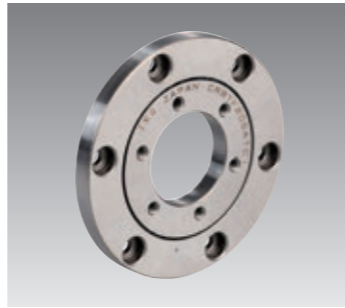


# IKO

New

Mounting Holed Type Super Slim  
Crossed Roller Bearings

# CRBTF



## NIPPON THOMPSON CO., LTD. (JAPAN)

Head Office : 19-19 Takanawa 2-chome Minato-ku  
Tokyo 108-8586, Japan  
Phone : +81 (0)3-3448-5850  
Fax : +81 (0)3-3447-7637  
E-mail : ntt@ikonet.co.jp  
URL : <http://www.ikonet.co.jp/eg/>  
Plant : Gifu, Kamakura

## IKO INTERNATIONAL, INC. (U.S.A.)

### East Coast Operations (Sales Head Office)

91 Walsh Drive  
Parsippany, NJ 07054  
U.S.A.  
Phone : +1 973-402-0254  
Toll Free : 1-800-922-0337  
Fax : +1 973-402-0441  
E-mail : eco@ikonet.co.jp

### Midwest Operations

101 Mark Street Unit G,  
Wood Dale, IL 60191  
U.S.A.  
Phone : +1 630-766-6464  
Toll Free : 1-800-323-6694  
Fax : +1 630-766-6869  
E-mail : mwo@ikonet.co.jp

### Minnesota Sales Office

1500 McAndrews Road West, Suite 210  
Burnsville, MN 55337  
U.S.A.  
Phone : +1 952-892-8415  
Toll Free : 1-800-323-6694  
Fax : +1 952-892-1722  
E-mail : mwo@ikonet.co.jp

### West Coast Operations

9830 Norwalk Boulevard, Suite 198  
Santa Fe Springs, CA 90670  
U.S.A.  
Phone : +1 562-941-1019  
Toll Free : 1-800-252-3665  
Fax : +1 562-941-4027  
E-mail : wco@ikonet.co.jp

### Silicon Valley Sales Office

1500 Wyatt Drive, Suite 10  
Santa Clara, CA 95054  
U.S.A.  
Phone : +1 408-492-0240  
Toll Free : 1-800-252-3665  
Fax : +1 408-492-0245  
E-mail : wco@ikonet.co.jp

### Southeast Operations

2150 Boggs Road, Suite 100  
Duluth, GA 30096  
U.S.A.  
Phone : +1 770-418-1904  
Toll Free : 1-800-874-6445  
Fax : +1 770-418-9403  
E-mail : seo@ikonet.co.jp

### Southwest Operations

8105 N. Beltline Road, Suite 130  
Irving, TX 75063  
U.S.A.  
Phone : +1 972-929-1515  
Toll Free : 1-800-295-7886  
Fax : +1 972-915-0060  
E-mail : swo@ikonet.co.jp

## IKO THOMPSON BEARINGS CANADA, INC.(CANADA)

731-2425 Matheson Boulevard East 7th floor  
Mississauga, Ontario L4W 5K4, Canada  
Phone : +1 905-361-2872  
Fax : +1 905-361-6401  
E-mail : itc@ikonet.co.jp

## IKO BRASIL SERVIÇOS EMPRESARIAIS LTDA. (BRAZIL)

Rua Frei Caneca 1407, Condomínio Edifício Barão  
de Monte Cedro,Cjs. 801/802, Consolação,  
São Paulo- SP  
Cep : 01307-909  
Phone : +55 (0)11-2366-3033  
E-mail : itb@ikonet.co.jp

## NIPPON THOMPSON EUROPE B.V. (EUROPE)

### The Netherlands (Sales Head Office)

Sheffieldstraat 35  
3047 AN Rotterdam  
The Netherlands  
Phone : +31 (0)10-462 68 68  
E-mail : nte@ikonet.co.jp

### Germany Branch

Mündelheimer Weg 54  
40472 Düsseldorf  
Germany  
Phone : +49 (0)211-41 40 61  
Fax : +49 (0)211-42 76 93  
E-mail : ntd@ikonet.co.jp

### Regensburg Sales Office

Im Gewerbepark D 30  
93059 Regensburg  
Germany  
Phone : +49 (0)941-20 60 70  
Fax : +49 (0)941-20 60 719  
E-mail : ntdr@iko-nt.de

### Neunkirchen Sales Office

Gruben Str. 95c  
66540 Neunkirchen  
Germany  
Phone : +49 (0)6821-99 98 60  
Fax : +49 (0)6821-99 98 626  
E-mail : ntdn@iko-nt.de

### U.K. Branch

2 Vincent Avenue, Crownhill  
Milton Keynes, Bucks, MK8 0AB  
United Kingdom  
Phone : +44 (0)1908-566144  
Fax : +44 (0)1908-565458  
E-mail : sales@iko.co.uk

### Spain Branch

Autovia Madrid-Barcelona, Km. 43,700  
Polig. Ind. AIDA - Nove A-8, Ofic. 2-1<sup>a</sup>  
19200 Azuqueca de Henares  
(Guadalajara) Spain  
Phone : +34 949-26 33 90  
Fax : +34 949-26 31 13  
E-mail : nts@ikonet.co.jp

### France Branch

Bâtiment le Raphaël Paris Nord 2  
22 avenue des Nations  
BP54394 Villepinte  
95943 ROISSY C.D.G Cedex  
France  
Phone : +33 (0)1-48 16 57 39  
Fax : +33 (0)1-48 16 57 46  
E-mail : contact@iko-france.com

## IKO THOMPSON KOREA CO.,LTD. (KOREA)

2F, 111, Yeouigongwon-ro,  
Yeongdeungpo-gu, Seoul, Korea  
Phone : +82 (0)2-6337-5851  
Fax : +82 (0)2-6337-5852  
E-mail : itk@ikonet.co.jp

## IKO THOMPSON ASIA CO., LTD. (THAILAND)

1-7 Zuellig House, 3rd Floor  
Silom Road, Silom, Bangrak  
Bangkok 10500, Thailand  
Phone : +66 (0)2-637-5115  
Fax : +66 (0)2-637-5116  
E-mail : ita@ikonet.co.jp

## IKO-THOMPSON (SHANGHAI) LTD. (CHINA)

### Shanghai (Sales Head Office)

1608-10 MetroPlaza No.555 LouShanGuan  
Road  
ChangNing District Shanghai  
People's Republic of China 200051  
Phone : +86 (0)21-3250-5525  
Fax : +86 (0)21-3250-5526  
E-mail : ntc@ikonet.co.jp

### Beijing Branch

Room1506, Jingtai Tower,  
NO.24,Jianguomenwai Avenue,  
Chaoyang District, Beijing People's Republic of  
China 100022  
Phone : +86 (0)10-6515-7681  
Fax : +86 (0)10-6515-7681\*106  
E-mail : ntc@ikonet.co.jp

### Guangzhou Branch

Room 834, Garden Tower, Garden Hotel  
368 Huanshi East Road, Yuexiu District,  
Guangzhou, Guangdong  
People's Republic of China 510064  
Phone : +86 (0)20-8384-0797  
Fax : +86 (0)20-8381-2863  
E-mail : ntc@ikonet.co.jp

### Wuhan Branch

Room 2300, Truroll Plaza No.72 Wusheng  
Road, Qiao kou District, Wuhan, Hubei  
People's Republic of China 430033  
Phone : +86 (0)27-8556-1610  
Fax : +86 (0)27-8556-1630  
E-mail : ntc@ikonet.co.jp

### Shenzhen Office

Room 420, Oriental Plaza,  
1072 Jianshe Road, Luohu District,  
Shenzhen, Guangdong  
People's Republic of China 518001  
Phone : +86 (0)755-2265-0553  
Fax : +86 (0)755-2298-0665  
E-mail : ntc@ikonet.co.jp

### Ningbo Office

Room 3406, Zhongnongxin Building, No.181  
Zhongshan East Road, Haishu Ward, Ningbo,  
Zhejiang  
People's Republic of China 315000  
Phone : +86 (0)574-8718-9535  
Fax : +86 (0)574-8718-9533  
E-mail : ntc@ikonet.co.jp

### Qingdao Office

1007 Block B, He Da Center Building, No.179  
Tailiu Road, Shibei District, Qingdao,  
Shandong  
People's Republic of China 266000  
Phone : +86 (0)532-8670-2246  
Fax : +86 (0)532-8670-2242  
E-mail : ntc@ikonet.co.jp

### Shenyang Office

2-1203 Tower I.City Plaza Shenyang, No.206  
Nanjing North Street Heping District,  
Shenyang  
People's Republic of China 110001  
Phone : +86 (0)24-2334-2662  
Fax : +86 (0)24-2334-2442  
E-mail : ntc@ikonet.co.jp



\* The specifications and dimensions of products in this catalog are subject to change without prior notice. \* When these products are exported, the exporter should confirm a forwarding country and a use, and, in case of falling under the customer's requirements, take necessary procedures such as export permission application. \* Although all data in this catalog has been carefully compiled to make the information as complete as possible, NIPPON THOMPSON CO., LTD. shall not be liable for any damages whatsoever, direct or indirect, based upon any information in this catalog. NIPPON THOMPSON CO., LTD. makes no warranty, either express or implied, including the implied warranty of merchantability or fitness for a particular purpose. \* Reproduction and conversion without permission are prohibited.



ISO 9001 & 14001 Quality system registration certificate



<https://www.ikonet.co.jp/eg/>

CAT-2951E

Printed in Japan ©2019.07

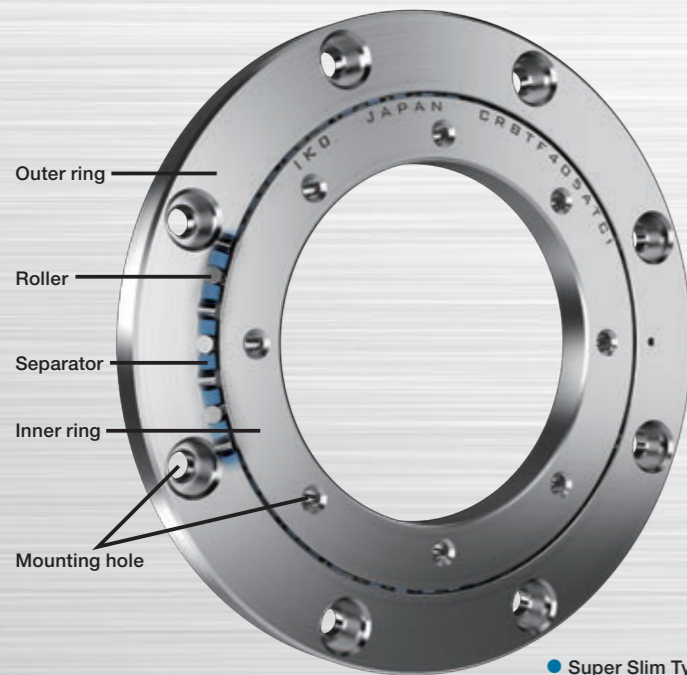
NIPPON THOMPSON CO., LTD.



# Super Slim Crossed Roller Bearings now available with mounting hole specification! Slim design and easy mounting can reduce the size and weight of your equipment.

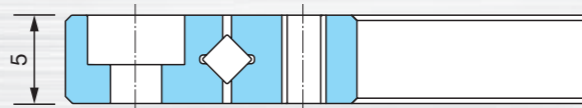
Mounting Holed Type Super Slim Crossed Roller Bearings  
**CRBTF**

## CRBTF Structure and Features



### 1. Make your equipment more compact with this super slim design!

Mounting Holed Type Super Slim Crossed Roller Bearings have an ultra-slim 5 mm bearing width, made possible thanks to IKO's technological expertise in miniature bearing production.

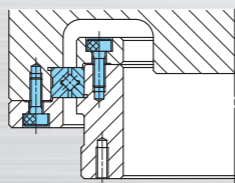


### 2. Easy bolt-on mounting eliminates complex mounting procedures.

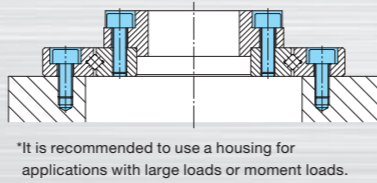
Mounting Holed Type Super Slim Crossed Roller Bearings can be mounted directly to the mounting surface. No housing or pressure plate required.

● Super Slim Type Crossed Roller Bearing Mounting Method

Until now...  
Housing and pressure plates were required.



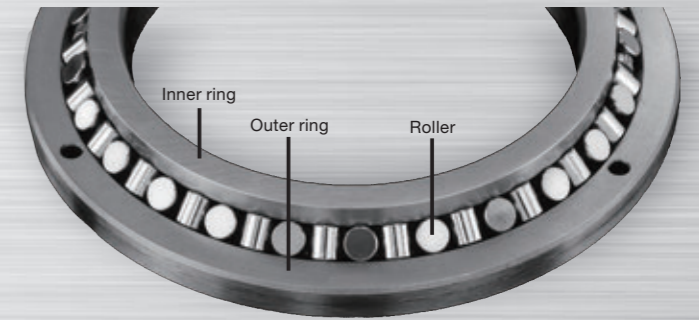
● Mounting Holed Type Super Slim Crossed Roller Bearing Mounting Method



\*It is recommended to use a housing for applications with large loads or moment loads.

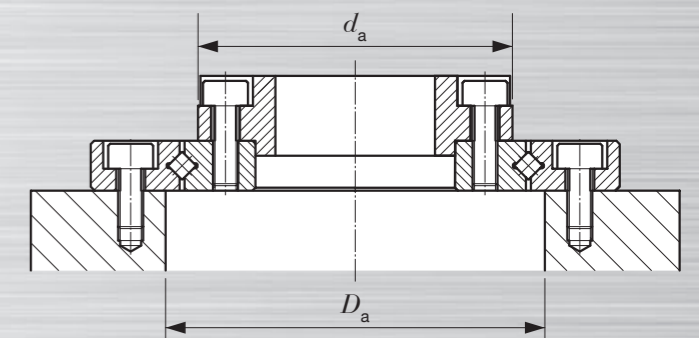
## What are Crossed Roller Bearings?

IKO 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 a single bearing to handle complex loads simultaneously from any direction, making mounting possible without worrying about load direction.



## Mounting

- The shoulder height diameters ( $d_a$  and  $D_a$ ) which are related to mounting must meet the values shown in the dimension tables.
- When used with a housing, it is recommended to use a slight interference fit adjusted to the actual measured dimensions of the outer and inner ring. In addition, the depth of the housing bore is recommended to be equal to or larger than the bearing width.
- Mounting Holed Type Super Slim Crossed Roller Bearings have a plug hole for inserting cylindrical rollers. When mounting the bearings, position the plug away from the maximum load. The plug is located by the pin on the side.



Tighten the fixing screws (M2.5 x 0.4) at 0.58 N·m torque.

## Dimensions/Accuracy/Clearance

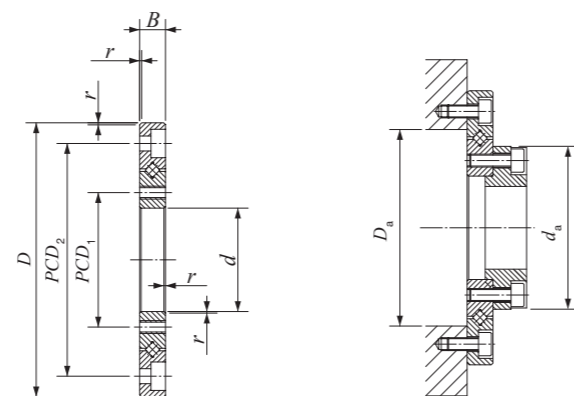


Table 1. Dimensions

Shaft diameter mm	Identification number	Mass (Ref.) g	Boundary dimensions mm				Mounting holes mm			Mounting dimensions mm		Basic dynamic load rating $C$ N	Basic static load rating $C_0$ N	
			$d$	$D$	$B$	$r_{min}^{(1)}$	Inner ring Mounting holes	$PCD_1$	Outer ring Mounting holes	$PCD_2$	$d_a$			$D_a$
10	CRBTF 105 AT	46	10	43	5	0.15	16	6-M2.5 through	35	6- $\phi$ 2.9 through $\phi$ 5.5 Counterbore depth 2.8	21.5	28	1 500	1 410
20	CRBTF 205 AT	66	20	53	5	0.15	26	6-M2.5 through	45	6- $\phi$ 2.9 through $\phi$ 5.5 Counterbore depth 2.8	31.5	38	1 890	2 150
30	CRBTF 305 AT	83	30	63	5	0.15	36	8-M2.5 through	55	8- $\phi$ 2.9 through $\phi$ 5.5 Counterbore depth 2.8	41.5	47.5	2 140	2 750
40	CRBTF 405 AT	103	40	73	5	0.15	46	8-M2.5 through	65	8- $\phi$ 2.9 through $\phi$ 5.5 Counterbore depth 2.8	51.5	58	2 440	3 490

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

Table 2. Accuracy/Internal radial clearance

$d$ Nominal bore diameter mm	$\Delta_{dmp}$ Bore diameter deviation		$\Delta_{Dmp}$ Outside diameter deviation		$\Delta_{Bs}$ and $\Delta_{Cs}$ Inner/outer ring width deviation		$K_{ia}$ and $S_{ia}$ Radial and axial runout of assembled bearing inner ring	$K_{ea}$ and $S_{ea}$ Radial and axial runout of assembled bearing outer ring	Radial internal clearance C1	
	High	Low	High	Low	High	Low	Maximum	Maximum	Min.	Maximum
	10	0	-8	0	-11	0	-75	13	20	0
20	0	-10	0	-13	0	-75	13	20	0	15
30	0	-10	0	-13	0	-75	15	25	0	15
40	0	-12	0	-13	0	-75	15	25	0	15

unit:  $\mu$ m

1N  $\approx$  0.102 kgf