

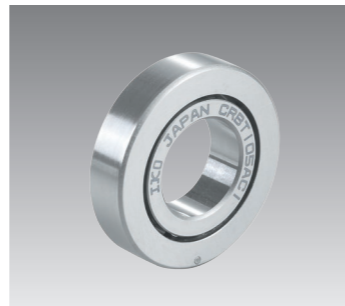
IKO

New

Super Slim Crossed Roller Bearings

CRBT105A

Compact size and high rigidity



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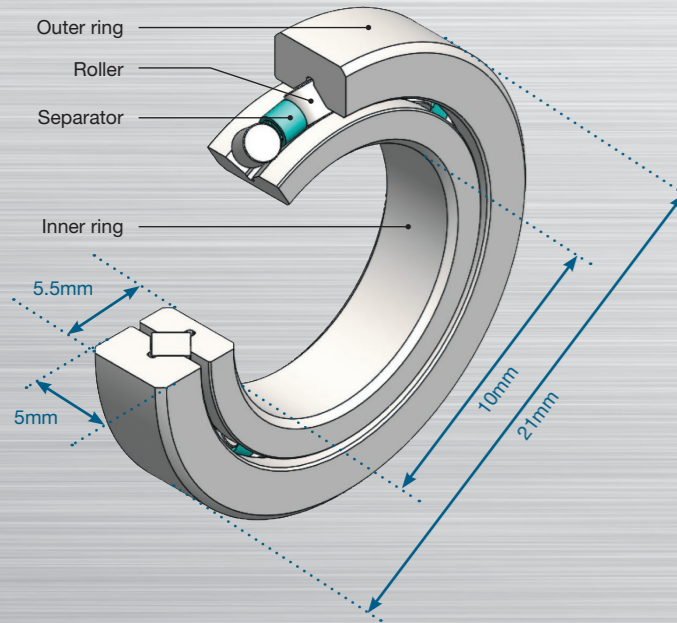
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NIPPON THOMPSON CO., LTD.

Now Available! Super Slim Type Crossed Roller Bearings with a bore diameter of just 10mm and outside diameter of 21mm. Smaller size can help reduce the size of your equipment.

Super Slim Type Crossed Roller Bearings
CRBT105A

CRBT105A Structure and Features

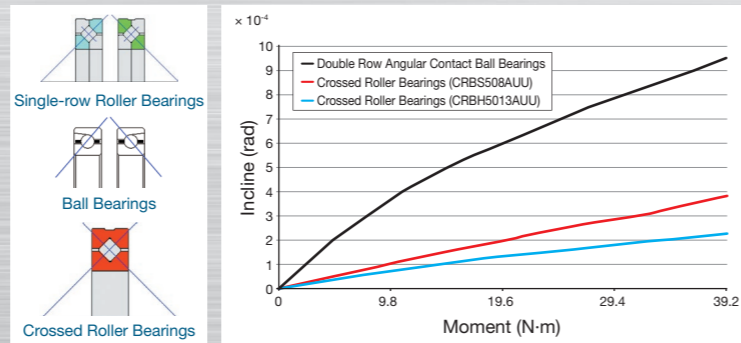


1. Ultra-Slim and Ultra-Small!

These Crossed Roller Bearings are ultra-slim and small with a 10mm bearing bore, 21mm outside diameter, and 5mm bearing width. The compact size is made possible thanks to IKO's technological expertise in miniature bearing production.

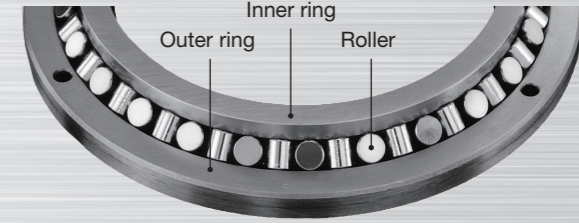
2. High Rigidity and a Compact Size!

In Crossed Roller Bearings, the orthogonal array of rollers reduces the cross sectional area of rear-mounted 45° contact angle single-row roller bearings or ball bearings by half, creating a compact structure. Even though they are more compact, the rigidity is 3 to 4 times greater than double-row angular contact ball bearings.



What are Crossed Roller Bearings?

Crossed Roller Bearings are compact bearings with their rollers alternately crossed at right angles to each other between inner and outer rings. The orthogonal array of the rollers allows the bearing to handle complex loads simultaneously from any direction, which makes assembly possible without needing to worry about load direction.



CRBT105A Usage Examples

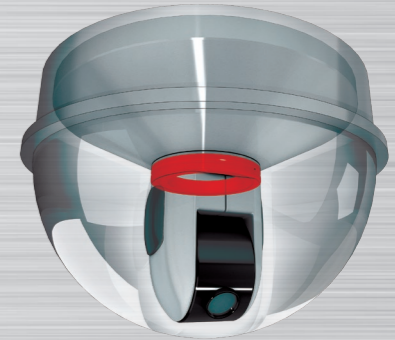
Compact Hand Robot

Crossed Roller Bearings feature high rotational accuracy and high rigidity which minimizes deflection, making them ideal for the swivel parts of hand robots, that require accurate positioning motion.



Compact Surveillance Camera

Crossed Roller Bearings can receive complex loads from various directions, making them ideal bearings for supporting surveillance cameras which are in constant 24-hour operation.



Dimensions/Accuracy/Radial Clearance

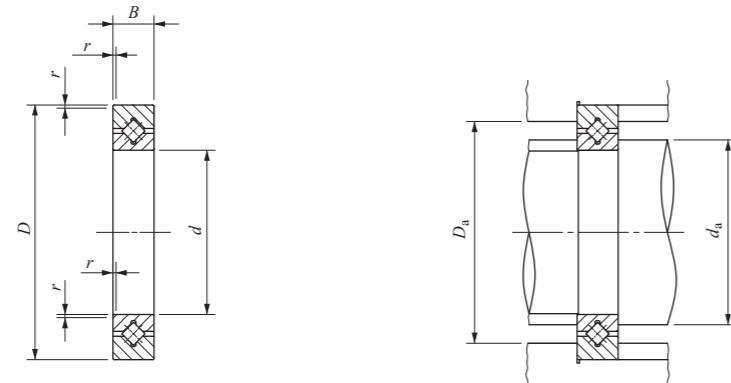


Table 1. Dimensions

Shaft diameter mm	Identification number	Mass (Ref.) g	Boundary dimensions mm				Mounting dimensions mm		Basic dynamic load rating C N	Basic static load rating Co N
			d	D	B	⁽¹⁾ r _{min}	da	Da		
10	CRBT 105 A	9.0	10	21	5	0.15	12.5	17	1120	811
15	CRBT 155 A	11.9	15	26	5	0.15	17.5	22	1320	1110
20	CRBT 205 A	14.8	20	31	5	0.15	22.5	27	1400	1290
30	CRBT 305 A	20.7	30	41	5	0.15	32.5	37	1770	1970
40	CRBT 405 A	26.5	40	51	5	0.15	42.5	47	2000	2520
50	CRBT 505 A	32.3	50	61	5	0.15	52.5	57	2280	3200

Note (1) Minimum allowable single value of chamfer dimension r. Remarks 1. No oil hole is provided. 2. Provided with pre-packed grease.

1N = 0.102 kgf

Table 2. Tolerances, allowable values, and radial internal clearances of Super Slim Type Crossed Roller Bearings

unit: μm

Nominal bore diameter d mm	Δ_{dmp} Single plane mean bore diameter deviation		Δ_{Dmp} Single plane mean outside diameter deviation		Δ_{Bk} and Δ_{Cs} Actual inner ring and outer ring width deviation		K_{ia} and S_{ia} Radial and axial runout of assembled bearing inner ring	K_{eo} and S_{eo} Radial and axial runout of assembled bearing outer ring	Radial internal clearance C ₁	
	High	Low	High	Low	High	Low	Maximum	Maximum	Min.	Maximum
	10	0	-8	0	-9	0	-75	10	15	0
15	0	-8	0	-9	0	-75	10	15	0	15
20	0	-10	0	-11	0	-75	13	20	0	15
30	0	-10	0	-11	0	-75	13	20	0	15
40	0	-12	0	-13	0	-75	15	25	0	15
50	0	-12	0	-13	0	-75	15	25	0	15