NEW

Cross-Roller Ring RBU

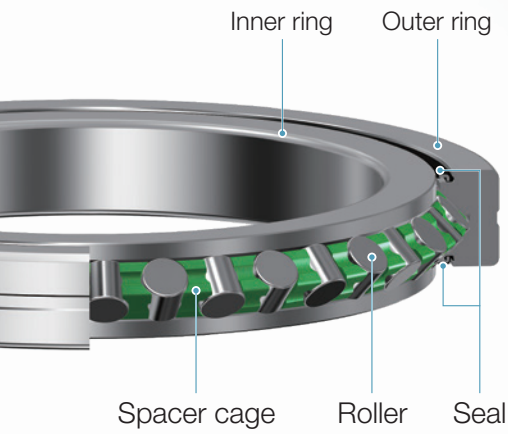


Quick to install on equipment.
Stable rotational accuracy and torque.

RBU Cross-Roller Ring

Structure and Features

Because the RBU features cylindrical rollers that are arranged orthogonally between spacer cages inside a 90˚ V-shaped raceway, a single bearing can handle radial, axial, and moment loads in all directions. In addition, it can be used for both inner-ring and outer-ring rotation because neither the inner nor outer ring has a split structure.



Cross-Roller Ring RBU Structure



Cross-Roller Ring RBU

Simple installation adjustments

No detailed adjustments are needed when attaching to equipment, making installation easy and less time-consuming.

Stable bearing performance

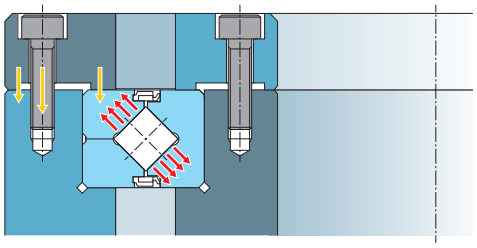
The integrated inner/outer ring structure improves component rigidity over the RB, which has a split outer ring. This mitigates the impact of the housing's accuracy and rigidity, providing stable performance.

Exchangeable with existing products

The dimensions are interchangeable with the existing RB, making it possible to switch without changing the design.

RB

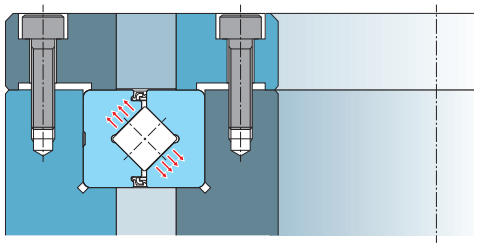
Ideal for machine tools that require high rigidity



Separate outer ring
High preload can be applied

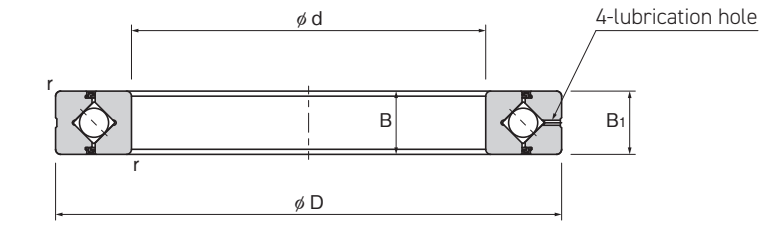
RBU

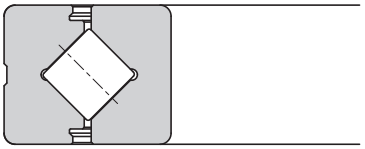
Ideal for robots and reduction gears with high production volumes



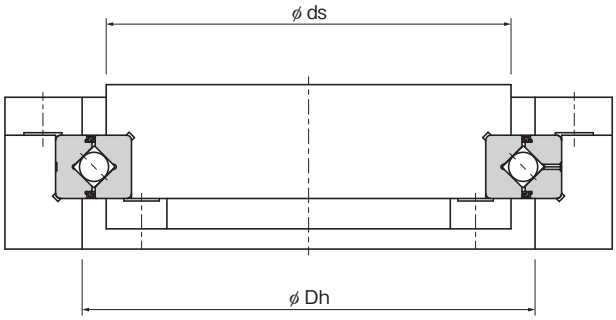
Integrated inner/outer ring
Quicker to install on equipment / Stable rotation accuracy and torque

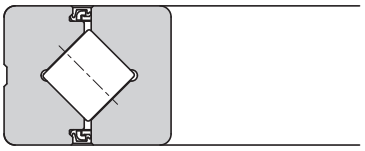
Specification Table





RBU





RBU UU Type

Unit: mm

Shaft diameter	Model	Main dimensions						Shoulder height		Basic load rating (radial)		Mass
		Inner diameter	Outer diameter	Roller pitch circle diameter	Width	Lubrication hole				C	C_0	
		d	D	dp	B B1	d_0	r_{min}	ds (max)	Dh (min)	kN	kN	kg
20	RBU 2008	20	36	27	8	1.2	0.5	23.5	30.5	3.23	3.1	0.04
25	RBU 2508	25	41	32	8	1.2	0.5	28.5	35.5	3.63	3.83	0.05
30	RBU 3010	30	55	41.5	10	1.5	0.6	36.5	47	7.35	8.36	0.12
35	RBU 3510	35	60	46.5	10	1.5	0.6	41	51.5	7.64	9.12	0.13
40	RBU 4010	40	65	51.5	10	1.5	0.6	46.5	57.5	8.33	10.6	0.16
45	RBU 4510	45	70	56.5	10	1.5	0.6	51	61.5	8.62	11.3	0.17
50	RBU 5013	50	80	64	13	2	0.6	57	72	16.7	20.9	0.27
60	RBU 6013	60	90	74	13	2	0.6	67	82	18	24.3	0.3
70	RBU 7013	70	100	84	13	2	0.6	77	92	19.4	27.7	0.35
80	RBU 8016	80	120	98	16	2	0.6	88	110	30.1	42.1	0.7
90	RBU 9016	90	130	108	16	2	1	98	118	31.4	45.3	0.75
100	RBU 10016	100	140	119.3	16	2	1	109	129	31.7	48.6	0.83
	RBU 10020	100	150	125	20	2	1	113	137	51.3	73	1.45
110	RBU 11015	110	145	126.5	15	2	0.6	119	136	23.7	41.5	0.75
	RBU 11020	110	160	135	20	2	1	120	147	55.3	83.2	1.56
120	RBU 12025	120	180	148.7	25	2	1.5	133	164	66.9	100	2.62
130	RBU 13025	130	190	158	25	2	1.5	143	174	69.5	107	2.82
140	RBU 14016	140	175	154.8	16	2	1	147	162	25.9	50.1	1
	RBU 14025	140	200	168	25	2	1.5	154	185	74.8	121	2.96
150	RBU 15013	150	180	164	13	2	0.6	157	172	27	53.5	0.68
	RBU 15025	150	210	178	25	2	1.5	164	194	76.8	128	3.16
160	RBU 16025	160	220	188.6	25	2	1.5	173	204	81.7	135	3.14
180	RBU 18025	180	240	210	25	2	1.5	195	225	84	143	3.44
190	RBU 19025	190	240	211.9	25	2	1	202	222	41.7	82.9	2.99

Model Number Coding

Select an option

RBU12025 UU CC0 P2 R

Model

Seal symbol*
No symbol: Without seal
UU: Seals on both sides
U: Seal on one side (marked side)
UT: Seal on one side (unmarked side)

Radial clearance symbol
CC0: Negative clearance (preload)
C0: Positive clearance (no preload)
C1: Positive clearance (greater than C0)

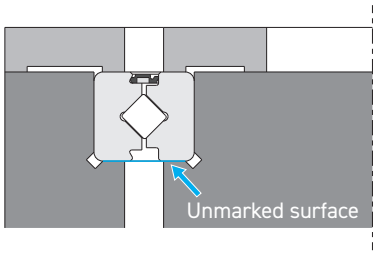
Component symbol for accuracy
No symbol: Accuracy applies to inner ring
R: Accuracy applies to outer ring
B: Accuracy applies to inner and outer rings

Accuracy symbol
No symbol: Normal grade (grade 0)
P6: Rotational accuracy grade 6
P5: Rotational accuracy grade 5
P4: Rotational accuracy grade 4
P2: Rotational accuracy grade 2
USP: Rotational accuracy grade USP
PE6: Rotational accuracy grade 6 + Dimensional accuracy grade 6
PE5: Rotational accuracy grade 5 + Dimensional accuracy grade 5
PE4: Rotational accuracy grade 4 + Dimensional accuracy grade 4
PE2: Rotational accuracy grade 2 + Dimensional accuracy grade 4

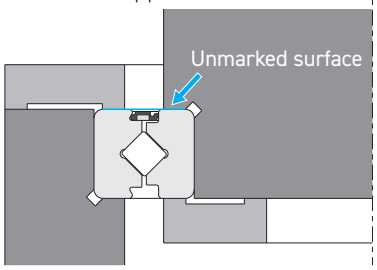
***Precautions for Selecting Seals on One Side**

Because the unmarked surface is used as the machining reference surface, we recommend assembling the cross-roller ring so that the unmarked surface faces the mounting reference surface. 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 Specifications



UT Specifications

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