

# IKO

New

Inch Series Cam Followers  
With ThrustDisk Seals™

# CR...VBS



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CAT-2954E

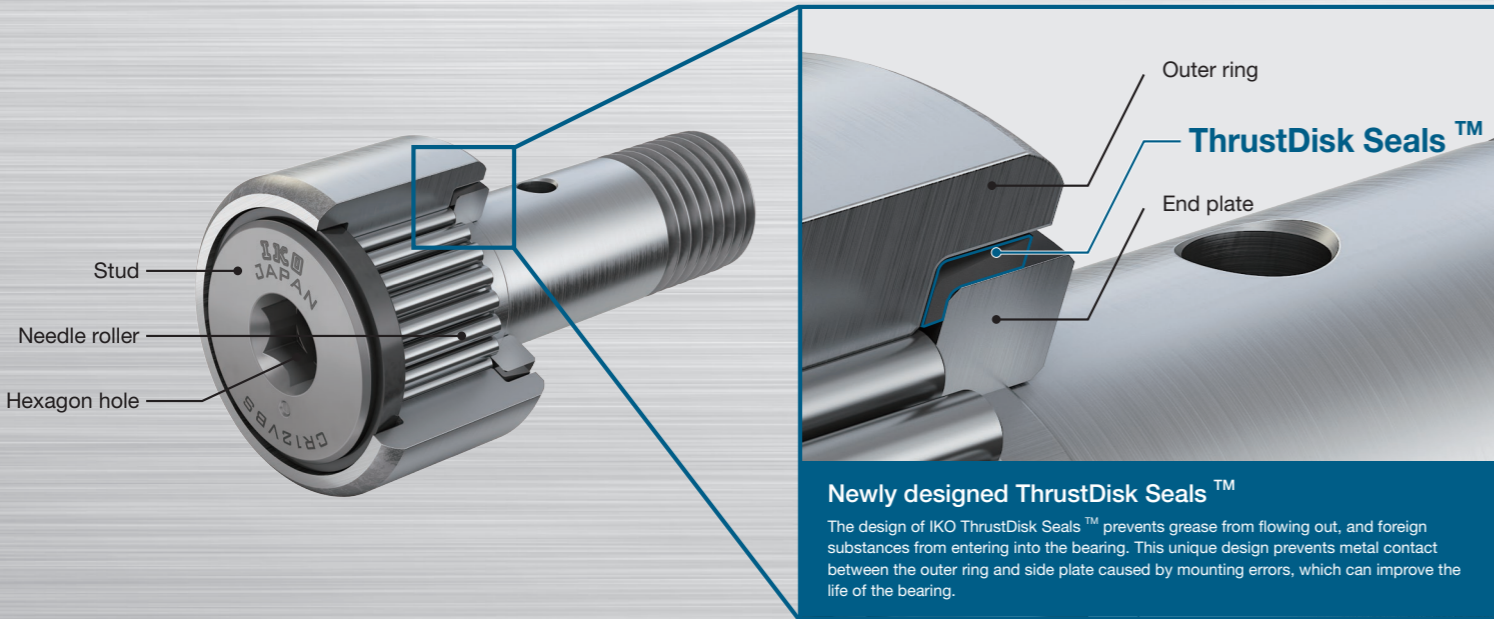
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NIPPON THOMPSON CO., LTD.

# IKO inch series cam followers, now available with new ThrustDisk Seals™, can prevent 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)

(1) Model		(4) Shape of stud head (f)	
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 (l)		(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

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

## Dimensions

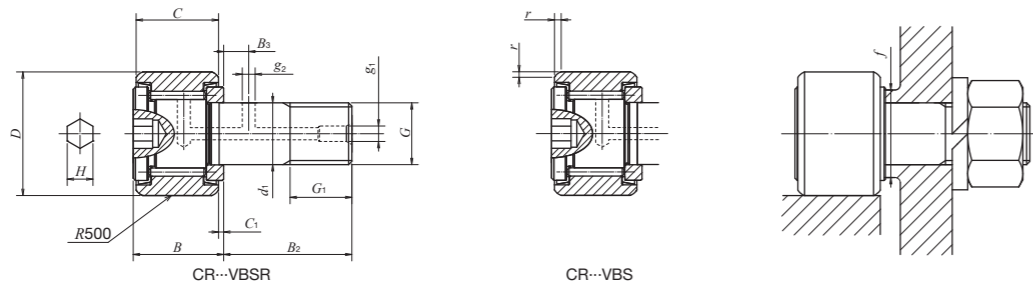


Table 1: Tolerance

Item	Inch Series Cam Followers	
	Crowned outer ring	Cylindrical outer ring
Outside dia. of outer ring $D$	0 -50	See Table 2
Stud diameter $d_1$	+25 0	
Width of outer ring $C$	0 -130	

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

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

Stud diameter mm (inch)	Identification number		Mass (Ref.) g	Boundary dimensions mm (inch)													Mounting related dimensions $f$ Minimum mm (inch)	Maximum tightening torque N-m	Basic dynamic load rating C N	Basic static load rating $C_0$ N	Track capacity (l)		Radial internal clearance $\mu$ m	
	Sealed type with integrated thrust washer			$D$	$C$	$d_1$	G UNF	$G_1$	$B_{max}$	$B_2$	$B_3$	$C_1$	$g_1$	$g_2$	$H$	$r$					Crowned outer ring	Cylindrical outer ring	Min.	Maximum
	Crowned outer ring	Cylindrical outer ring																						
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

Note (l) 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

- No oil hole is provided if the stud diameter  $d_1$  is 6.35 mm or less. An oil hole is provided for the outside surface and the end of the stud on other models.
- Grease (Shell Lubricants Japan K.K. ALVANIA GREASE S2) is prepacked.
- For the maximum allowable static load, please contact IKO.
- This product includes a hexagon nut. If the nut should become loose, use a spring washer, self-locking nut, etc.

- 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.
- The operating temperature range is from -20 to 80°C.
- The allowable rotational speed is around  $d_{in}=42000$  for grease lubrication, and around  $d_{in}=70000$  for oil lubrication. If an axial load is applied, it is recommended to use 1/10 the  $d_{in}$  value.
- When mounting, do not hit the cam followers directly with a hammer, etc. It may lead to rotation failure or cracking.