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IKO

New

Lightweight Crossed Roller
Bearings

LCRB

Lightweight, compact, and
easy to mount!



NIPPON THOMPSON CO., LTD.



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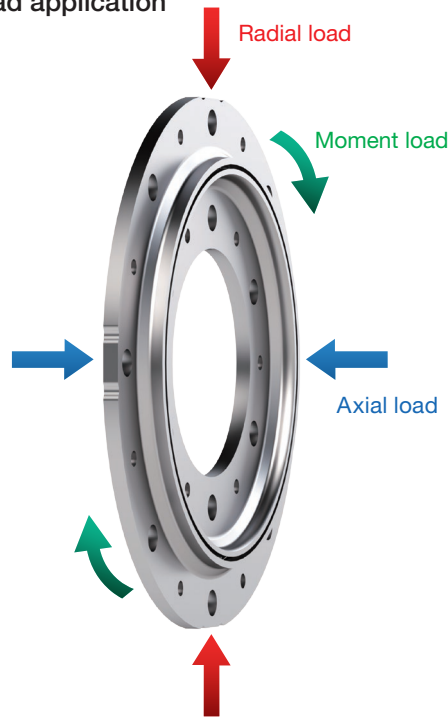
Introducing an ultra-lightweight and compact Crossed Roller Bearing.
Significant weight reduction results in energy savings for various applications.

Structure and Characteristics

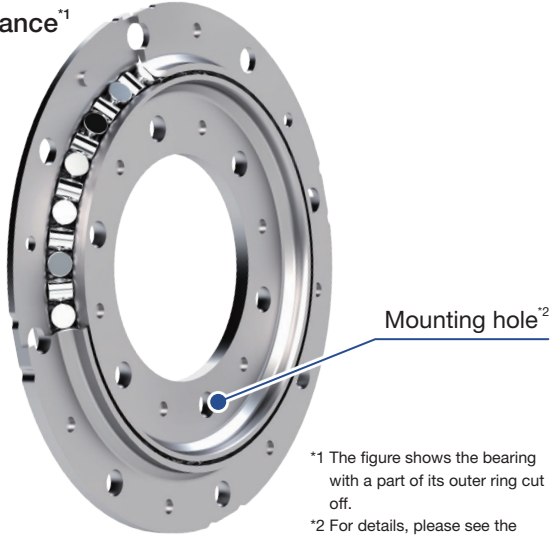
IKO LCRB, a lightweight type Crossed Roller Bearing, is an innovative, new product with press-formed inner and outer rings. Like other IKO Crossed Roller Bearings, they can handle complex loads simultaneously from any direction, but are more lightweight and easier to mount.

The inner and outer rings are made of specially heat-treated chromium molybdenum steel sheets, which reduce the mass by 60% or more compared to conventional products of equivalent size. LCRB bearings are ideal for improving equipment operating efficiency and downsizing.

LCRB load application example

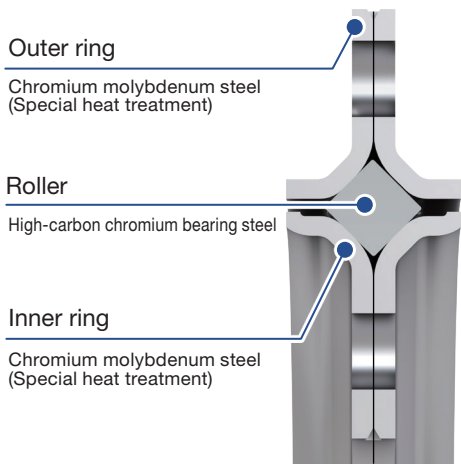


Appearance^{*1}



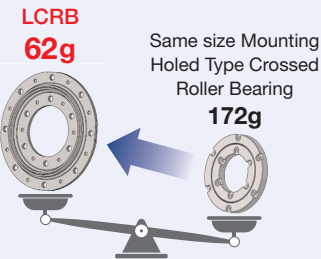
^{*1} The figure shows the bearing with a part of its outer ring cut off.
^{*2} For details, please see the boundary dimensions table on the right.

Enlarged view of section



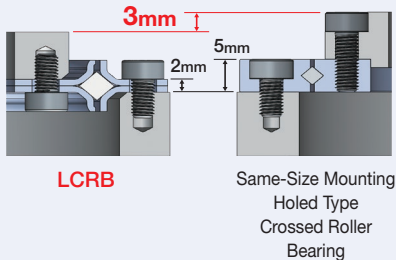
Ultra-Lightweight

Weight reduced by 60% or more compared to conventional products.



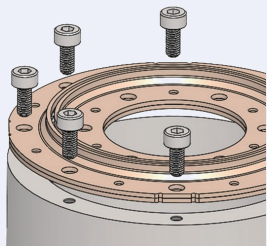
Compact

Low sectional height when mounted results in a compact design.



Easy Mounting

Flange-integrated structure allows for bolt-on mounting.



Identification Number

Example

LCRB	50
1	2

1 Model

Model
LCRB Lightweight Type Crossed Roller Bearings

2 Size

Size
50 Outside dia. of outer ring 50 mm
70 Outside dia. of outer ring 70 mm

Detailed specifications

Boundary dimensions

Identification Number	Mass (Ref.) g	Boundary dimensions mm							Radial internal clearance mm	Roller guide method
		d	D	B	b_i	B_o	d_i	D_o		
LCRB 50	37	10	50	8	2	2	28.4	33.5	0 to 0.2	Full complement
LCRB 70	62	30	70	8	2	2	48.6	53.8	0 to 0.2	Full complement

Mounting dimensions

Identification Number	Inner ring		Outer ring		Dimensions of mating part	
	PCD _i	Mounting holes	PCD _e	Mounting holes	d_a	D_a
LCRB 50	18	4- ϕ 3.2 Through	43	6- ϕ 3.2 Through	24	37
LCRB 70	38	6- ϕ 3.2 Through	63	8- ϕ 3.2 Through	44	57

Accuracy

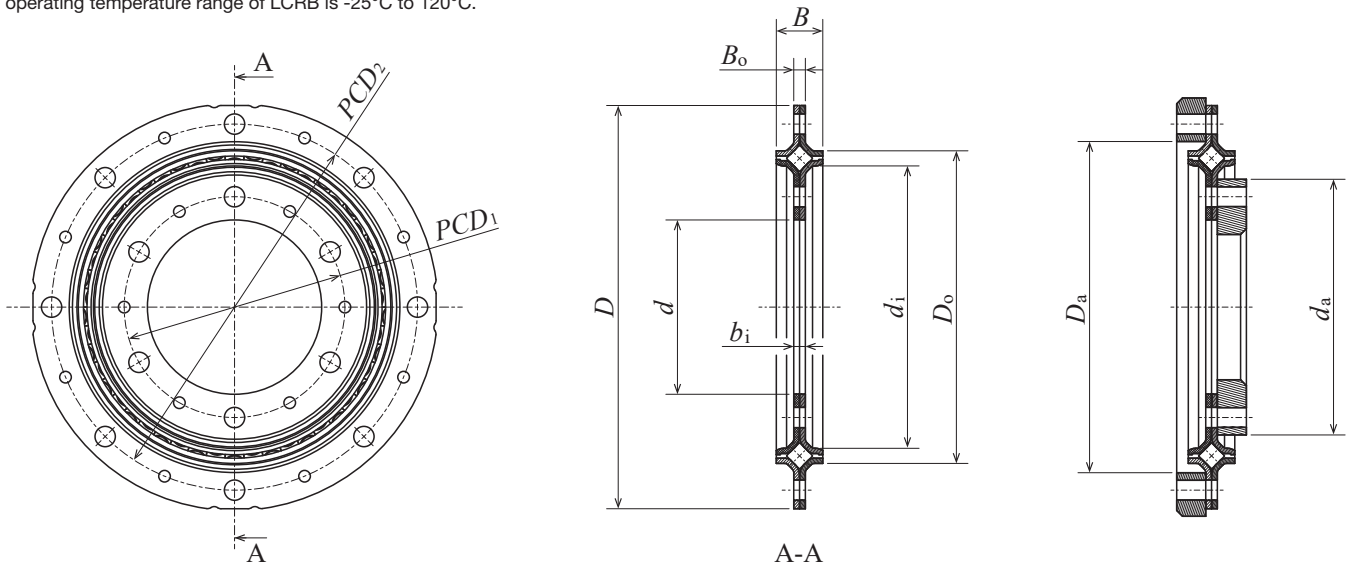
Identification Number	Inner ring				Outer ring			
	Δd_{mp} Single plane mean bore diameter deviation for d		ΔB_s Deviation of a single inner ring width for b_i		ΔD_{mp} Single plane mean outside diameter deviation for D		ΔC_s Deviation of a single outer ring width for B_o	
	High	Low	High	Low	High	Low	High	Low
LCRB 50	300	-300	200	-200	300	-300	200	-200
LCRB 70	300	-300	200	-200	300	-300	200	-200

Allowable load and allowable rotational speed

Identification Number	Allowable Load		Allowable moment N·m	Allowable rotational speed min ⁻¹
	Radial direction N	Axial direction N		
LCRB 50	453	676	7	970
LCRB 70	586	875	15	580

Operating Temperature Range

The operating temperature range of LCRB is -25°C to 120°C.



Remark 1. Lubrication grease (Shell Lubricants Japan K.K. ALVANIA GREASE S2 or equivalent) is prepacked.
Remark 2. M3 hexagon socket head bolts (strength division 12.9) are recommended for mounting.
Remark 3. The tightening torque of mounting bolts is 1.7N·m (reference value). In actual use, it should be set according to the operating conditions.