an outer ring with mounting holes. The mounting holes enable the bearing to be fixed and it is suitable for both inner and outer ring rotation .

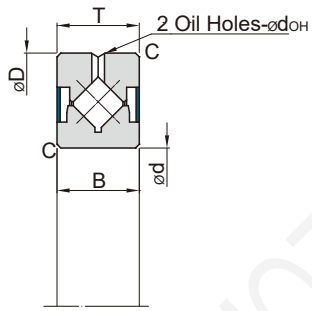


Model CRBX (Customized Type)

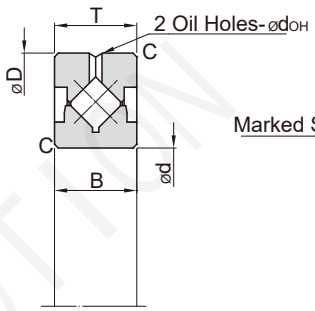
The bearing could be designed and modified in accordance with the customers requirements to achieve a more innovative structure. The surface treatment could also be customized to meet the customers' environmental requirements.

Model CRBA (Split Outer Ring Type)

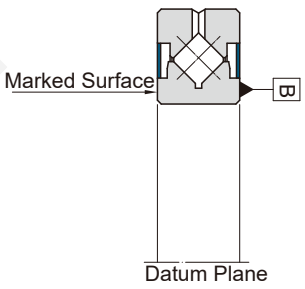
The bore diameter is 20~400 mm, sealed and open type.



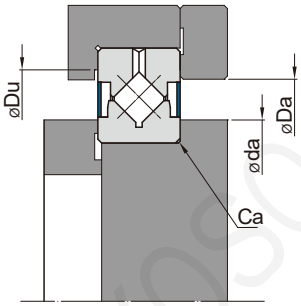
Sealed(WW)



Open(NN)



Datum Plane

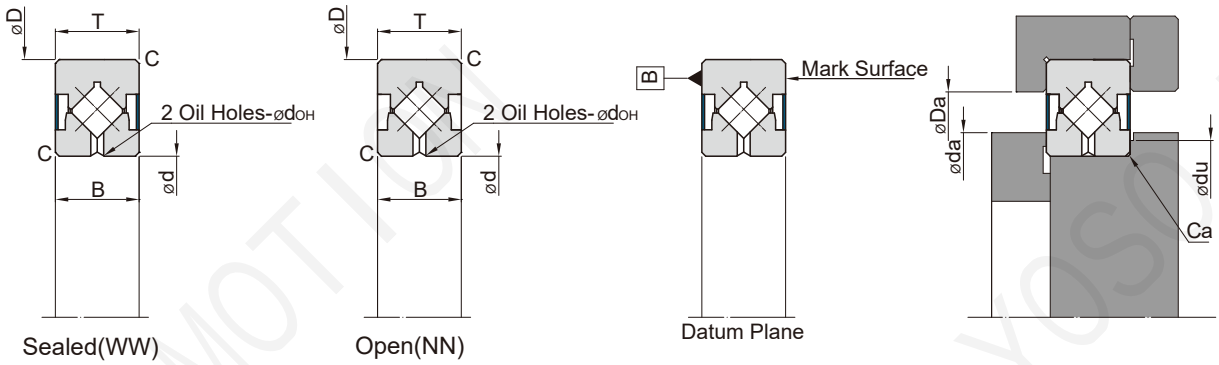


Dimensions (mm)			Bearing No.	Oil holes, dOH (mm)	Basic load Ratings (kN)		Mounting dimensions (mm)			
Inner diameter d	Outeer diameter D	Width B,T			Dynamic load, C	Static load, C0	da	Da	Du	Ca (max)
20	36	8	CRBA 02008	1.5	4.1	4	22.9	30.8	32	0.6
25	41	8	CRBA 02508	1.5	4.5	4.8	27.9	35.8	37	0.6
30	55	10	CRBA 03010	1.5	8.2	9.2	35	46.8	47.5	0.6
35	60	10	CRBA 03510	1.5	8.5	10	40	51.8	52.5	0.6
40	65	10	CRBA 04010	1.5	9.3	11.6	45	56.8	57.5	0.6
45	70	10	CRBA 04510	1.5	9.6	12.5	50	61.8	62.5	0.6
50	80	13	CRBA 05013	2	18.9	23.4	57.2	72	74.2	0.6
60	90	13	CRBA 06013	2	20.3	27	67	82	84.2	0.6
70	100	13	CRBA 07013	2	21.7	30.6	77	92	94.2	0.6
80	110	13	CRBA 08013	2	22.8	34.2	87	102	104.2	0.6
80	120	16	CRBA 08016	2.5	30.2	44.8	92	109	111.2	0.6
90	130	16	CRBA 09016	2.5	30.8	47.4	104	120	121.2	1
90	140	20	CRBA 09020	2.5	39.7	60.2	104	120	126.8	1
100	140	16	CRBA 10016	2.5	32.5	52.3	112	129	131.2	1
100	150	20	CRBA 10020	2.5	40.4	63.6	117	132	137.8	1
110	160	20	CRBA 11020	2.5	42.7	70.2	126	143	147.8	1
120	150	16	CRBA 12016	2.5	28.1	50.3	126	143	144	1
120	170	20	CRBA 12020	2.5	44.9	76.9	136	153	157.8	1.5
120	180	25	CRBA 12025	2.5	66.3	109	138	158	166	1.5
130	190	25	CRBA 13025	2.5	67.8	114.8	148	168	176	1.5
140	200	25	CRBA 14025	2.5	69.5	120.6	161	178	186	1.5
150	210	25	CRBA 15025	2.5	73.1	131.9	168	188	196	1.5
150	230	30	CRBA 15030	3	114.3	187.3	181	198	211.5	1.5
160	220	25	CRBA 16025	2.5	74.5	137.7	181	198	206	1.5
170	220	20	CRBA 17020	2.5	52.3	103.6	183	203	207.8	1.5
180	240	25	CRBA 18025	2.5	79.6	154.8	198	218	226	1.5
190	240	25	CRBA 19025	2.5	54.5	113.6	203	223	228	1
200	260	25	CRBA 20025	2.5	82.3	166.4	218	238	246	2
200	280	30	CRBA 20030	3	122.9	242	231	248	261.5	2
200	295	35	CRBA 20035	3	155.9	277.4	238	258	272	2
220	280	25	CRBA 22025	2.5	86.3	183.5	237	259	266	2
240	300	25	CRBA 24025	2.5	90.5	200.6	257	279	286	2
250	310	25	CRBA 25025	2.5	91.6	206.4	267	289	296	2
250	330	30	CRBA 25030	3	142	286.2	280	299	311.5	2
250	355	40	CRBA 25040	4	207	391.8	289	311	329.8	2
300	360	25	CRBA 30025	2.5	100.6	246.5	317	339	346	2.5
300	395	35	CRBA 30035	3	191.6	407.8	337	359	372	2.5
300	405	40	CRBA 30040	4	227	465.8	339	361	377.3	2.5
400	480	35	CRBA 40035	3	219.4	532.9	426	447	464.5	2.5

Notes: 1. The basic load ratings are based on ISO76 / ISO281.
2. For specific dimensional requirements, please contact YOSO.
3. The inner ring datum plane B is for customer use, specification and product series number are marked on the surface.

Model CRBB (Split Inner Ring Type)

The bore diameter is 30~400 mm, sealed and open type.

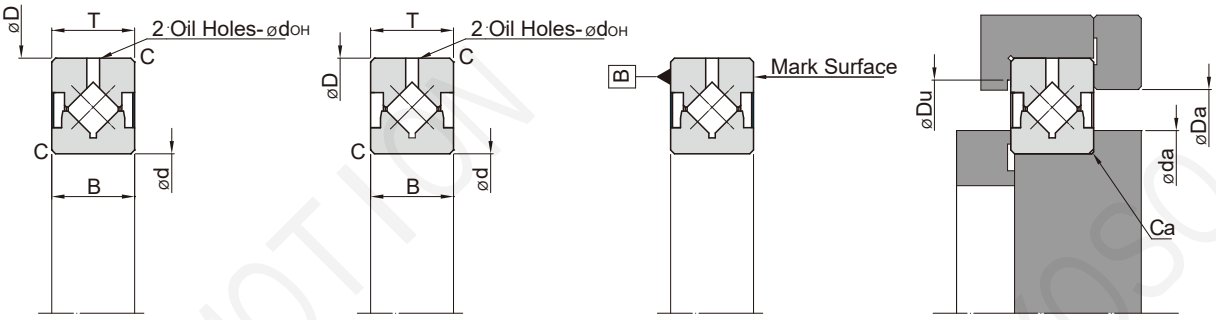


Dimensions (mm)			Bearing No.	Oil holes, d_{OH} (mm)	Basic load Ratings (kN)		Mounting dimensions (mm)			
Inner diameter d	Outeer diameter D	Width B,T			Dynamic load, C	Static load, C_0	d_a	d_u	D_a	C_a (max)
30	55	10	CRBB 03010	1.5	8.2	9.2	35	34.4	46.8	0.6
35	60	10	CRBB 03510	1.5	8.5	10	40	39.4	51.8	0.6
40	65	10	CRBB 04010	1.5	9.3	11.6	45	44.4	56.8	0.6
45	70	10	CRBB 04510	1.5	9.6	12.5	50	49.4	61.8	0.6
50	80	13	CRBB 05013	2	18.9	23.4	57.2	55.6	72	0.6
60	90	13	CRBB 06013	2	20.3	27	67	65.6	82	0.6
70	100	13	CRBB 07013	2	21.7	30.6	77	75.6	92	0.6
80	110	13	CRBB 08013	2	22.8	34.2	87	85.6	102	0.6
80	120	16	CRBB 08016	2.5	30.2	44.8	92	89	109	0.6
90	130	16	CRBB 09016	2.5	30.8	47.4	104	99	120	1
90	140	20	CRBB 09020	2.5	39.7	60.2	104	101	120	1
100	140	16	CRBB 10016	2.5	32.5	52.3	112	109	129	1
100	150	20	CRBB 10020	2.5	40.4	63.6	117	111	132	1
110	160	20	CRBB 11020	2.5	42.7	70.2	126	121	143	1
120	150	16	CRBB 12016	2.5	28.1	50.3	126	126	143	1
120	170	20	CRBB 12020	2.5	44.9	76.9	136	131	153	1.5
120	180	25	CRBB 12025	2.5	66.3	109	138	134	158	1.5
130	190	25	CRBB 13025	2.5	67.8	114.8	148	144	168	1.5
140	200	25	CRBB 14025	2.5	69.5	120.6	161	154	178	1.5
150	210	25	CRBB 15025	2.5	73.1	131.9	168	164	188	1.5
150	230	30	CRBB 15030	3	114.3	187.3	181	168.5	198	1.5
160	220	25	CRBB 16025	2.5	74.5	137.7	181	174	198	1.5
170	220	20	CRBB 17020	2.5	52.3	103.6	183	181	203	1.5
180	240	25	CRBB 18025	2.5	79.6	154.8	198	194	218	1.5
190	240	25	CRBB 19025	2.5	54.5	113.6	203	203	223	1
200	260	25	CRBB 20025	2.5	82.3	166.4	218	214	238	2
200	280	30	CRBB 20030	3	122.9	242	231	218.5	248	2
200	295	35	CRBB 20035	3	155.9	277.4	238	222.5	258	2
220	280	25	CRBB 22025	2.5	86.3	183.5	237	234	259	2
240	300	25	CRBB 24025	2.5	90.5	200.6	257	254	279	2
250	310	25	CRBB 25025	2.5	91.6	206.4	267	264	289	2
250	330	30	CRBB 25030	3	142	286.2	280	268.5	299	2
250	355	40	CRBB25040	4	207	391.8	289	275	311	2
300	360	25	CRBB 30025	2.5	100.6	246.5	317	314	339	2.5
300	395	35	CRBB 30035	3	191.6	407.8	337	322.5	359	2.5
300	405	40	CRBB 30040	4	227	465.8	339	325	361	2.5
400	480	35	CRBB40035	3	219.4	523.9	426	415.5	447	2.5

Notes: 1. The basic load ratings are based on ISO76 / ISO281.
2. For specific dimensional requirements, please contact YOSO.
3. The outer ring datum plane B is for customer use, specification and product series number are marked on the surface.

Model CRBC (High Rigidity Type)

The bore diameter is 20~400 mm, sealed and open type.



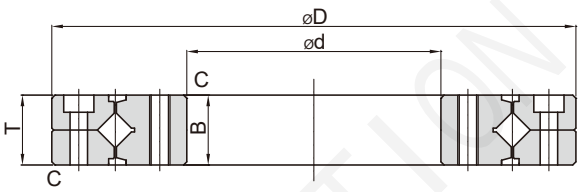
Sealed(WW) Open(NN) Datum Plane

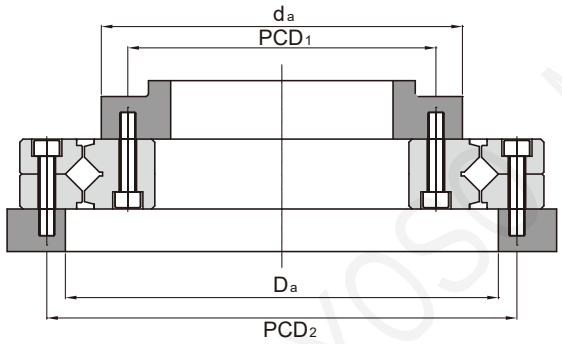
Dimensions (mm)			Bearing No.	Oil holes, d_{OH} (mm)	Basic load Ratings (kN)		Mounting dimensions (mm)			
Inner diameter d	Outeer diameter D	Width B,T			Dynamic load, C	Static load, C_0	d_a	D_a	D_u	C_a (max)
20	36	8	CRBC 02008	1.5	4.1	4	22.9	30.8	32	0.6
25	41	8	CRBC 02508	1.5	4.5	4.8	27.9	35.8	37	0.6
30	55	10	CRBC03010	1.5	8.2	9.2	35	46.8	47.5	0.6
35	60	10	CRBC03510	1.5	8.5	10	40	51.8	52.5	0.6
40	65	10	CRBC04010	1.5	9.3	11.6	45	56.8	57.5	0.6
45	70	10	CRBC04510	1.5	9.6	12.5	50	61.8	62.5	0.6
50	80	13	CRBC05013	2	18.9	23.4	57.2	72	74.2	0.6
60	90	13	CRBC06013	2	20.3	27	67	82	84.2	0.6
70	100	13	CRBC 07013	2	21.7	30.6	77	92	94.2	0.6
80	110	13	CRBC 08013	2	22.8	34.2	87	102	104.2	0.6
80	120	16	CRBC 08016	2.5	30.2	44.8	92	109	111.2	0.6
90	130	16	CRBC 09016	2.5	30.8	47.4	104	120	121.2	1
90	140	20	CRBC 09020	2.5	39.7	60.2	104	120	126.8	1
100	140	16	CRBC 10016	2.5	32.5	52.3	112	129	131.2	1
100	150	20	CRBC 10020	2.5	40.4	63.6	117	132	137.8	1
110	160	20	CRBC 11020	2.5	42.7	70.2	126	143	147.8	1
120	150	16	CRBC 12016	2.5	28.1	50.3	126	143	144	1
120	170	20	CRBC 12020	2.5	44.9	76.9	136	153	157.8	1.5
120	180	25	CRBC 12025	2.5	66.3	109	138	158	166	1.5
130	190	25	CRBC 13025	2.5	67.8	114.8	148	168	176	1.5
140	200	25	CRBC 14025	2.5	69.5	120.6	161	178	186	1.5
150	210	25	CRBC 15025	2.5	73.1	131.9	168	188	196	1.5
160	220	25	CRBC 16025	2.5	74.5	137.7	181	198	206	1.5
170	220	20	CRBC 17020	2.5	52.3	103.6	183	203	207.8	1.5
180	240	25	CRBC 18025	2.5	79.6	154.8	198	218	226	1.5
190	240	25	CRBC 19025	2.5	54.5	113.6	203	223	228	1.5
200	260	25	CRBC 20025	2.5	82.3	166.4	218	238	246	2
400	480	35	CRBC 40035	3	219.4	523.9	426	447	464.5	2.5

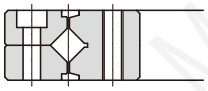
Notes: 1. The basic load ratings are based on ISO76 / ISO281.
2. For specific dimensional requirements, please contact YOSO.
3. The inner ring datum plane B is for customer use, specification and product series number are marked on the surface.

Model CRBD (Split Outer Ring with Mounting Holes)

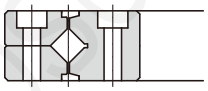
The bore diameter is 30~400 mm, sealed and open type.



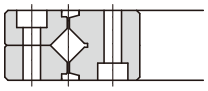




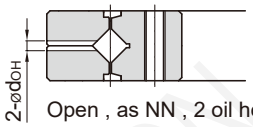
A type : Thread holes on inner ring ,sink holes on outer ring.
CRBD 02012 A ~ CRBD 16035 A



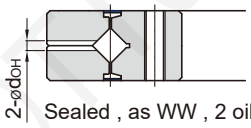
B type : Sink holes on inner ring and outer ring , same dire ction.
CRBD 08022 B ~ CRBD 16035 B



C type : Sink holes on inner ring and outer ring , reverse direction.
CRBD 08022 C ~ CRBD 16035 C



Open , as NN , 2 oil holes for lubrication.

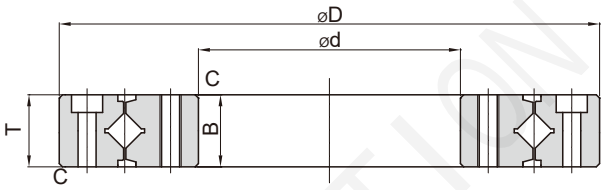


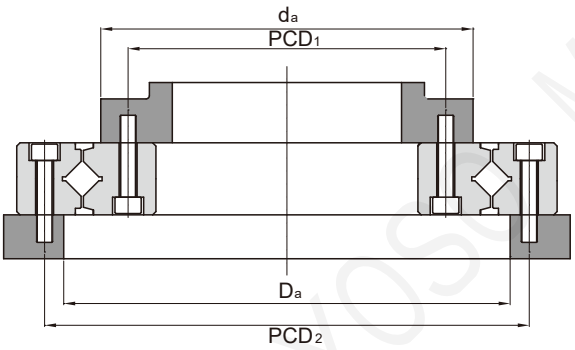
Sealed , as WW , 2 oil holes for lubrication.

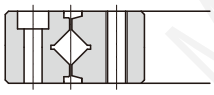
Dimensions (mm)					Bearing No.	Dimensions of mounting holes (mm)				Basic load Ratings (kN)		Mounting dimensions (mm)	
						Inner rings		Outer rings					
Inner dia. (d)	Outeer dia. (D)	Width (B,T)	Chamfer (C_{min})	Oil hoies (d_{OH})		PCD_1	Mounting holes	PCD_2	Mounting holes	Dynamic load, C	Static load, C_0	d_a	D_a
20	70	12	0.6	3	CRBD 02012A	28	6-M3 through	57	6-ø3.4 through ø6.5 counter bore depth 3.3	8.26	9.16	35	47
35	95	15	0.6	3	CRBD 03515A	45	8-M4 through	83	8-ø4.5 through ø8 counter bore depth 4.4	18.9	23.4	57	73
55	120	15	0.6	3	CRBD 05515A	65	8-M5 through	105	8-ø5.5 through ø9.5 counter bore depth 5.4	21.7	30.6	77	92
80	165	22	1	3	CRBD 08022A CRBD 08022B CRBD 08022 C	97	10-M5 through 10-ø5.5 through ø9.5 counter bore depth 5.4	148	10-ø5.5 through ø9.5 counter bore depth 5.4	40.4	63.6	117	132
90	210	25	1.5	3	CRBD 09025A CRBD 09025 B CRBD 09025C	112	12-M8 through 12-ø9 through ø14 counter bore depth 8.6	187	12-ø9 through ø14 counter bore depth 8.6	46	80.2	139	157
115	240	28	1.5	3	CRBD 11528 A CRBD 11528B CRBD 11528C	139	12-M8 through 12-ø9 through ø14 counter bore depth 8.6	217	12-ø9 through ø14 counter bore depth 8.6	73.1	131.9	168	188
160	295	35	2	6	CRBD 16035 A CRBD 16035 B CRBD 16035C	184	12-M10 through 12-ø11 through ø17.5 counter bore depth 10.8	270	12-ø11 through ø17.5 counter bore depth 10.8	102	192.3	218	238

Model CRBE (High Rigidity with Mounting Holes)

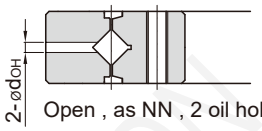
The bore diameter is 20~210 mm, sealed and open type.



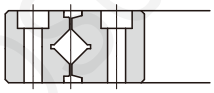




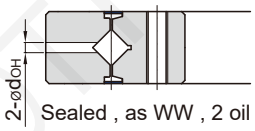
A type : Thread holes on inner ring , sink holes on outer ring.
CRBE 02012 A ~ CRBE 21040 A



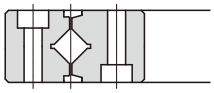
Open , as NN , 2 oil holes for lubrication.



B type : Sink holes on inner ring and outer ring , same direction.
CRBE 08022 B ~ CRBE 21040 B



Sealed , as WW , 2 oil holes for lubrication.



C type : Sink holes on inner ring and outer ring , reverse direction.
CRBE 08022 C ~ CRBE 21040 C

Dimensions (mm)					Bearing No.	Dimensions of mounting holes (mm)				Basic load Ratings (kN)		Mounting dimensions (mm)	
						Inner rings		Outer rings					
Inner dia. (d)	Outeer dia. (D)	Width (B,T)	Chamfer (C_{min})	Oil hoies (d_{OH})		PCD_1	Mounting holes	PCD_2	Mounting holes	Dynamic load, C	Static load, C_0	d_a	D_a
20	70	12	0.6	3	CRBE 02012A	28	6-M3 through	57	6-ø3.4 through ø6.5 counter bore depth 3.3	8.26	9.16	35	47
35	95	15	0.6	3	CRBE 03515A	45	8-M4 through	83	8-ø4.5 through ø8 counter bore depth 4.4	18.9	23.4	57	73
55	120	15	0.6	3	CRBE 05515A	65	8-M5 through	105	8-ø5.5 through ø9.5 counter bore depth 5.4	21.7	30.6	77	92
80	165	22	1	3	CRBE 08022A CRBE 08022B CRBE 08022C	97	10-M5 through 10-ø5.5 through ø9.5 counter bore depth 5.4	148	10-ø5.5 through ø9.5 counter bore depth 5.4	40.4	63.6	117	132
90	210	25	1.5	3	CRBE 09025A CRBE 09025B CRBE 09025C	112	12-M8 through 12-ø9 through ø14 counter bore depth 8.6	187	12-ø9 through ø14 counter bore depth 8.6	46	80.2	139	157
115	240	28	1.5	3	CRBE 11528A CRBE 11528B CRBE 11528C	139	12-M8 through 12-ø9 through ø14 counter bore depth 8.6	217	12-ø9 through ø14 counter bore depth 8.6	73.1	131.9	168	188
160	295	35	2	6	CRBE 16035A CRBE 16035B CRBE 16035C	184	12-M10 through 12-ø11 through ø17.5 counter bore depth 10.8	270	12-ø11 through ø17.5 counter bore depth 10.8	102	192.3	218	238
210	380	40	2.5	6	CRBE 21040A CRBE 21040B CRBE 21040C	240	16-M12 through 16-ø14 through ø20 counter bore depth 13	350	16-ø14 through ø20 counter bore depth 13	142	286.2	277	299

MEMO

Model number coding (CRB Series)

Model code:
CRBHV...A: High Rigidity Type Crossed Roller Bearings V (With Separator)
CRBFV...A: Mounting Holed Type High Rigidity Crossed Roller Bearings V (With Separator)
CRBC: Standard Type Crossed Roller Bearings (With Cage)
CRB:Standard Type Crossed Roller Bearings (Full complement)
CRBT...A: Super Slim Type Crossed Roller Bearings (With Separator)
CRBTF...A:Mounting Holed Type Super Slim Crossed Roller Bearings (With Separator)
CRBS: Slim Type Crossed Roller Bearings (With Cage)
CRBS...A: Slim Type Crossed Roller Bearings (With Separator)
CRBS...V: Slim Type Crossed Roller Bearings (Full complement)

Dimension:
115:Bearing Inner Diameter 115 mm

Dimension:
28:Bearing width 28 mm

Supplemental code:
T: With female threaded mounting holes on the inner ring
No symbol: With counter-bored mounting holes on both inner ring and outer ring in the same direction
D: With counter-bored mounting holes on both inner ring and outer ring in the opposite direction

Seal symbol:
No symbol: Open type
UU : Sealed type
U:One side sealed type

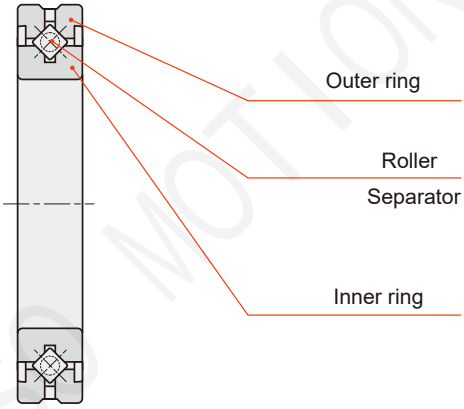
Supplemental code:
T1: T1 clearance
C1: C1 clearance
C2: C2 clearance
No symbol : Normal clearance

Classification symbol:
P6
P5
P4
P2
RP6
RP5
RP4
RP2

Structure of Crossed Roller Bearings

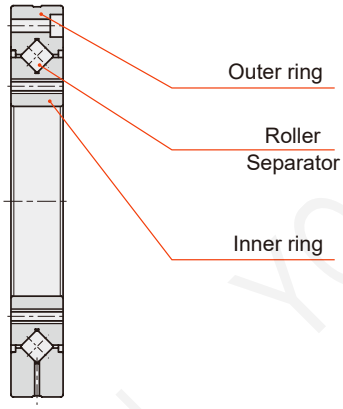
Model CRBHV...A

High Rigidity Type Crossed Roller Bearings V



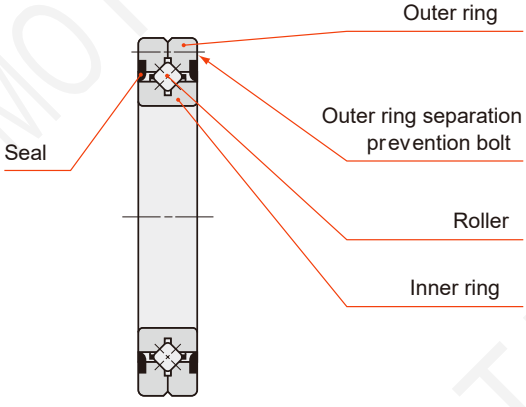
Model CRBFV...A

Mounting Holed Type High Rigidity Crossed Roller Bearings V



Model CRB...UU

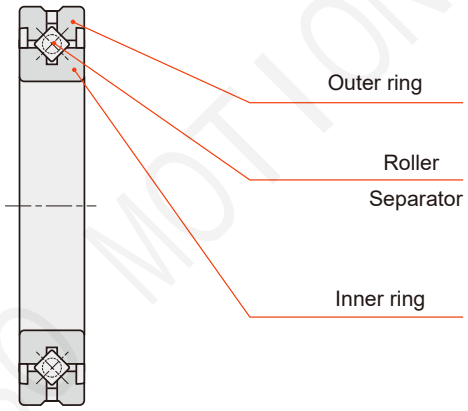
Standard Type Crossed Roller Bearings

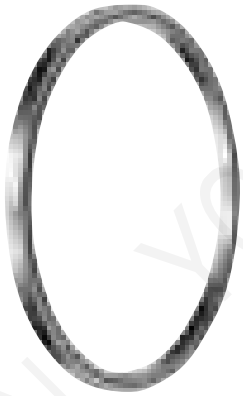


Structure of Crossed Roller Bearings

Model CRBT...A

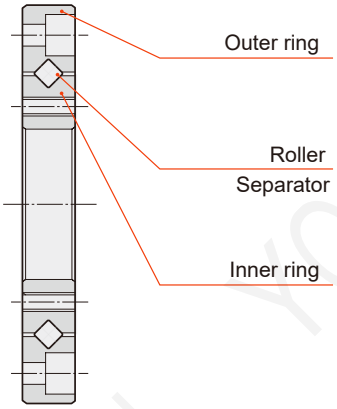
Super Slim Type Crossed Roller Bearings





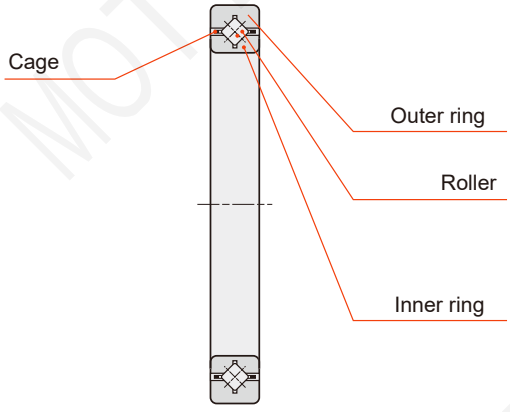
Model CRBTF...A

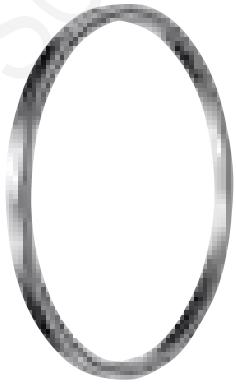
Mounting Holed Type Super Slim Crossed Roller Bearings



Model CRBS

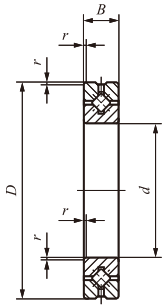
Slim Type Crossed Roller Bearings





Model CRBHV...A (High Rigidity Type Crossed Roller Bearings V)

Open Type/With Separator Sealed Type/With Separator



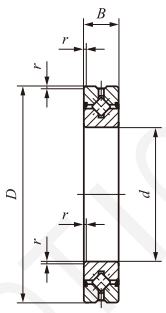
CRBHV... A

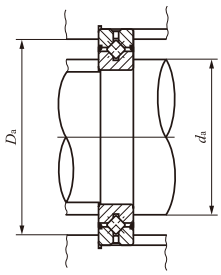
Shaft dia. mm	Identification number		Mass (Ref.) kg	Boundary dimensions mm			
	Open Type	Sealed Type		d	D	B	r_{min} (1)
20	CRBHV 208A	CRBHV 208 A UU	0.04	20	36	8	0.3
25	CRBHV 258 A	CRBHV 258 A UU	0.05	25	41	8	0.3
30	CRBHV 3010 A	CRBHV 3010 A UU	0.12	30	55	10	0.3
35	CRBHV 3510 A	CRBHV 3510 A UU	0.13	35	60	10	0.3
40	CRBHV 4010 A	CRBHV 4010 A UU	0.15	40	65	10	0.3
45	CRBHV 4510 A	CRBHV 4510A UU	0.16	45	70	10	0.3
50	CRBHV 5013 A	CRBHV 5013 A UU	0.29	50	80	13	0.6
60	CRBHV 6013A	CRBHV 6013 A UU	0.33	60	90	13	0.6
70	CRBHV 7013 A	CRBHV 7013 A UU	0.38	70	100	13	0.6
80	CRBHV 8016A	CRBHV 8016 A UU	0.74	80	120	16	0.6
90	CRBHV 9016A	CRBHV 9016 A UU	0.81	90	130	16	0.6
100	CRBHV 10020 A	CRBHV 10020 A UU	1.45	100	150	20	0.6
110	CRBHV 11020 A	CRBHV 11020 A UU	1.56	110	160	20	0.6
120	CRBHV 12025 A	CRBHV 12025 A UU	2.62	120	180	25	1
130	CRBHV 13025A	CRBHV 13025 A UU	2.82	130	190	25	1
140	CRBHV 14025 A	CRBHV 14025 A UU	2.96	140	200	25	1
150	CRBHV 15025 A	CRBHV 15025 A UU	3.16	150	210	25	1
200	CRBHV 20025 A	CRBHV 20025 A UU	4.00	200	260	25	1
250	CRBHV 25025A	CRBHV 25025 A UU	4.97	250	310	25	1.5
300	CRBH 30025 A	CRBH 30025 A UU	5.29	300	360	25	1.5

Notes(1): Minimum allowable single value of chamfer dimension r

Remarks1. The outer ring has an oil groove and two oil holes.
2. No grease is prepacked for Open Type. Perform proper lubrication. Grease is prepacked for Sealed Type.
3. If one side sealed type are needed, please contact YOSO.

Model CRBHV...A (High Rigidity Type Crossed Roller Bearings V)





CRBHV... AUU

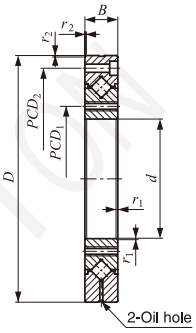
Mounting dimensions mm		Basic dynamic load rating C	Basic static load rating C0
da	Da	N	N
24	31	2910	2430
29	36	3120	2810
36.5	48.5	7600	8370
41.5	53.5	7900	9130
46.5	58.5	8610	10600
51.5	63.5	8860	11300
56	74	17300	20900
66	84	18800	24300
76	94	20100	27700
88	112	32100	43400
98	122	33100	46800
110	140	50900	72200
120	150	52400	77400
132	168	73400	108000
142	178	75900	115000
152	188	81900	130000
162	198	84300	138000
212	248	92300	169000
262	298	102000	207000
312	348	112000	245000

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model CRBFV...A (Mounting Holed Type High Rigidity)

Open Type/With Separator

Sealed Type/With Separator



CRBFV...AT

CRBFV...ATUU

CRBFV...A

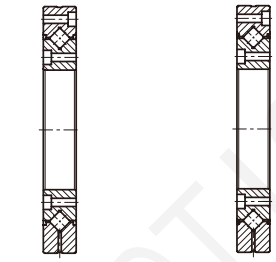
CRBFV...AUU

Shaft dia. mm	Identification number		Mass (Ref.) kg	Boundary dimensions mm				
	Open Type	Sealed Type		d	D	B	r_{1min} (1)	r_{2min} (1)
10	CRBFV 108 AT	CRBFV 108 AT UU	0.12	10	52	8	0.3	0.3
20	CRBFV 2012 AT	CRBFV 2012 AT UU	0.31	20	70	12	0.3	0.3
25	CRBFV 2512 AT	CRBFV 2512 AT UU	0.40	25	80	12	0.6	0.6
35	CRBFV 3515 AT	CRBFV 3515 AT UU	0.66	35	95	15	0.6	0.6
55	CRBFV 5515 AT	CRBFV 5515 AT UU	0.96	55	120	15	0.6	0.6
80	CRBFV 8022 AT	CRBFV 8022 AT UU	2.63	80	165	22	0.6	1
	CRBFV 8022 A	CRBFV 8022A UU	2.60					
	CRBFV 8022 AD	CRBFV 8022 AD UU						
90	CRBFV 9025 AT	CRBFV 9025 AT UU	4.83	90	210	25	1.5	1.5
	CRBFV 9025 A	CRBFV 9025 A UU	4.67					
	CRBFV 9025 AD	CRBFV 9025 AD UU						
115	CRBFV 11528 AT	CRBFV 11528 AT UU	6.81	115	240	28	1.5	1.5
	CRBFV 11528 A	CRBFV 11528 A UU	6.63					
	CRBFV 11528 AD	CRBFV 11528 AD UU						

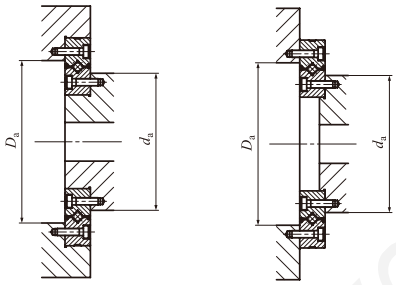
Notes(1): Minimum allowable single value of chamfer dimension r_1 and r_2

Remarks1. The outer ring has an oil groove and two oil holes.
2. No grease is prepacked for Open Type. Perform proper lubrication. Grease is prepacked for Sealed Type.
3. If one side sealed type are needed, please contact YOSO.

Model CRBFV...A (Mounting Holed Type High Rigidity)



CRBFV… AD CRBFV… ADUU

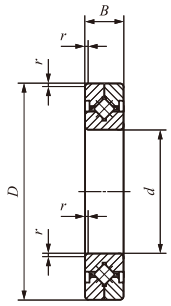


Mounting holes mm				Mounting dimensions mm		Basic dynamic load rating C N	Basic static load rating C_0 N
PCD_1	Inner ring Mounting holes	PCD_2	Outer ring Mounting holes	d_a	D_a		
16	4-M3 through	42	6-ø3.4 through ø6.5 counter bore depth 3.3	24	31	2910	2430
28	6-M3 through	57	6-ø3.4 through ø6.5 counter bore depth 3.3	36.5	48.5	7600	8370
35	6-M3 through	67	6-ø3.4 through ø6.5 counter bore depth 3.3	46.5	58.5	8610	10600
45	8-M4 through	83	8-ø4.5 through ø8 counter bore depth 4.4	56	74	17300	20900
65	8-M5 through	105	8-ø5.5 through ø9.5 counter bore depth 5.4	76	94	20100	27700
97	10-M5 through 10-ø5.5 through ø9.5 counter bore depth 5.4	148	10-ø5.5 through ø9.5 counter bore depth 5.4	107	137	51100	72000
112	12-M8 through 12-ø9 through ø14 counter bore depth 12	187	12-ø9 through ø14 counter bore depth 12	132	168	73400	108000
139	12-M8 through 12-ø9 through ø14 counter bore depth 13.5	217	12-ø9 through ø14 counter bore depth 13.5	162	198	84300	138000

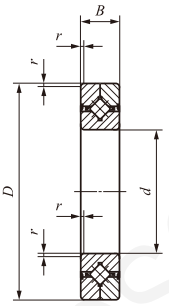
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model CRBC (Standard Type)

Open Type/With Cage　　Open Type/Full Complement Type
Sealed Type/With Cage　　Sealed Type/Full Complement Type



CRBC



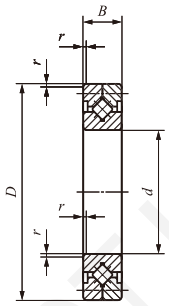
CRBC…UU

Shaft dia. mm	Identification number With Cage Open Type	With Cage Sealed Type	Full complement Open Type	Full complement Sealed Type	Mass (Ref.) kg	Boundary dimensions mm d	D	B
30	CRBC 3010	CRBC 3010UU	CRB 3010	CRB 3010UU	0.12	30	55	10
40	CRBC 4010	CRBC 4010UU	CRB 4010	CRB 4010UU	0.15	40	65	10
50	CRBC 5013	CRBC 5013UU	CRB 5013	CRB 5013UU	0.29	50	80	13
60	CRBC 6013	CRBC 6013UU	CRB 6013	CRB 6013UU	0.33	60	90	13
70	CRBC 7013	CRBC 7013UU	CRB 7013	CRB 7013UU	0.38	70	100	13
80	CRBC 8016	CRBC 8016UU	CRB 8016	CRB 8016UU	0.74	80	120	16
90	CRBC 9016	CRBC 9016UU	CRB 9016	CRB 9016UU	0.81	90	130	16
100	CRBC 10020	CRBC 10020UU	CRB 10020	CRB 10020UU	1.45	100	150	20
110	CRBC 11020	CRBC 11020UU	CRB 11020	CRB 11020UU	1.56	110	160	20
120	CRBC 12025	CRBC 12025UU	CRB 12025	CRB 12025UU	2.62	120	180	25
130	CRBC 13025	CRBC 13025UU	CRB 13025	CRB 13025UU	2.82	130	190	25
140	CRBC 14025	CRBC 14025UU	CRB 14025	CRB 14025UU	2.96	140	200	25
150	CRBC 15025	CRBC 15025UU	CRB 15025	CRB 15025UU	3.16	150	210	25
	CRBC 15030	CRBC 15030UU	CRB 15030	CRB 15030UU	5.30	150	230	30
200	CRBC 20025	CRBC 20025UU	CRB 20025	CRB 20025UU	4.00	200	260	25
	CRBC 20030	——	CRB 20030	——	6.70	200	280	30
	CRBC 20035	——	CRB 20035	——	9.58	200	295	35

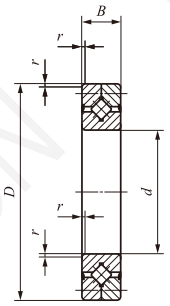
Notes(1): Minimum allowable single value of chamfer dimension r

Remarks1. No oil hole is provided.
2. No grease is prepacked for Open Type. Perform proper lubrication. Grease is prepacked for Sealed Type.

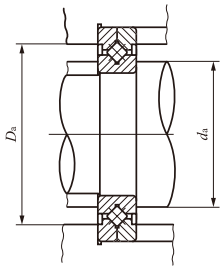
Model CRBC (Standard Type)



CRB



CRB...UU

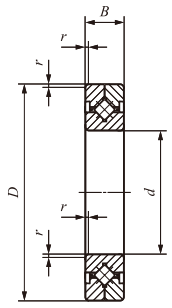


r_{min} (1)	Mounting dimensions mm		CRBC		CRB	
	da	Da	Basic dynamic load rating C N	Basic static load rating C0 N	Basic dynamic load rating C N	Basic static load rating C0 N
0.3	34	44	3830	4130	5290	6350
0.3	44	54	4280	5140	5980	8040
0.6	55	71	10700	12600	14200	18400
0.6	64	81	11600	14600	15400	21500
0.6	75	91	12300	16700	17000	25500
0.6	86	107	18200	25500	24300	37500
1	98	118	19400	28600	25900	42100
1	108	134	31500	45100	39400	61100
1	118	144	33500	50700	41200	66700
1.5	132	164	47700	70500	59900	95400
1.5	140	172	49200	74800	61000	99800
1.5	151	183	50700	79200	64100	10800
1.5	160	192	53800	87700	65000	113000
1.5	166	202	69200	108000	85900	144000
2	208	239	60200	110000	75300	148000
2	218	262	108000	178000	133000	234000
2	221	274	137000	215000	168000	282000

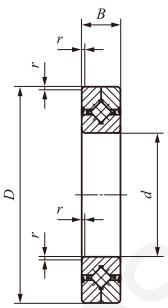
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model CRBC (Standard Type)

Open Type/With Cage　　Open Type/Full Complement Type
Sealed Type/With Cage　　Sealed Type/Full Complement Type



CRBC 25025
CRBC 30025



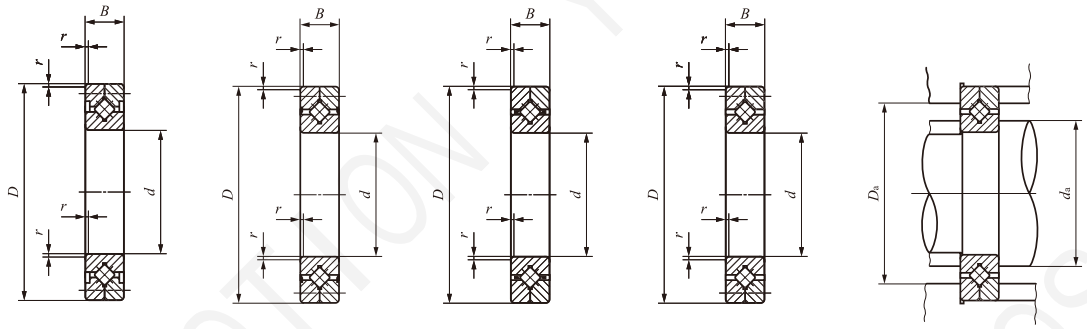
CRBC 25025UU
CRBC 30025UU

Shaft dia. mm	Identification number With Cage Open Type	With Cage Sealed Type	Full complement Open Type	Full complement Sealed Type	Mass (Ref.) kg	Boundary dimensions mm d	D	B
250	CBRC 25025	CBRC 25025 UU	CBR 25025	CBR 25025 UU	4.97	250	310	25
	CBRC 25030	——	CBR 25030	——	8.10	250	330	30
	CBRC 25040	——	CBR 25040	——	14.8	250	355	40
300	CBRC 30025	CBRC 30025 UU	CBR 30025	CBR 30025 UU	5.88	300	360	25
	CBRC 30035	——	CBR 30035	——	13.4	300	395	35
	CBRC 30040	——	CBR 30040	——	17.2	300	405	40
400	CBRC 40035	——	CBR 40035	——	14.5	400	480	35
	CBRC 40040	——	CBR 40040	——	23.5	400	510	40
	CBRC 40070	——	CBR 40070	——	72.4	400	580	70
500	CBRC 50040	——	CBR 50040	——	26.0	500	600	40
	CBRC 50050	——	CBR 50050	——	41.7	500	625	50
	CBRC 50070	——	CBR 50070	——	86.1	500	680	70
600	CBRC 60040	——	CBR 60040	——	30.6	600	700	40
	CBRC 60070	——	CBR 60070	——	102	600	780	70
	CBRC 600120	——	CBR 600120	——	274	600	870	120
700	CBRC 70045	——	CBR 70045	——	46.5	700	815	45
	CBRC 70070	——	CBR 70070	——	115	700	880	70
	CBRC 700150	——	CBR 700150	——	478	700	1020	150
800	CBRC 80070	——	CBR 80070	——	109	800	950	70
	CBRC 800100	——	CBR 800100	——	247	800	1030	100

Notes(1): Minimum allowable single value of chamfer dimension r

Remarks1. No oil hole is provided.
2. No grease is prepacked for Open Type. Perform proper lubrication. Grease is prepacked for Sealed Type.

Model CRBC (Standard Type)



CRB 25025
CRB 30025

CRB 25025UU
CRB 30025UU

CRBC

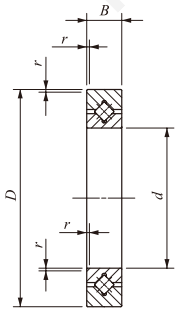
CRB

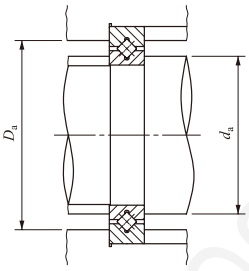
r_{min} (1)	Mounting dimensions mm		CRBC		CRB	
	d_a	D_a	Basic dynamic load rating C N	Basic static load rating C_0 N	Basic dynamic load rating C N	Basic static load rating C_0 N
2.5	259	290	67200	136000	83900	183000
2.5	265	310	116000	208000	146000	283000
2.5	271	330	179000	299000	215000	382000
2.5	310	341	73800	162000	91900	217000
2.5	318	372	163000	299000	205000	408000
2.5	321	381	194000	351000	235000	451000
2.5	414	457	133000	300000	165000	400000
2.5	423	483	222000	455000	270000	590000
2.5	430	532	470000	811000	576000	1060000
2.5	517	573	212000	497000	259000	648000
2.5	531	592	247000	561000	306000	747000
2.5	530	633	536000	1020000	653000	1330000
3	621	676	231000	581000	287000	774000
3	630	734	591000	1230000	700000	1540000
3	643	817	1250000	2210000	1490000	2800000
3	730	785	250000	681000	313000	917000
3	731	834	630000	1390000	766000	1810000
3	751	953	1660000	3010000	1980000	3820000
4	831	907	417000	1090000	513000	1440000
4	840	972	936000	2040000	1140000	2640000

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model CRBT...A (Super Slim Type)

Open Type/With Separator





CRBT...A

Shaft dia. mm	Identification number	Mass (Ref.) kg	Boundary dimensions mm				Mounting dimensions mm		Basic dynamic load rating C N
			d	D	B	r_{min} (1)	da	Da	
10	CRBT 105A	9.0	10	21	5	0.15	12.5	17	1120
15	CRBT 155A	11.9	15	26	5	0.15	17.5	22	1320
20	CRBT 205A	14.8	20	31	5	0.15	22.5	27	1400
30	CRBT 305A	20.7	30	41	5	0.15	32.5	37	1770
40	CRBT 405A	26.5	40	51	5	0.15	42.5	47	2000
50	CRBT 505A	32.3	50	61	5	0.15	52.5	57	2280

Notes(1): Minimum allowable single value of chamfer dimension r

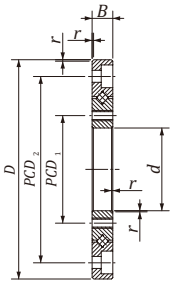
Remarks1. No oil hole is provided.
2. Grease is prepacked.

Basic static load rating C0 N	
811	
1110	
1290	
1970	
2520	
3200	

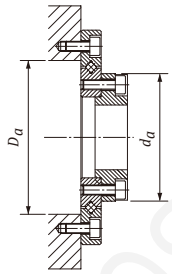
1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model CRBTF...A (Mounting Holed Type Super Slim)

Open Type/With Separator



CRBTF...A



Shaft dia. mm	Identification number	Mass (Ref.) kg	Boundary dimensions mm				Mounting holes mm	
			d	D	B	r_{min} (1)	PCD_1	Inner ring Mounting holes
10	CRBTF 105 AT	46	10	43	5	0.15	16	6-M2.5 through
20	CRBTF 205 AT	66	20	53	5	0.15	26	6-M2.5 through
30	CRBTF 305 AT	83	30	63	5	0.15	36	8-M2.5 through
40	CRBTF 405 AT	103	40	73	5	0.15	46	8-M2.5 through

Notes(1): Minimum allowable single value of chamfer dimension r .

Remarks1. No oil hole is provided.

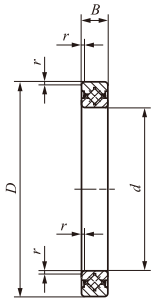
2. Grease is prepacked.

Mounting holes mm		Mounting dimensions mm		Basic dynamic load rating C N	Basic static load rating C_0 N
$PCDa$	Outer ring Mounting holes	da	Da		
35	6-ø2.9 through ø5.5 counter bore depth 2.8	21.5	28	1500	1410
45	6-ø2.9 through ø5.5 counter bore depth 2.8	31.5	38	1890	2150
55	8-ø2.9 through ø5.5 counter bore depth 2.8	41.5	47.5	2140	2750
65	8-ø2.9 through ø5.5 counter bore depth 2.8	51.5	58	2440	3490

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model CRBS (Slim Type)

Open Type/With Cage　Open Type/Full Complement Type
Sealed Type/With Cage　Sealed Type/Full Complement Type

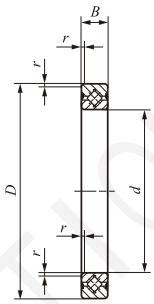


CRBS

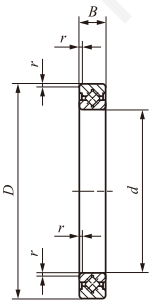
Shaft dia. mm	Identification number With Cage / With Separator		Full complement		Mass (Ref.) kg
	Open Type	Sealed Type	Open Type	Sealed Type	
50	CRBS 508	CRBS 508A UU	CRBS 508A V	CRBS 508A V UU	84
60	CRBS 608	CRBS 608A UU	CRBS 608A V	CRBS 608A V UU	94
70	CRBS 708	CRBS 708A UU	CRBS 708A V	CRBS 708A V UU	108
80	CRBS 808	CRBS 808A UU	CRBS 808A V	CRBS 808A V UU	122
90	CRBS 908	CRBS 908A UU	CRBS 908A V	CRBS 908A V UU	135
100	CRBS 1008	CRBS 1008A UU	CRBS 1008A V	CRBS 1008A V UU	152
110	CRBS 1108	CRBS 1108A UU	CRBS 1108A V	CRBS 1108A V UU	163
120	CRBS 1208	CRBS 1208A UU	CRBS 1208A V	CRBS 1208A V UU	184
130	CRBS 1308	CRBS 1308A UU	CRBS 1308A V	CRBS 1308A V UU	199
140	CRBS 1408	CRBS 1408A UU	CRBS 1408A V	CRBS 1408A V UU	205
150	CRBS 1508	CRBS 1508A UU	CRBS 1508A V	CRBS 1508A V UU	220
160	CRBS 16013	CRBS 16013A UU	CRBS 16013A V	CRBS 16013A V UU	620
170	CRBS 17013	CRBS 17013A UU	CRBS 17013A V	CRBS 17013A V UU	675
180	CRBS 18013	CRBS 18013A UU	CRBS 18013A V	CRBS 18013A V UU	710
190	CRBS 19013	CRBS 19013A UU	CRBS 19013A V	CRBS 19013A V UU	740
200	CRBS 20013	CRBS 20013A UU	CRBS 20013A V	CRBS 20013A V UU	780

Notes(1): Minimum allowable single value of chamfer dimension r.
(2): No grease is prepacked. Perform proper lubrication.
(3): Grease is prepacked.
Remark No oil hole is provided.

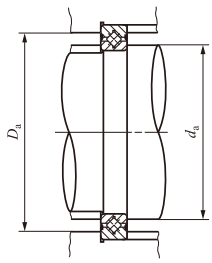
Model CRBS (Slim Type)



CRBS…AUU
…VUU



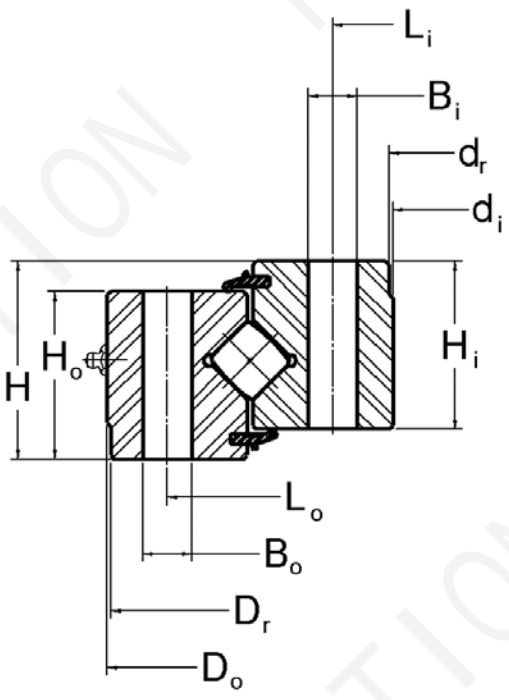
CRBS…V



Boundary dimensions mm				Mounting dimensions mm		CRB[2] With cage		CRBS...AUU[3] With Separator		CRBS...V[2] CRBS...VUU[3] Full complement	
d	D	B	$r_{min}^{(1)}$	da	Da	Basic dynamic load rating C N	Basic static load rating C_0 N	Basic dynamic load rating C N	Basic static load rating C_0 N	Basic dynamic load rating C N	Basic static load rating C_0 N
50	66	8	0.4	54	61	4900	6170	4680	5810	6930	9800
60	76	8	0.4	64	71	5350	7310	5350	7310	7600	11700
70	86	8	0.4	74	81	5740	8440	5740	8440	8190	13600
80	96	8	0.4	84	91	6130	9590	6130	9590	8790	15500
90	106	8	0.4	94	101	6490	10700	6490	10700	9310	17400
100	116	8	0.4	104	111	6850	11900	6530	11100	9850	19300
110	126	8	0.4	114	121	7160	13000	6850	12300	10300	21200
120	136	8	0.4	124	131	7530	14100	7070	13000	10900	23000
130	146	8	0.4	134	141	7860	15300	7270	13800	11200	24600
140	156	8	0.4	144	151	8060	16400	7510	14900	11700	26800
150	166	8	0.4	154	161	8350	17500	7810	16000	12100	28700
160	186	13	0.6	166	179	20300	39900	19400	37700	26900	58200
170	196	13	0.6	176	189	20900	42200	20000	39900	27800	61600
180	206	13	0.6	186	199	21500	44600	21900	45700	28600	65200
190	216	13	0.6	196	209	22100	46900	22900	49200	29300	68600
200	226	13	0.6	206	219	22500	49300	23300	51600	30000	72200

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

Model XR Series



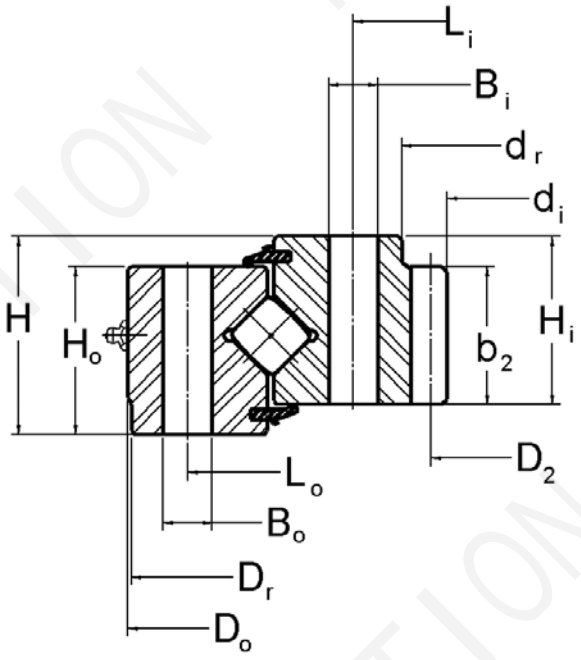
No Gear

P/N	Outline dimensions and weight								Hole data					
									Outer ring			Inner ring		
	D_o (in)	d_i (in)	H (in)	H_o (in)	H_i (in)	D_r (in)	d_r (in)	G APPROX. (in)	L_o (in)	n_o	B_o (in)	L_i (in)	n_i	B_i (in)
16318001	11.811	5.512	1.417	1.181	1.181	——	——	30	10.630	6	M16x2	6.693	6	M16x2
16319001	15.886	9.055	2.165	1.772	1.850	——	——	65	14.094	24	0.512	10.197	24	0.512
16320001	27.362	18.779	3.031	2.520	2.244	27.283	18.897	185	25.197	28	0.709	20.000	28	0.709
16321001	35.312	26.625	2.953	2.863	2.863	35.251	26.750	325	34.000	24	1/2-13	29.000	24	0.590
16322001	46.250	34.250	4.250	3.880	3.880	——	34.380	765	44.000	28	1-8	36.250	28	1.063
16323001	56.380	46.770	3.820	3.470	3.430	56.295	46.850	710	40.000	36	0.813	33.875	36	3/4-16
16324001	85.000	74.000	3.750	3.250	3.250	84.880	74.120	1190	83.000	42	0.938	76.000	42	0.938
16325001	95.000	82.000	4.000	3.500	3.500	94.875	82.063	1660	93.000	48	1.063	85.000	48	1.063
16326001	131.890	112.205	7.874	6.496	7.087	131.250	120.866	6500	127.559	40	M36x3	116.535	40	1.496
16327001	158.661	140.945	8.819	6.654	6.654	——	——	6400	155.315	92	1.654	144.291	92	1.654

Gear data α=20°						Gear tooth raing F_z (lbs)	Dynamic capacities 1 Million revolutions L_{10} life		
Tooth form	D_2 (in)	P_d or(m)	Z_2	X_2	b_2 (in)		Radial (lbs)	Thrust (lbs)	Moment (ft-lbs)
——	——	——	——	——	——	——	19150	22340	7530
——	——	——	——	——	——	——	36850	42830	20140
——	——	——	——	——	——	——	64560	73730	65660
——	——	——	——	——	——	——	81310	91980	116170
——	——	——	——	——	——	——	235420	270010	425900
——	——	——	——	——	——	——	209680	237380	482960
——	——	——	——	——	——	——	267330	300410	956430
——	——	——	——	——	——	——	362100	407250	1450300
——	——	——	——	——	——	——	762050	858130	4185500
——	——	——	——	——	——	——	723870	812130	4879900

Note: Capacities are dynamic and based on an L10 life of 1 million revolutions per ABMA Std 11-1990. Values listed do not apply simultaneously.
Ring cross section and bolted joint configuration used may result in lower bearing capacity ratings.

Model XR Series



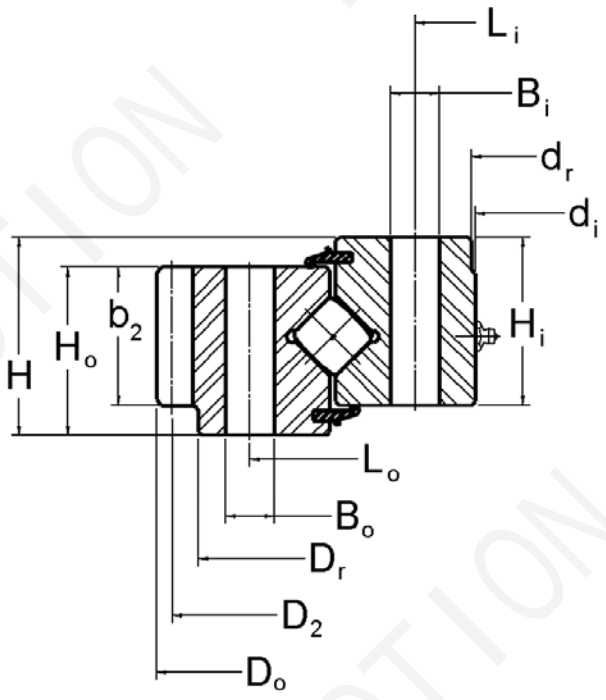
Internal Gear

P/N	Outline dimensions and weight								Hole data					
									Outer ring			Inner ring		
	D_o (in)	d_i (in)	H (in)	H_o (in)	H_i (in)	D_r (in)	d_r (in)	G APPROX. (in)	L_o (in)	n_o	B_o (in)	L_i (in)	n_i	B_i (in)
16328001	26.700	18.667	2.500	2.000	2.000	——	——	130	24.500	18	1/2-13	20.500	18	1/2-3
16329001	36.000	24.160	3.880	3.380	3.380	——	——	465	33.250	24	0.813	27.250	30	3/4-10
16330001	41.500	30.320	4.190	3.370	4.000	——	32.360	510	40.000	36	0.807	33.500	36	3/4-16
16331001	41.970	30.828	3.350	2.560	2.950	41.929	——	400	39.961	24	M20x2.5	34.646	24	M20×2.5
16332001	54.740	44.400	4.500	3.750	4.130	——	46.380	500	53.000	36	0.922	48.000	36	7/8-14
16333001	78.819	62.913	5.906	4.921	4.921	——	65.157	2050	76.575	48	1.181	67.520	48	1.181
16334001	114.000	95.000	6.000	5.500	5.500	——	97.500	4250	111.000	48	1.063	100.000	48	1-8
16335001	121.496	97.717	6.772	6.299	6.299	——	——	6080	117.795	72	1.535	105.512	72	1.535
16336001	142.000	123.200	6.000	5.500	5.500	——	——	5370	139.000	72	1.063	28.000	72	1.063

Gear data α=20°						Gear tooth raing F_z	Dynamic capacities 1 Million revolutions L_{10} life		
Tooth form	D_2 (in)	P_d or(m)	Z_2	X_2	b_2 (in)	(lbs)	Radial (lbs)	Thrust (lbs)	Moment (ft-lbs)
FD	19.000	6	114	0	2.000	6345	64620	73810	65430
SD	24.800	2.5	62	0	3.380	27300	157900	181900	213180
FD	30.800	2.5	77	-.400	3.500	27600	220820	254250	362220
FD	31.102	(10)	79	-.625	2.950	22820	125790	142740	211160
FD	45.200	2.5	113	0	3.750	28600	205410	232690	460450
FD	63.307	(12)	134	-.500	4.528	40350	406070	459660	1315740
FD	96.000	2	192	0	5.000	54550	500930	563230	2389570
FD	98.268	(24)	104	-.708	6.299	134270	755820	854030	3797780
SD	124.000	2	248	0	5.500	50440	675310	758460	4057130

Note: Capacities are dynamic and based on an L10 life of 1 million revolutions per ABMA Std 11-1990. Values listed do not apply simultaneously.
Ring cross section and bolted joint configuration used may result in lower bearing capacity ratings.

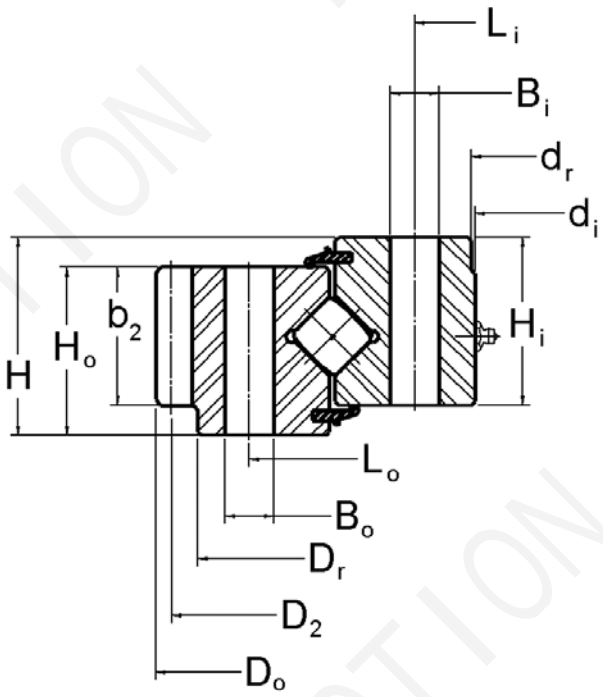
Model XR Series



External Gear

P/N	Outline dimensions and weight								Hole data					
									Outer ring			Inner ring		
	D_o (in)	d_i (in)	H (in)	H_o (in)	H_i (in)	D_r (in)	d_r (in)	G APPROX. (in)	L_o (in)	n_o	B_o (in)	L_i (in)	n_i	B_i (in)
16337001	16.000	9.190	2.170	1.770	1.850	14.880	9.250	55	14.094	24	0.562	10.197	24	0.562
16338001	23.333	13.750	2.750	2.500	2.500	——	——	175	20.875	12	0.688	15.375	12	0.688
16339001	27.362	18.780	3.030	2.520	2.240	26.380	18.900	180	25.197	18	0.688	20.000	18	0.688
16340001	33.627	26.535	2.205	1.752	1.752	——	——	140	30.906	36	M12x1.75	27.480	40	0.551
16341001	36.333	24.500	4.690	4.310	3.880	35.500	24.625	580	33.625	24	0.813	26.125	24	0.813
16342001	45.050	34.180	3.930	3.360	3.470	42.840	34.250	470	41.338	24	0.866	35.826	24	0.866
16343001	51.040	40.000	4.000	3.500	3.500	——	——	680	48.200	36	0.813	41.800	36	0.813
16344001	63.150	47.480	5.118	4.409	4.409	61.063	47.559	1420	58.819	36	1.023	50.394	36	1.023
16345001	70.510	53.540	5.040	4.330	4.330	——	——	1460	65.354	42	1.063	55.906	42	1.063
16346001	85.866	75.250	3.300	2.800	2.800	——	——	920	82.750	48	0.813	77.250	48	0.813
16347001	100.667	84.000	6.500	6.500	4.000	98.750	84.250	3240	95.000	48	1-8	87.000	48	1.063
16348001	159.843	141.732	6.142	5.748	5.748	——	——	5480	154.528	100	1.299	144.685	100	1.299
16393001	209.843	188.583	7.047	6.417	6.024	206.299	188.858	9750	202.36	210	1.299	191.339	100	1.299

Model XR Series



Gear data α=20°						Gear tooth raing Fz	Dynamic capacities 1 Million revolutions L10 life		
Tooth form	D2 (in)	Pd or(m)	Z2	X2	b2 (in)	(lbs)	Radial (lbs)	Thrust (lbs)	Moment (ft-lbs)
FD	15.600	5	78	0	1.460	4320	24130	27780	13190
FD	23.000	6	138	0	2.500	7430	85170	99260	69470
FD	26.969	(5)	137	0	1.650	5725	64560	73730	65660
FD	33.071	(8)	105	0	1.752	9130	58790	66360	77600
FD	36.000	6	216	0	4.000	12700	204020	236880	274290
FD	43.701	(10)	111	+.713	2.580	15490	128480	145650	223060
SD	50.400	2.5	126	0	3.500	24380	195710	222290	396330
FD	61.811	(10)	157	+.750	3.346	20640	350400	399710	861070
FD	68.346	(14)	124	+1.150	4.330	36690	293690	332590	801340
SD	85.333	3	256	0	2.800	18280	190740	213890	686710
FD	100.000	3	300	0	6.000	32030	376230	422960	1557670
FD	158.110	(16)	251	+.500	5.748	67650	724030	812320	4874640
FD	206.929	(18)	292	+1.150	6.102	81360	1005010	1126290	8903140

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