



# IKO

New

Inch Series Cam Followers  
With ThrustDisk Seals™

# CR-VBS

Model variation is now expanded!



## 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 : https://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

3235 Satellite Boulevard Building 400, Suite 230,  
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 EIRELI (BRAZIL)

Rua Frei Caneca 1407,  
Condominio Edificio 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)

Keersopstraat 35,  
3044 EX, 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. 2-1ª  
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 : ntf@ikonet.eu

## 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 KOREA CO.,LTD. (KOREA)

201, Worldvision Bldg., 77-1, Yeouinaru-ro,  
Yeongdeungpo-gu, Seoul, Korea  
Phone : +82 (0)2-6337-5851  
Fax : +82 (0)2-6337-5852  
E-mail : itk@ikonet.co.jp

### Shanghai (Sales Head Office)

1608-10 Metro Plaza No.555, LouShanGuan  
Road, Pudong District,  
People's Republic of China, 200053  
Phone : +86 (0)21-3250-5525  
Fax : +86 (0)21-3250-5526  
E-mail : ntc@ikonet.co.jp

### Beijing Branch

Room 1506, Jingtai Tower,  
NO.24, Jianguomenwai Avenue,  
Chaoyang District, Beijing  
People's Republic of China, 100022  
Phone : +86 (0)10-6515-7681  
Fax : +86 (0)10-6515-7689  
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 Branch

Room 1808, KEENSTAR Building 18,  
Chuangye 2nd Rd 248, Bao'an, Shenzhen, Guangdong,  
People's Republic of China, 518081  
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

Room 1111, Building 9, Qingdao Science and  
Technology City, No. 7 Wuyang Road,  
North District, Qingdao City, Shandong,  
People's Republic of China, 266045  
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



ISO 9001 & 14001 Quality system registration certificate

CAT-2962E Printed in Japan © 2020.12 (AK)



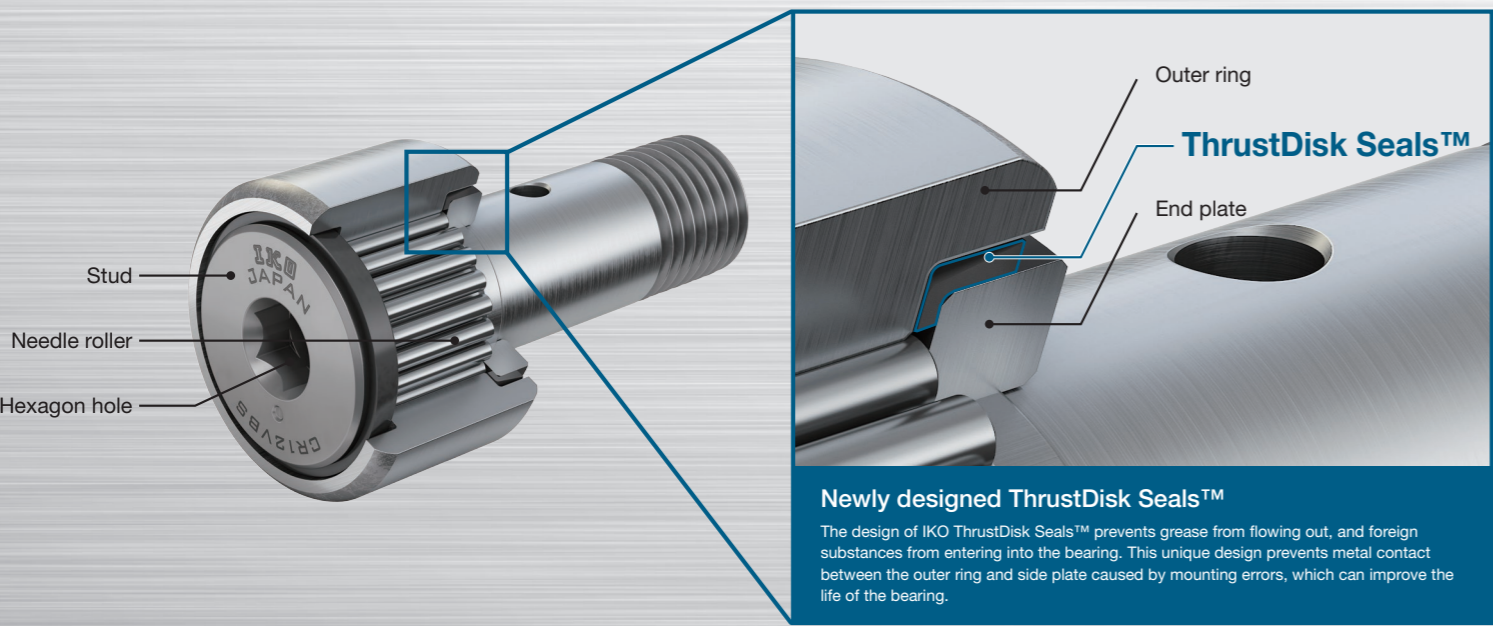
\* The specifications and dimensions of products in this catalog are subject to change without prior notice. • When these products are exported, the exporter should confirm a forwarding country and a use, and, in case of falling under the customer's requirements, take necessary procedures such as export 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.



# IKO Inch Series Cam Followers with ThrustDisk Seals™ now have a variety of sizes! Protects against internal bearing damage caused by mounting errors.

Sealed Type Inch Series Cam Followers  
with Integrated Thrust Washer  
**CR...VBS**

## Structure and Features of CR...VBS:



## Inch Series Cam Followers CR...B Variations

Name	Shape of stud head	Roller guide method	Seal structure	Shape of outer ring outside surface	Identification number	Size															
						8	8-1	10	10-1	12	14	16	18	20	22	24	26	28	30	32	36
Inch Series Cam Followers CR	With hexagon socket	Cage	Shield type	Crowned outer ring	CR...BR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	
				Cylindrical outer ring	CR...B	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			Sealed type	Crowned outer ring	CR...BUUR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				Cylindrical outer ring	CR...BUU	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
		Full complement	Shield type	Crowned outer ring	CR...VBR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				Cylindrical outer ring	CR...VB	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			Sealed type	Crowned outer ring	CR...VBUUR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
				Cylindrical outer ring	CR...VBUU	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
Sealed type with integrated thrust washer	Crowned outer ring	CR...VBSR	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			
	Cylindrical outer ring	CR...VBS	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○			

## Example of Identification Number

**CR 12 V B S R**  
(1) (2) (3) (4) (5) (6)

Note (1) The sealed type with ThrustDisk Seals™ is compatible with the full complement specification only.  
Note (2) Only the hexagon socket specification is compatible with the sealed type with ThrustDisk Seals™

(1) Model		(4) Shape of stud head (1)	
CR	Inch Series Cam Followers	No symbol	With screwdriver slot
		B	With hexagon socket

(2) Dimensions		(5) Seal structure	
The outer diameter of the outer ring is indicated in units of 1/16 inch.		No symbol	Shield type
		UU	Sealed type
		S	Sealed type with integrated thrust washer

(3) Roller guide method (1)		(6) Shape of outer ring outside surface	
No symbol	With cage	R	Crowned outer ring
V	Full complement	No symbol	Cylindrical outer ring

## Model Comparison Table

IKO	NTN	NSK	Mc.GILL
CR...VBR	CRV-H	CRBC...	CCF...B
CR...VB	CRV-XH	CRB...	CF...B
CR...VBUUR	CRV-LLH	CRSBC...	CCF...SB
CR...VBUU	CRV-XLLH	CRSB...	CF...SB
CR...VBSR	-	-	CCF...SB
CR...VBS	-	-	CF...SB

## Dimensions

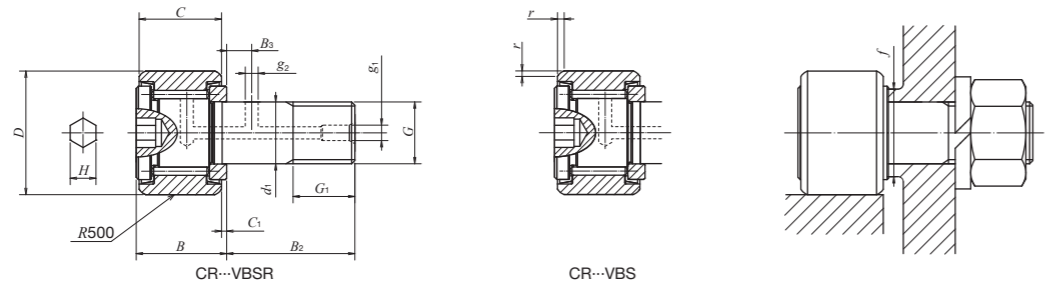


Table 1: Tolerance

Name	Inch Series Cam Followers	
	Crowned outer ring	Cylindrical outer ring
Outside dia. of outer ring D	0 -50	See Table 2
Stud diameter d <sub>1</sub>	+25 0	
Width of outer ring C	0 -130	

Table 2: Tolerance and allowance of outer ring (cylindrical outer ring)

D		$\Delta D_{mp}$		$V_{Dsp}$	$V_{Dmp}$	$K_{re}$
Nominal outside diameter of outer ring mm	Single plane mean outside diameter deviation	High	Low			
Over	Incl.			Outside diameter variation in a single radial plane (maximum)	Single plane mean bore diameter variation (maximum)	Radial runout (maximum)
6	18	0	-25	10	6	15
18	30			12	7	15
30	50			14	8	20
50	80			16	10	25

Stud diameter mm (inch)	Identification number		Mass (Ref.) g	Boundary dimensions mm (inch)														Mounting related dimensions	Maximum tightening torque	Basic dynamic load rating	Basic static load rating	Track capacity (1)		Radial internal clearance	
	Sealed type with integrated thrust washer	Crowned outer ring		Cylindrical outer ring	D	C	d <sub>1</sub>	G	G <sub>1</sub>	B max	B <sub>2</sub>	B <sub>3</sub>	C <sub>1</sub>	g <sub>1</sub>	g <sub>2</sub>	H	r					N	N	Min.	Maximum
4.826	CR8VBSR	CR8VBS	9	12.700 (1/2)	8.731 (11/32)	4.826	No.10-32	6.350 (1/4)	10.2 (0.40)	12.700 (1/2)	- (-)	- (-)	0.794 (1/32)	- (-)	- (-)	3.175 (1/8)	0.397 (1/64)	8.334 (21/64)	1.4	3 790	4 100	770	2 140	3	17
	CR8-1VBSR	CR8-1VBS	10	12.700 (1/2)	9.525 (3/8)	4.826	No.10-32	6.350 (1/4)	10.9 (0.43)	15.875 (5/8)	- (-)	- (-)	0.794 (1/32)	- (-)	- (-)	3.175 (1/8)	0.397 (1/64)	8.334 (21/64)	1.4	4 260	4 750	770	2 360	3	17
6.350 (1/4)	CR10VBSR	CR10VBS	19	15.875 (5/8)	10.319 (13/32)	6.350 (1/4)	1/4-28	7.938 (5/16)	11.8 (0.46)	15.875 (5/8)	- (-)	- (-)	0.794 (1/32)	- (-)	- (-)	3.175 (1/8)	0.397 (1/64)	11.509 (29/64)	3.4	5 310	6 780	1 030	3 210	5	20
	CR10-1VBSR	CR10-1VBS	21	15.875 (5/8)	11.112 (7/16)	6.350 (1/4)	1/4-28	7.938 (5/16)	12.5 (0.49)	19.050 (3/4)	- (-)	- (-)	0.794 (1/32)	- (-)	- (-)	3.175 (1/8)	0.397 (1/64)	11.509 (29/64)	3.4	5 830	7 660	1 030	3 480	5	20
9.525 (3/8)	CR12VBSR	CR12VBS	34	19.050 (3/4)	12.700 (1/2)	9.525 (3/8)	3/8-24	9.525 (3/8)	14.2 (0.56)	22.225 (7/8)	6.350 (1/4)	- (-)	0.794 (1/32)	4.762 (3/16)	2.381 (3/32)	4.762 (3/16)	0.794 (1/32)	13.494 (17/32)	10.8	7 400	11 100	1 340	4 500	5	25
	CR14VBSR	CR14VBS	45	22.225 (7/8)	12.700 (1/2)	9.525 (3/8)	3/8-24	9.525 (3/8)	14.2 (0.56)	22.225 (7/8)	6.350 (1/4)	- (-)	0.794 (1/32)	4.762 (3/16)	2.381 (3/32)	4.762 (3/16)	0.794 (1/32)	15.081 (19/32)	10.8	7 400	11 100	1 340	5 250	5	25
11.112 (7/16)	CR16VBSR	CR16VBS	73	25.400 (1)	15.875 (5/8)	11.112 (7/16)	7/16-20	12.700 (1/2)	17.3 (0.68)	25.400 (1)	6.350 (1/4)	- (-)	0.794 (1/32)	4.762 (3/16)	3.175 (3/32)	6.350 (5/16)	1.191 (3/64)	17.859 (45/64)	17.4	12 000	20 300	1 970	7 280	5	25
	CR18VBSR	CR18VBS	100	28.575 (1 1/8)	15.875 (5/8)	11.112 (7/16)	7/16-20	12.700 (1/2)	17.3 (0.68)	25.400 (1)	6.350 (1/4)	- (-)	0.794 (1/32)	4.762 (3/16)	3.175 (3/32)	6.350 (5/16)	1.588 (1/16)	19.050 (3/4)	17.4	12 000	20 300	2 300	7 710	5	25
12.700 (1/2)	CR20VBSR	CR20VBS	136	31.750 (1 1/4)	19.050 (3/4)	12.700 (1/2)	1/2-20	15.875 (5/8)	20.4 (0.80)	31.750 (1 1/4)	7.938 (5/16)	- (-)	0.794 (1/32)	4.762 (3/16)	3.175 (3/32)	6.350 (1/4)	1.588 (1/16)	21.828 (55/64)	27.7	22 000	29 000	2 680	10 700	5	25
	CR22VBSR	CR22VBS	159	34.925 (1 3/8)	19.050 (3/4)	12.700 (1/2)	1/2-20	15.875 (5/8)	20.4 (0.80)	31.750 (1 1/4)	7.938 (5/16)	- (-)	0.794 (1/32)	4.762 (3/16)	3.175 (3/32)	6.350 (1/4)	1.588 (1/16)	21.828 (55/64)	27.7	22 000	29 000	3 050	11 800	5	25
15.875 (5/8)	CR24VBSR	CR24VBS	230	38.100 (1 1/2)	22.225 (7/8)	15.875 (5/8)	5/8-18	19.050 (3/4)	23.6 (0.93)	38.100 (1 1/2)	9.525 (3/8)	- (-)	0.794 (1/32)	4.762 (3/16)	3.969 (5/32)	7.938 (5/16)	1.588 (1/16)	26.196 (11/64)	55.7	26 400	36 900	3 410	15 400	10	30
	CR26VBSR	CR26VBS	265	41.275 (1 5/8)	22.225 (7/8)	15.875 (5/8)	5/8-18	19.050 (3/4)	23.6 (0.93)	38.100 (1 1/2)	9.525 (3/8)	- (-)	0.794 (1/32)	4.762 (3/16)	3.969 (5/32)	7.938 (5/16)	1.588 (1/16)	26.196 (11/64)	55.7	26 400	36 900	3 820	16 700	10	30
19.050 (3/4)	CR28VBSR	CR28VBS	368	44.450 (1 3/4)	25.400 (1)	19.050 (3/4)	3/4-16	22.225 (7/8)	26.8 (1.06)	44.450 (1 3/4)	11.112 (7/16)	- (-)	0.794 (1/32)	4.762 (3/16)	3.969 (5/32)	7.938 (5/16)	1.588 (1/16)	32.543 (19/32)	100	32 200	49 500	4 210	21 000	10	30
	CR30VBSR	CR30VBS	413	47.625 (1 7/8)	25.400 (1)	19.050 (3/4)	3/4-16	22.225 (7/8)	26.8 (1.06)	44.450 (1 3/4)	11.112 (7/16)	- (-)	0.794 (1/32)	4.762 (3/16)	3.969 (5/32)	7.938 (5/16)	1.588 (1/16)	32.543 (19/32)	100	32 200	49 500	4 610	22 500	10	30
22.225 (7/8)	CR32VBSR	CR32VBS	620	50.800 (2)	31.750 (1 1/4)	22.225 (7/8)	7/8-14	25.400 (1)	33.5 (1.32)	50.800 (2)	12.700 (1/2)	- (-)	0.794 (1/32)	4.762 (3/16)	4.762 (3/16)	11.112 (7/16)	1.588 (1/16)	37.306 (115/32)	162	42 600	73 700	5 050	30 900	10	30
	CR36VBSR	CR36VBS	753	57.150 (2 1/4)	31.750 (1 1/4)	22.225 (7/8)	7/8-14	25.400 (1)	33.5 (1.32)	50.800 (2)	12.700 (1/2)	- (-)	0.794 (1/32)	4.762 (3/16)	4.762 (3/16)	11.112 (7/16)	1.588 (1/16)	37.306 (115/32)	162	42 600	73 700	5 900	34 700	10	30

Note (1) This is defined as the load which can be continuously applied without causing deformation or indentation on the mating member material when the outer ring makes contact with the mating track surface. Value when the mating surface hardness is 40HRc. 1N ≈ 0.102 kgf

Remarks: 1. No oil hole is provided if the stud diameter d<sub>1</sub> is 6.35 mm or less. An oil hole is provided for the outside surface and the end of the stud on other models. 2. Grease (Shell Lubricants Japan K.K. ALVANIA GREASE S2) is prepacked. 3. For the maximum allowable static load, please contact IKO. 4. This product includes a hexagon nut. If the nut should become loose, use a spring washer, self-locking nut, etc. 5. A mounting hole with a tolerance class of F7 is recommended for mounting the stud. The mounting hole diameter should be prepared without play in the fit area, especially when shock loads are applied. 6. The operating temperature range is from -20 to 80°C. 7. The allowable rotational speed is around d<sub>m</sub>=42000 for grease lubrication, and around d<sub>m</sub>=70000 for oil lubrication. If an axial load is applied, it is recommended to use 1/10 the d<sub>m</sub> value. 8. When mounting, do not hit the cam followers directly with a hammer, etc. It may lead to rotation failure or cracking.