

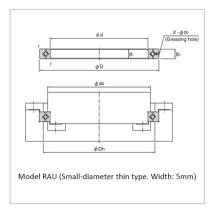
# 各阳盟拓轴承科技有限公司

Louyang Monton Bearing Science&Technology Co.ltd.

#### Crossed Roller Bearing

#### RAU slim thin section crossed roller bearing-190



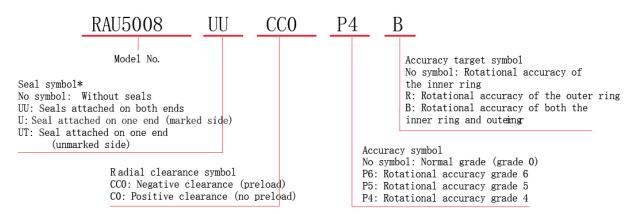


Shaft diameter	190
Model No.	RAU19013
Main dimensions	
Inner diameter	190
Outer diameter	216
Roller pitch circle	202
diameter	
Width	13
Greasing hole d0	2
rmin	0.8
Shoulder dimensions	
ds(max)	195
Dh (min)	209
Basic load rating	
C kN	24.9
C0 kN	51.5
Mass	
g	69

# **Micro Cross-Roller Ring RAU**

### Model composition

Model Number Coding



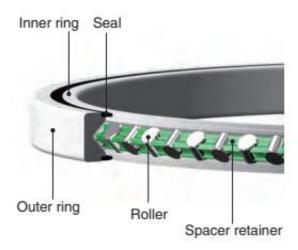
Considerations for model RAU (Small-diameter thin type. Width: 5mm)

\*Seals are not available.\* The omndiyar clearance available is CO.\* The only accuracy available is normal grade (grade 0).

Micro Cross-Roller Ring with inner diameter of 10 mm and outer diameter of 21 mm

☐More compact than a conventional angular contact ball bearing

Spacer retainer enables smooth movement and high rotation accuracy.



### **Structure**

In the RAU, the rollers travel on the V-shaped raceways ground into the inner and outer rings.

Alternating rollers are arrayed orthogonally so that one bearing can support loads and moments in any direction.

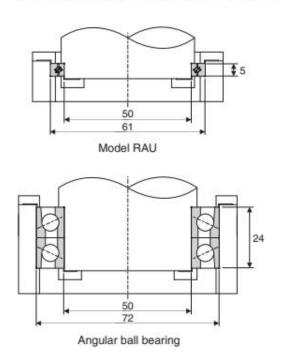
Also, because of the integrated structure, the RAU can be used for either inner ring or outer ring rotation.

Fig. 1 Structure of Cross Roller-Ring Model RAU

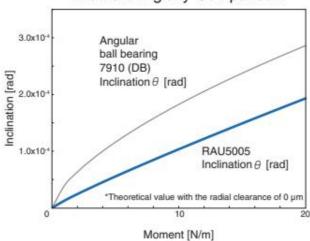
### 1. Compact and Rigid

The RAU is more compact and lighter weight than a double row angular contact ball bearing. It is also more rigid, even though it is made as compact as possible.

### Comparison, 50 mm inner diameter



# Moment Rigidity Comparison



Comparison of cross-sectional area and mass

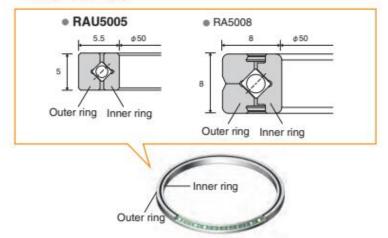
Model No.	RAU5005	7910 (DB		
Cross-sectional area	27.5mm²	264mm²		
Mass	32g	260g		

### 2. Light Weight

The cross-sectional area of the model RAU is 57% smaller than the Cross-Roller Ring model RA, which was previously the thinnest ever. This enables further weight reduction. The line-up also includes other models

whose inner diameters are the smallest to date: 10, 15, 20, 30, and 40mm.

# Comparison of cross section and mass, 50 mm inner diameter



Model No.	RAU5005	RA5008		
Cross-sectional area	27.5mm <sup>2</sup>	64mm²		
Mass	32g	80g		

## Accuracy standards

### Rotational accuracy

- Rota	tional					er Ri	ing	Un	it: μm	l	- Rotat	ional A	ccura	cy of	the	Outer	Ring	it: μm
of bear	dimension ing inner (d) (mm)	Radia		out to ner ri		e <b>A</b> xial		ut tol er ring	erance (	of	of bear	dimension ing outer (D) (mm)	Radia					ut toler- ter ring
Above	Or less	Grade 0	Grade P6	Grade P5	Grade P4	Grade 0	Grade P6	Grade P5	Grade P4		Above	Or less	Grade 0	Grade P5	Grade P4	Grade P6	Grade P5	Grade P4
	18	10	_	_	-	10	_	_	_			65	13	_	-	13	_	_
18	40	13				13		_			65	80	13	8	5	13	8	5
40	65	13	10	5	4	13	10	5	4		80	100	15	10	6	15	10	6
65	80	15	10	5	4	15	10	5	4		100	120	15	10	6	15	10	6
80	100	15	13	6	5	15	13	6	5		120	140	20	11	7	20	11	7
100	120	20	13	6	5	20	13	6	5		140	180	25	11	7	25	11	7
120	140	25	18	8	6	25	18	8	6		180	200	25	15	10	25	15	10
140	180	25	18	8	6	25	18	8	6		200	250	30	15	10	30	15	10
180	200	30	20	10	8	30	20	10	8									

<sup>-</sup> The rotational accuracy of model RAU (Small-diameter thin type. Width: 5mm) is only available in normal grade (grade 0).

### Dimensional accuracy

Un	÷	+		11	122
UH	1	L		μ	m

Basic dimension d, D [mm]			liameter:		ring liameter: olerance of Dm	Dimensiona		е
Above	Or less	Upper limit	Lower lim	it Upper li	mit Lower	limit Upper	limit Lowe	er limit
_	18	0	-8	-	_	0	-120	
18	30	0	-10	0	-9	0	-120	
30	50	0	-12	0	-11	0	-120	
50	80	0	-15	0	-13	0	-120	
80	120	0	-20	0	-15	0	-120	
120	150	0	-25	0	-18	0	-120	
150	180	0	-25	0	-25	0	-120	
180	250	0	-30	0	-30	0	-120	

<sup>-</sup>dm and Dm represent the arithmetic averages of the maximum and minimum diameters obtained by measuring the inner and outer diameters of the bearing at two points.

## Radial clearance standard $_{\text{Unit: }\mu\,\text{m}}$

					OHIC. PI		
	er Pitch diamete [mm]		0	CO			
Above	Or less	Min.	Max.	Min.	Max.		
	18	_	_	0	15		
18	30	_		0	15		
30	50	_	-	0	15		
50	80	-8	0	0	15		
80	120	-8	0	0	15		
120	140	-8	0	0	15		
140	160	-8	0	0	15		
160	180	-10	0	0	20		
180	200	-10	0	0	20		
200	225	-10	0	0	20		