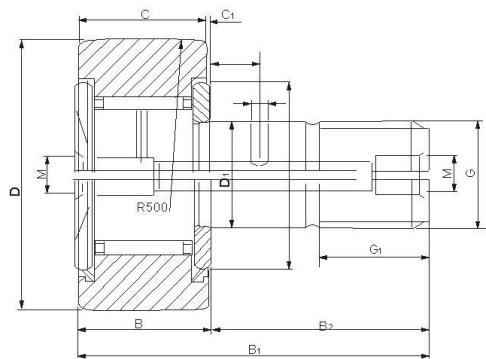


TURNUP



ROLLING WHEEL BEARING CATALOG

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Cam Followers

Se

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Roller Follower Series

Description

Advantage of Roller Followers
Identification Number
Load Rating and Life
Maximum Allowable Static Load
Accuracy
Clearance

Fit
Track Capacity
Allowable Rotational Speed
Lubrication
Oil Hole
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Dimension Tables

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Description

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Centralized Lubrication Type Cam Followers
Easy Mounting Type Cam Followers
Cylindrical Roller Cam Followers
Inch Series Cam Followers CR
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Ready-made Track for Cam Followers

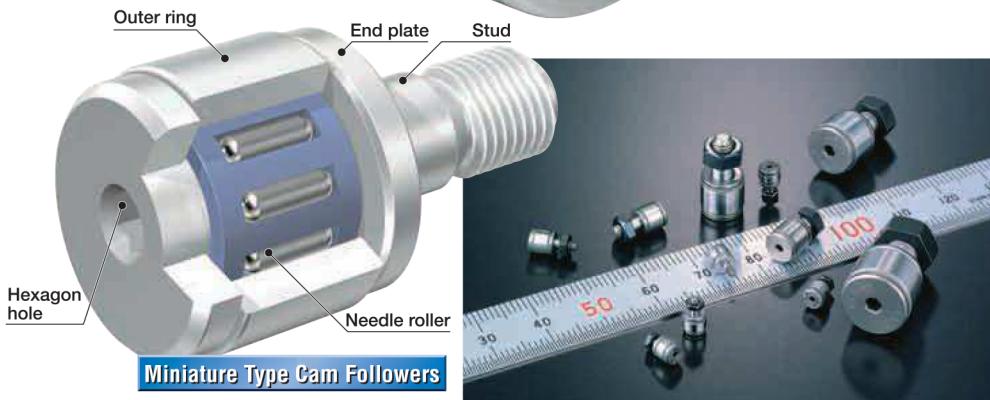
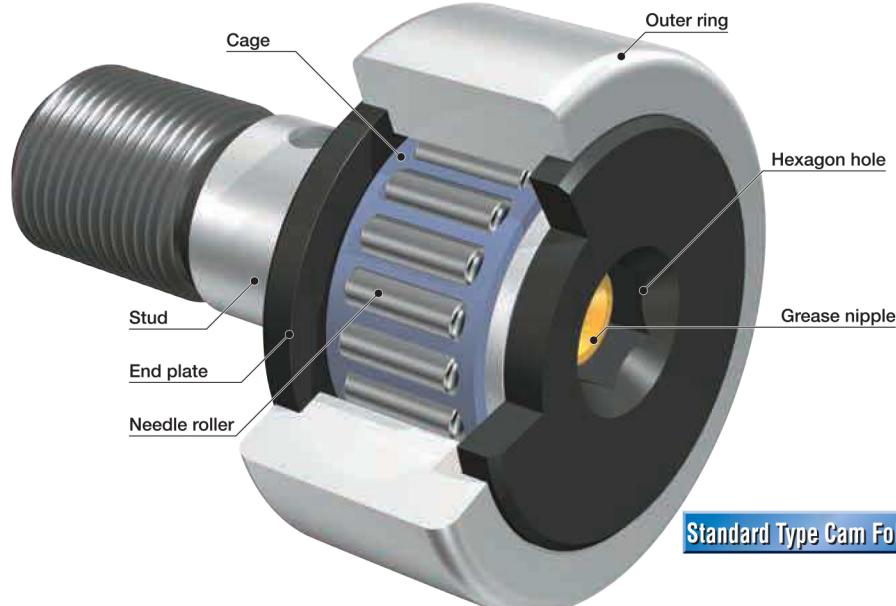
Cam Followers RoHS compliant

CF

Cam Followers are bearings provided with a stud in which needle rollers are assembled in a thick outer ring, having a small coefficient of friction and excellent rotating performance designed for outer ring rotation. These products having high rigidity and accuracy are widely used for machine tools, industrial robots, electronic parts, OA devices as follower bearings for various cam mechanisms and guide rollers for linear motion.

The head of the stud is provided with a hexagon hole so that it can be surely tightened with a hex wrench.

Its Turnup original lubrication structure permits a grease-up operation from the head of the stud, so this allows the user to make a system design freely without any limitation on the direction of lubrication.



Variety and Originality Cam Follower Series with reliability and actual operation results

The excellent features of

Cam Followers are presented below.

① Full product lineup

The product lineup including the miniature type with very small dimensions, type provided with a thrust washer strong in mounting error, and maintenance-free type with a prepacked solid lubricant is complete.

To page 7

② Abundant product specifications selectable for each application

The customer can select the optimum product specifications including material type, roller guide type, seal section structure, and external diameter surface of outer ring according to each application.

To page 13

③ Provided with a hexagon hole that facilitates mounting

The head of the stud is provided with a hexagon hole and this permits easy mounting with a hex wrench.

To page 15

④ original structure that permits lubrication from the head of the stud

Grease-up can be performed from the head of the stud though the product is provided with a hexagon hole. The direction of lubrication is not limited.

To page 16

⑤ C-Lube Unit for Cam Followers based on a new concept

C-Lube Unit to supply the lubricant to the external diameter surface of the outer ring and the track surface of Cam Followers.

If this product is combined with Cam Followers, periodic lubrication on the track surface is not required and friction and abrasion can be reduced.

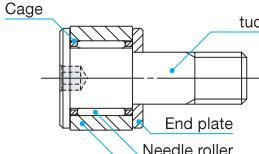
To page 17

1 Full product lineup 1

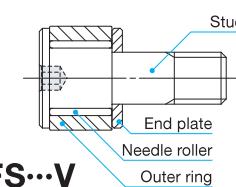
Miniature Type Cam Followers

CFS

In this bearing, very thin needle rollers are assembled in the outer ring. This product is designed as a compact type with a small external diameter of the outer ring for the stud diameter. The product is used in electronic parts, OA devices, miniature index devices, etc.



CFS



CFS...V



Stud diameter
2 to 6

Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Shield type UU Sealed type
Shape of outer ring	No symbol Cylindrical outer ring R Crowned outer ring

Thrust Disk Type Miniature Cam Followers

CFS...W

Miniature Type Cam Followers which is provided with a thrust disk made of special synthetic resin excellent in abrasion resistance and heat resistance. This product receives an axial load of the outer ring that is caused by mounting error to reduce friction and abrasion of the slide surface.

The smallest in the world !
Cam Followers with such a small stud diameter of 1.4mm !!



CFS1.4WV with a stud diameter of 1.4 mm and a small external diameter of only 4 mm of the outer ring. The built-in thrust disk receives an axial load of the outer ring that is caused by mounting error.

Five features of CFS1.4WV

- 1 The stud diameter is only $\phi 1.4\text{mm}$.
- 2 The external diameter of the outer ring is only $\phi 4\text{mm}$.
- 3 Provided with a hexagon hole that facilitates mounting
- 4 Full complement type with a large load capacity
- 5 Provided with a thrust disk that is strong in mounting error

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Stud diameter
1.4 to 6

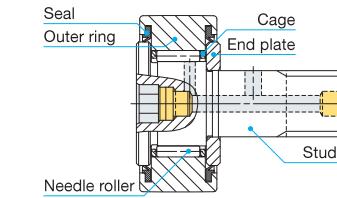
Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Shield type UU Sealed type
Shape of outer ring	No symbol Cylindrical outer ring R Crowned outer ring

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Standard Type Cam Followers

CF...B

This is a basic type of Cam Followers. The available size variation of stud diameter ranges from 3 mm min. to 30 mm max.



Stud diameter
3 to 30

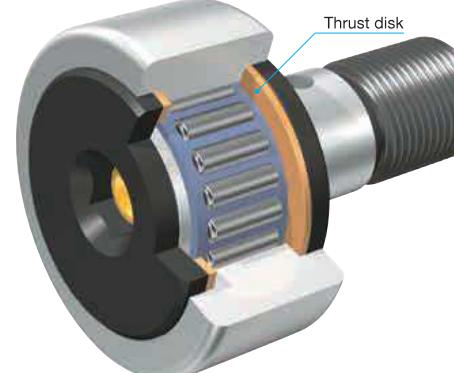
Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Shield type UU Sealed type
Shape of outer ring	No symbol Cylindrical outer ring R Crowned outer ring

To page
35

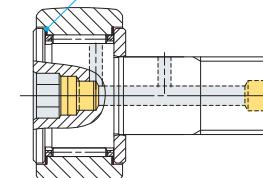
Thrust Disk Type Cam Followers

CF...WB

This product is provided with a thrust disk made of special synthetic resin excellent in abrasion resistance and heat resistance, so this thrust disk receives an axial load of the outer ring that is caused by mounting error to prevent the slide surface against friction and abrasion.



Thrust disk



Stud diameter
3 to 20

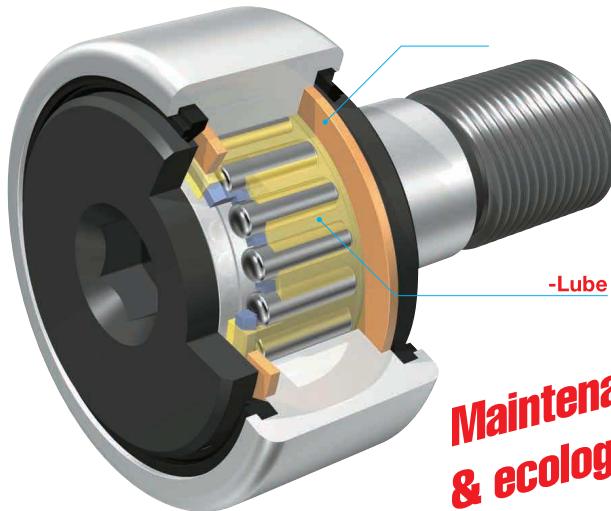
Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Shield type UU Sealed type
Shape of outer ring	No symbol Cylindrical outer ring R Crowned outer ring

To page
39

1

2

F...WB.../SG



Material type	
type	
Seal structure	



Maintenance-free
& ecology

« »

Sample	CF10WBUUR/SG
--------	--------------

100
75
50
25
0

min

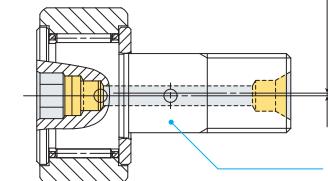
41

17

IJKO

5 to 20

FES...B

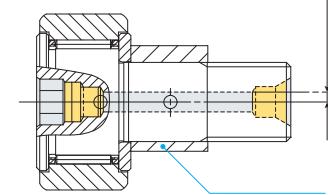


Material type	
type	
Seal structure	

43

6 to 18

FE...B



Material type	
type	
Seal structure	

45

6 to 30

41

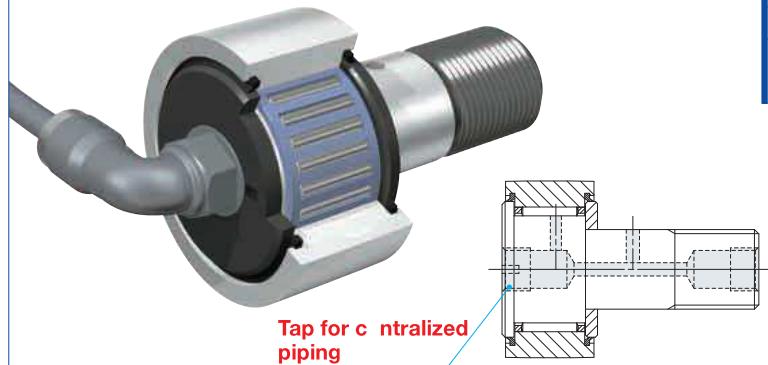
17

① Full product line p.3

Centralized Lubrication Type Cam Follow

CF-RU1, CF-FU1

A tap hole for centralized piping is made on the head of the stud. This product is most suitable for a position requiring centralized lubrication piping.



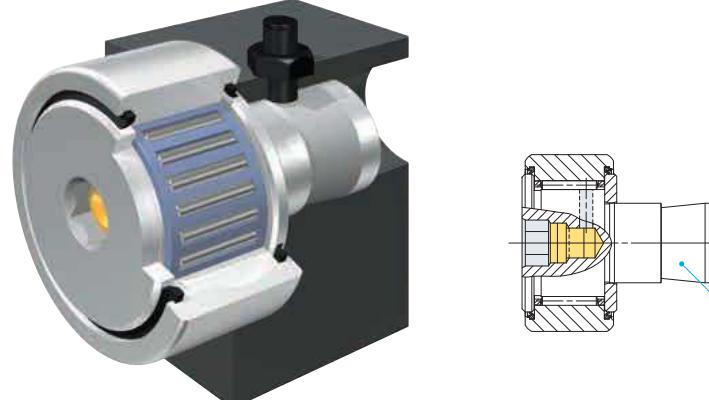
Stud diameter
↓
6 to 30
↑

Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Sealed type FU1 Sealed type
Shape of outer ring	FU1 Cylindrical outer ring RU1 Crowned outer ring

Easy Mounting Type Cam Follower

CF-SFU...B

Shouldering is already performed on the stud. This facilitates mounting to fix the shoulder portion with a set screw from the top surface. This product is most suitable for applications such as pallet changer.



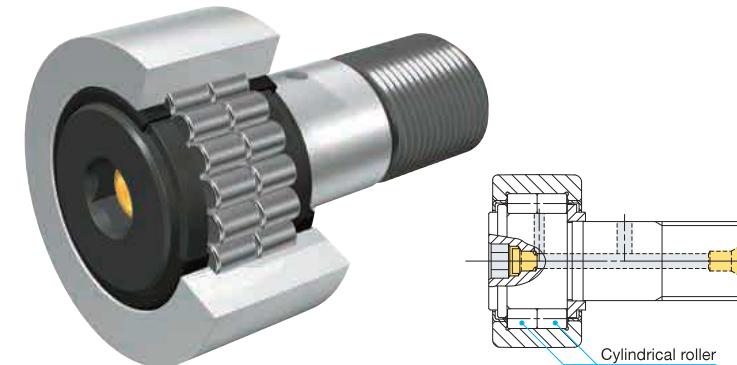
To page
49
↓
Stud diameter
6 to 20
↑

Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Sealed type FU1 Sealed type
Shape of outer ring	No symbol Cylindrical outer ring

Cylindrical Roller Cam Follower

NUCF...B

This product is a full complement bearing in which cylindrical rollers are assembled on the outer ring in a multiple-row form, and can receive a large radial load and a certain level of axial load.



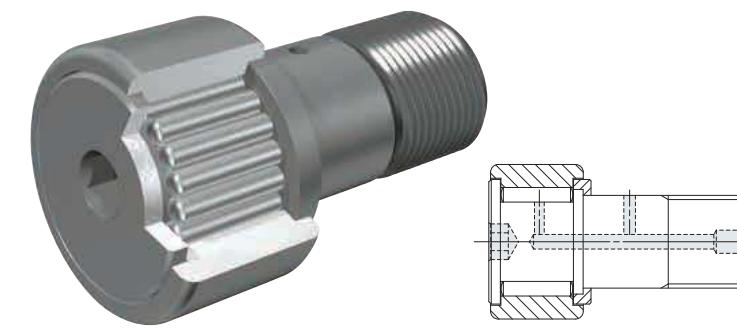
Stud diameter
↓
10 to 30
↑

Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Full complement V Caged
Seal structure	No symbol Shield type UU Sealed type
Shape of outer ring	No symbol Cylindrical outer ring R Crowned outer ring

Inch Series Cam Followers

CR...B, RH...B

The two types of Inch Series Cam Followers, CR and CRH, are lined up. The CRH type is applicable to a heavy load with a large rated load and has undergone black oxide film treatment.



To page
53
↓
Stud diameter
4.826 to 50.800
↑

Selectable product specifications	
Material type	No symbol Carbon steel F Stainless steel
Roller guide type	No symbol Caged V Full complement
Seal structure	No symbol Shield type UU Sealed type
Shape of outer ring	No symbol Cylindrical outer ring R Crowned outer ring

To page
55

2 abundant product specifications that can be selected according to each application

Product system of

Hex Head Type Cam Followers

	Material type	Roller guide type	Seal section structure	Shape of the external diameter surface of outer ring	Model number	Dimension table
Miniature Type Cam Followers CFS						
Carbon steel made	Caged	Shield type	Cylindrical outer ring	CFS		Page 31
	Full complement	Shield type	Cylindrical outer ring	CFS-V		Page 31
Stainless steel made	Caged	Shield type	Cylindrical outer ring	CFS-F		Page 31
	Full complement	Shield type	Cylindrical outer ring	CFS-FV		Page 31
Thrust Disk Type Miniature Cam Followers CFS-W						
Carbon steel made	Caged	Shield type	Cylindrical outer ring	CFS-W	2 - 6	Page 33
	Full complement	Shield type	Cylindrical outer ring	CFS-WV	1.4	Page 33
Stainless steel made	Caged	Shield type	Cylindrical outer ring	CFS-FW	2 - 6	Page 33
Standard Type Cam Followers CF-B						
Carbon steel made	Caged	Shield type	Crowned outer ring	CF-BR	3 - 30	Page 35
	Sealed type	Shield type	Cylindrical outer ring	CF-B	3 - 30	Page 35
	Sealed type	Crowned outer ring	CF-BUUR	3 - 30	Page 35	
Carbon steel made	Full complement	Shield type	Cylindrical outer ring	CF-BUU	3 - 30	Page 35
	Sealed type	Crowned outer ring	CF-VBR	6 - 30	Page 37	
	Sealed type	Cylindrical outer ring	CF-VB	6 - 30	Page 37	
	Sealed type	Crowned outer ring	CF-VBUUR	6 - 30	Page 37	
Stainless steel made	Caged	Shield type	Crowned outer ring	CF-VBUU	6 - 30	Page 37
	Sealed type	Crowned outer ring	CF-FBR	3 - 20	Page 35	
	Sealed type	Cylindrical outer ring	CF-FB	3 - 5	Page 35	
	Sealed type	Crowned outer ring	CF-FBUUR	3 - 20	Page 35	
	Sealed type	Cylindrical outer ring	CF-FBUU	3 - 5	Page 35	
Thrust Disk Type Cam Followers CF-WB						
Carbon steel made	Caged	Shield type	Crowned outer ring	CF-WBR	3 - 20	Page 39
	Sealed type	Crowned outer ring	CF-WBUUR	3 - 20	Page 39	
Stainless steel made	Caged	Shield type	Crowned outer ring	CF-FWBR	3 - 5	Page 39
	Sealed type	Crowned outer ring	CF-FWBUUR	3 - 5	Page 39	
C-Lube Cam Followers CF-WB-SG						
Carbon steel made	Caged	Sealed type	Crowned outer ring	CF-WBUUR/SG	5 - 20	Page 41
Solid Eccentric Stud Type Cam Followers CFES-B						
Carbon steel made	Caged	Shield type	Crowned outer ring	CFES-BR	6 - 18	Page 43
	Sealed type	Crowned outer ring	CFES-B	6 - 18	Page 43	
	Sealed type	Cylindrical outer ring	CFES-BUUR	6 - 18	Page 43	
	Sealed type	Cylindrical outer ring	CFES-BUU	6 - 18	Page 43	
Eccentric Type Cam Followers CFE-B						
Carbon steel made	Caged	Shield type	Crowned outer ring	CFE-BR	6 - 30	Page 45
	Sealed type	Cylindrical outer ring	CFE-B	6 - 30	Page 45	
	Sealed type	Crowned outer ring	CFE-BUUR	6 - 30	Page 45	
	Sealed type	Cylindrical outer ring	CFE-BUU	6 - 30	Page 45	
Carbon steel made	Full complement	Shield type	Crowned outer ring	CFE-VBR	6 - 30	Page 47
	Sealed type	Cylindrical outer ring	CFE-VB	6 - 30	Page 47	
	Sealed type	Crowned outer ring	CFE-VBUUR	6 - 30	Page 47	
	Sealed type	Cylindrical outer ring	CFE-VBUU	6 - 30	Page 47	
Centralized Lubrication Type Cam Followers CF-RU1 CF-FU1						
Carbon steel made	Caged	Sealed type	Crowned outer ring	CF-RU1	6 - 30	Page 49
	Sealed type	Cylindrical outer ring	CF-FU1	6 - 30	Page 49	
Easy Mounting Type Cam Followers CF-SFU-B						
Carbon steel made	Caged	Sealed type	Cylindrical outer ring	CF-SFU-B	6 - 20	Page 51
Cylindrical Roller Cam Followers NUCF-B						
Carbon steel made	Full complement	Shield type	Crowned outer ring	NUCF-BR	10 - 30	Page 53

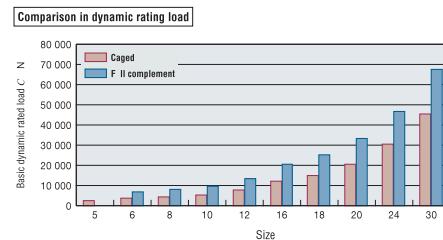
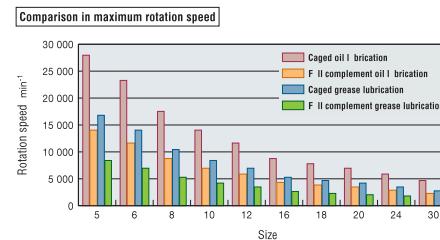
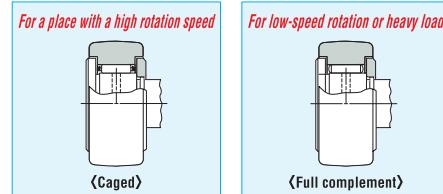
* For the product system of Inch Series Cam Followers, refer to the dimension tables on page 55 to page 66.

Material type



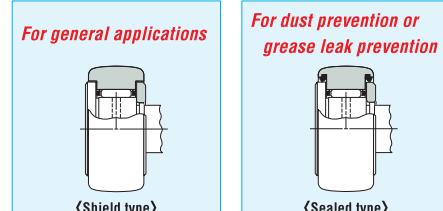
Roller guide type

The caged type has a small coefficient of friction and is suitable for high-speed rotation.
The full complement type is suitable for low-speed rotation, rocking motion, and places to which a heavy load is applied.



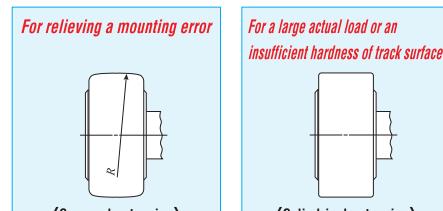
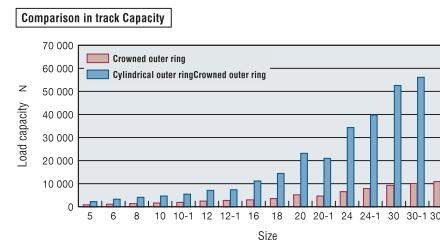
Seal section structure

The shield type reduces the clearance between the outer ring and stud collar section and between the outer ring and end plate, forming a labyrinth.
The sealed type consists of seals to prevent foreign substances from entering.



Shape of the external diameter surface of outer ring

The crowned outer ring is effective in relieving an end load due to mounting error.
The cylindrical outer ring is suitable for the case where the actual load is large or the track surface is not so hard.



③ Hexagonal head type that can be easily mounted

Tightening can be surely performed on the head of the stud from the hexagon hole with a hex wrench.

Mounting can also be performed easily to greatly improve the workability.

Stud tightening can be performed easily and surely with a hex wrench.



Series to which the hex head type is applicable

Series name	Type	Stud diameter (mm)
Miniature Type Cam Followers	CFS	2 to 6
Thrust Disk Type Miniature Cam Followers	CFS-W	1.4 to 6
Standard Type Cam Followers	CF-B	3 to 30
Thrust Disk Type Cam Followers	CF-WB	3 to 20
C-Lube Cam Followers	CF-WB-SG	5 to 20
Solid Eccentric Stud Type Cam Followers	CFE-B	6 to 18
Eccentric Type Cam Followers	CFE-B	6 to 30
Easy Mounting Type Cam Followers	CF-SFU-B	6 to 20
Cylindrical Roller Cam Followers	NUCF-B	10 to 30
Inch Series Cam Followers	CR-B, CR-B	4.826 to 50.800

* Centralized Lubrication Type Cam Followers have a screw driverslot.

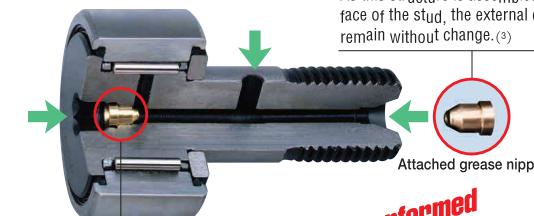
④ Original structure that permits lubrication from the head of the stud

Original lubrication structure

Cam Followers with Hexagon Hole permit lubrication from the head of the stud.⁽¹⁾

3 Way

Stud dia. 12 to 30mm⁽²⁾

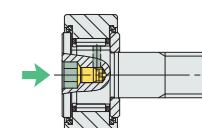


As this structure is assembled in the end face of the stud, the external dimensions remain without change.⁽³⁾

Lubrication can be performed from any of 3 directions with the same external dimensions.

1 Way

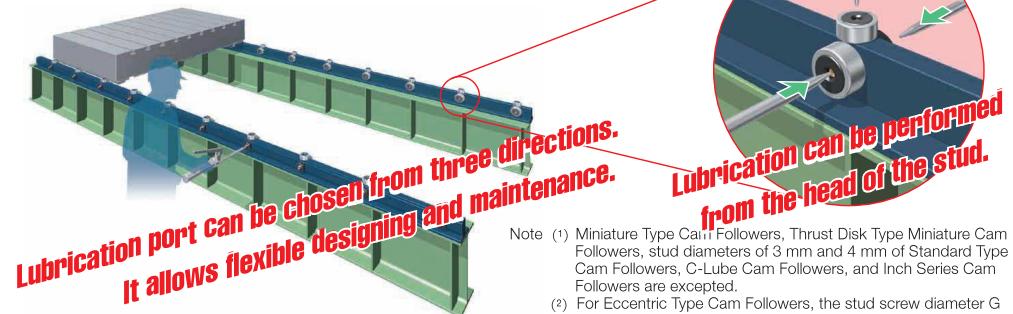
Stud dia. 5 to 10mm



The nipple at the end of the stud is kindly designed so as to avoid any projection.



It is also unnecessary to select the cap or grease nipple according to the direction of lubrication.



Note (1) Miniature Type Cam Followers, Thrust Disk Type Miniature Cam Followers, stud diameters of 3 mm and 4 mm of Standard Type Cam Followers, C-Lube Cam Followers, and Inch Series Cam Followers are excepted.

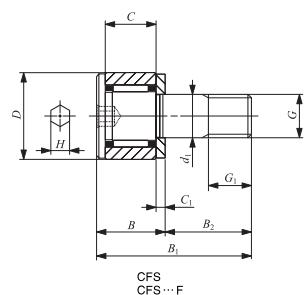
(2) For Eccentric Type Cam Followers, the stud screw diameter G shown in the dimension table is applied. For Easy Mounting Type Cam Followers, the 1-way type is applied to all the sizes.

(3) The grease nipple on the end face side of the stud is attached as an accessory.

i iatu e Type Cam Followe With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring

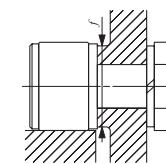
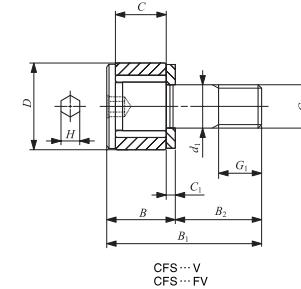


Stud dia. mm	Identification number		Mass (Ref.) g	Boundary dimensions mm					
	With cage	Full complement		D	C	d ₁	G	G ₁	B
2	CFS 2	—	0.6	4.5	2.5	2	M2 × 0.4	2	4
	—	CFS 2 V							
	CFS 2 F	—							
2.5	—	CFS 2 FV	1	5	3	2.5	M2.5 × 0.45	2.5	4.5
	CFS 2.5	—							
	—	CFS 2.5 V							
3	—	CFS 2.5 FV	2	6	4	3	M3 × 0.5	3	5.5
	CFS 3	—							
	—	CFS 3 V							
4	—	CFS 3 FV	4	8	5	4	M4 × 0.7	4	7
	CFS 4	—							
	—	CFS 4 V							
5	—	CFS 4 FV	7	10	6	5	M5 × 0.8	5	8
	CFS 5	—							
	—	CFS 5 V							
6	—	CFS 5 FV	13	12	7	6	M6 × 1	6	9.5
	CFS 6	—							
	—	CFS 6 V							
	—	CFS 6 FV							

Remarks 1. No oil hole is provided.

2. Provided with prepacked grease.

3. A nut is supplied with the stud.

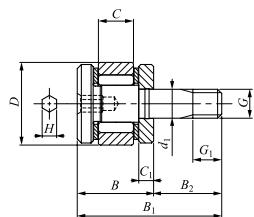


B_1	B_2	C_1	H	Mounting dimension f Min. mm	Maximum tightening torque N-cm	Basic dynamic load rating C N	Basic static load rating C_0 N	Maximum allowable static load N
8	4	0.7	0.9	4.3	9.1	288	202	202
						768	734	229
9.5	5	0.7	0.9	4.8	18.7	230	161	161
						614	587	229
11.5	6	0.7	1.3	5.8	33.5	428	351	351
						1 000	1 080	360
15	8	1.0	1.5	7.7	77.7	342	281	281
						800	862	360
18	10	1.0	2	9.6	158	629	611	484
						1 420	1 790	484
21.5	12	1.2	2.5	11.6	268	504	488	484
						1 140	1 430	484
						1 120	1 120	919
						2 370	3 000	919
						897	894	894
						1 900	2 400	919
						1 570	1 850	1 570
						3 180	4 700	1 570
						1 250	1 480	1 480
						2 540	3 760	1 570
						2 090	2 200	2 150
						4 610	6 250	2 150
						1 670	1 760	1 760
						3 690	5 000	2 150

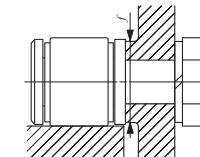
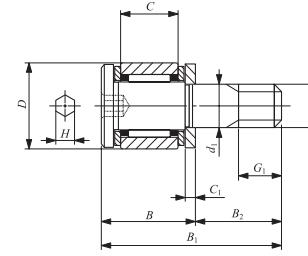
Thru t Disk Type Miniature Cam Followe s With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



CFS1.4 WV



Stud dia. mm	Identification number		Mass (Ref.) g	Boundary dimensions mm					
	With cage	Full complement		D	C	d ₁	G	G ₁	B
1.4	—	CFS 1.4 WV	0.35		.7	.4	M1.4 × 0.3	1.4	3.7
2	CFS 2 W	—	0.6	.5	2.5	2	M2 × 0.4	2	4.5
	CFS 2 FW	—							
2.5	CFS 2.5 W	—	1	5	3	2.5	M2.5 × 0.45	2.5	5
	CFS 2.5 FW	—							
3	CFS 3 W	—	2	6	4	3	M3 × 0.5	3	6.5
	CFS 3 FW	—							
4	CFS 4 W	—	4	8	5	4	M4 × 0.7	4	8
	CFS 4 FW	—							
5	CFS 5 W	—	7	10	6	5	M5 × 0.8	5	9
	CFS 5 FW	—							
6	CFS 6 W	—	13	12	7	6	M6 × 1	6	10.5
	CFS 6 FW	—							

Remarks: 1. No oil hole is provided.

2. Provided with prepacked grease.

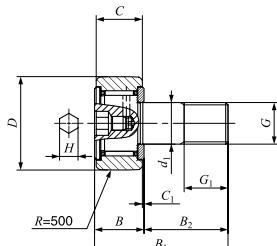
3. A nut is supplied with the stud.

B ₁	B ₂	C ₁	H	Mounting dimension f Min. mm	Maximum tightening torque N-cm	Basic dynamic load rating C	Basic static load rating C ₀	Maximum allowable static load
						N	N	N
7	3.3	0.7	0.9	3.8	3.0	8	385	05
						88	0	9
8.5	4	0.7	0.9	4.3	9.1	30	6	6
						8	35	33
10	5	0.7	0.9	4.8	18.7	3	8	8
						6 9	6	399
12.5	6	0.7	1.3	5.8	33.5	50	88	399
						0	0	785
16	8	1.0	1.5	7.7	77.7	897	89	785
						570	850	370
19	10	1.0	2	9.6	158	50	80	370
						090	00	90
22.5	12	1.2	2.5	11.6	268	670	760	760

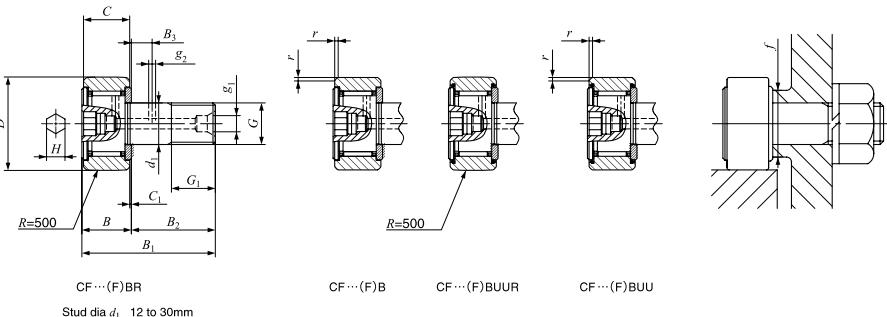
Standard Type Item Follows With Cage/With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



CF…(F)BR
Stud dia d_1 3 to 10mm



CF…(F)BR CF…(F)B CF…(F)BUUR CF…(F)BUU

Stud dia. mm	Identification number				Mass (Ref.) g						
	Shield type		Sealed type			D	C	d_1	G	G_1	
	W th crowned outer ring	W th cyl ndr cal outer ring	W th crowned outer ring	W th cyl ndr cal outer ring							
3	CF 3 BR	CF 3 B	CF 3 BUUR	CF 3 BUU	4.3	10	7	3	M 3 × 0.5	5	
	CF 3 FBR	CF 3 FB	CF 3 FBUUR	CF 3 FBUU	4.3	10	7	3	M 3 × 0.5	5	
4	CF 4 BR	CF 4 B	CF 4 BUUR	CF 4 BUU	7.4	12	8	4	M 4 × 0.7	6	
	CF 4 FBR	CF 4 FB	CF 4 FBUUR	CF 4 FBUU	7.4	12	8	4	M 4 × 0.7	6	
5	CF 5 BR	CF 5 B	CF 5 BUUR	CF 5 BUU	10.3	13	9	5	M 5 × 0.8	7.5	
	CF 5 FBR	CF 5 FB	CF 5 FBUUR	CF 5 FBUU	10.3	13	9	5	M 5 × 0.8	7.5	
6	CF 6 BR	CF 6 B	CF 6 BUUR	CF 6 BUU	18.5	16	11	6	M 6 × 1	8	
	CF 6 FBR	—	CF 6 FBUUR	—	18.5	16	11	6	M 6 × 1	8	
8	CF 8 BR	CF 8 B	CF 8 BUUR	CF 8 BUU	28.5	19	11	8	M 8 × 1.25	10	
	CF 8 BRM	CF 8 BM	CF 8 BUURM	CF 8 BUUM	28.5	19	11	8	M 8 × 1	10	
	CF 8 FBR	—	CF 8 FBUUR	—	28.5	19	11	8	M 8 × 1.25	10	
10	CF 10 BR	CF 10 B	CF 10 BUUR	CF 10 BUU	45	22	12	10	M 10 × 1.25	12	
	CF 10 BRM	CF 10 BM	CF 10 BUURM	CF 10 BUUM	45	22	12	10	M 10 × 1	12	
	CF 10 FBR	—	CF 10 FBUUR	—	45	22	12	10	M 10 × 1.25	12	
	CF 10-1 BR	CF 10-1 B	CF 10-1 BUUR	CF 10-1 BUU	60	26	12	10	M 10 × 1.25	12	
	CF 10-1 BRM	CF 10-1 BM	CF 10-1 BUURM	CF 10-1 BUUM	60	26	12	10	M 10 × 1	12	
12	CF 12 BR	CF 12 B	CF 12 BUUR	CF 12 BUU	95	30	14	12	M 12 × 1.5	13	
	CF 12 FBR	—	CF 12 FBUUR	—	95	30	14	12	M 12 × 1.5	13	
	CF 12-1 BR	CF 12-1 B	CF 12-1 BUUR	CF 12-1 BUU	105	32	14	12	M 12 × 1.5	13	
16	CF 16 BR	CF 16 B	CF 16 BUUR	CF 16 BUU	170	35	18	16	M 16 × 1.5	17	
	CF 16 FBR	—	CF 16 FBUUR	—	170	35	18	16	M 16 × 1.5	17	
18	CF 18 BR	CF 18 B	CF 18 BUUR	CF 18 BUU	250	40	20	18	M 18 × 1.5	19	
	CF 18 FBR	—	CF 18 FBUUR	—	250	40	20	18	M 18 × 1.5	19	
20	CF 20 BR	CF 20 B	CF 20 BUUR	CF 20 BUU	460	52	24	20	M 20 × 1.5	21	
	CF 20 FBR	—	CF 20 FBUUR	—	460	52	24	20	M 20 × 1.5	21	
	CF 20-1 BR	CF 20-1 B	CF 20-1 BUUR	CF 20-1 BUU	385	47	24	20	M 20 × 1.5	21	
24	CF 24 BR	CF 24 B	CF 24 BUUR	CF 24 BUU	815	62	29	24	M 24 × 1.5	25	
	CF 24-1 BR	CF 24-1 B	CF 24-1 BUUR	CF 24-1 BUU	1140	72	29	24	M 24 × 1.5	25	
30	CF 30 BR	CF 30 B	CF 30 BUUR	CF 30 BUU	1870	80	35	30	M 30 × 1.5	32	
	CF 30-1 BR	CF 30-1 B	CF 30-1 BUUR	CF 30-1 BUU	2030	85	35	30	M 30 × 1.5	32	
	CF 30-2 BR	CF 30-2 B	CF 30-2 BUUR	CF 30-2 BUU	2220	90	35	30	M 30 × 1.5	32	

Note⁽¹⁾: Minimum allowable value of chamfer dimension r

Remarks 1. Models with a stud diameter d_1 of 4 mm or less have no oil hole. For models with a stud dia. 5 to 10mm, oil hole (re-greasing fitting) is provided at the head. Other models are provided with an oil hole (grease nipple) at the head and an oil hole each on the outside surface and end surface of the stud.

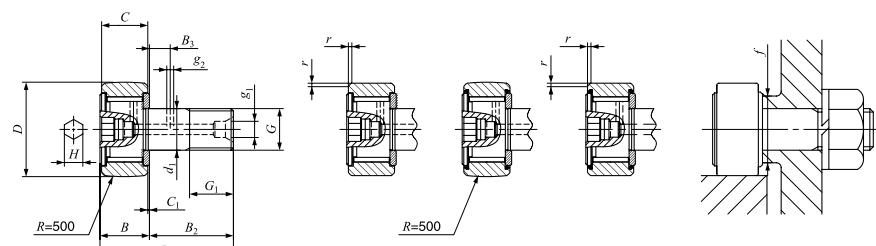
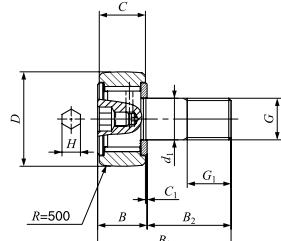
2. Shield type models with a stud diameter d_1 of 10mm or less and the sealed type models are provided with prepacked grease. Other models are not provided with prepacked grease. Perform proper lubrication for use.

B	B_1	B_2	B_3	C_1	g_1	g_2	H	$r_{s\ min}^{(1)}$	ounting dimension f Min. mm	maximum tightening torque	Bas c dynamic load rating C	Bas c static load rating C_0	maximum allowable static load N
									N-m				
8	17	9	—	0.5	—	—	2	0.2	6.8	0.34	1 500	1 020	384
8	17	9	—	0.5	—	—	2	0.2	6.8	0.34	1 200	813	384
9	20	11	—	0.5	—	—	2.5	0.3	8.3	0.78	2 070	1 590	834
9	20	11	—	0.5	—	—	2.5	0.3	8.3	0.78	1 650	1 270	834
10	23	13	—	0.5	—	—	3	0.3	9.3	1.6	2 520	2 140	1 260
10	23	13	—	0.5	—	—	3	0.3	9.3	1.6	1 930	1 730	1 260
12.2max	28.2max	16	—	0.6	—	—	3	0.3	11	2.7	3 660	3 650	1 950
12.2max	28.2max	16	—	0.6	—	—	3	—	11	2.7	2 930	2 920	1 950
12.2max	32.2max	20	—	0.6	—	—	4	0.3	13	6.5	4 250	4 740	4 620
12.2max	32.2max	20	—	0.6	—	—	4	0.3	13	7.1	4 250	4 740	4 620
12.2max	32.2max	20	—	0.6	—	—	4	—	13	6.5	3 400	3 790	3 790
13.2max	36.2max	23	—	0.6	—	—	4	0.3	16	13.8	5 430	6 890	6 890
13.2max	36.2max	23	—	0.6	—	—	4	0.3	16	14.7	5 430	6 890	6 890
13.2max	36.2max	23	—	0.6	—	—	4	—	16	13.8	4 340	5 510	5 510
13.2max	36.2max	23	—	0.6	—	—	5	0.3	16	13.8	5 430	6 890	6 890
13.2max	36.2max	23	—	0.6	—	—	4	0.3	16	14.7	5 430	6 890	6 890
15.2max	40.2max	25	6	0.6	4	3	6	0.6	21	21.9	7 910	9 790	9 790
15.2max	40.2max	25	6	0.6	4	3	6	—	21	21.9	6 330	7 830	7 830
15.2max	40.2max	25	6	0.6	4	3	6	0.6	21	21.9	7 910	9 790	9 790
19.6max	52.1max	32.5	8	0.8	4	3	6	0.6	26	58.5	12 000	18 300	18 300
19.6max	52.1max	32.5	8	0.8	4	3	6	—	26	58.5	9 620	14 700	14 700
21.6max	58.1max	36.5	8	0.8	6	3	8	1	29	86.2	14 800	25 200	25 200
21.6max	58.1max	36.5	8	0.8	6	3	8	—	29	86.2	11 800	20 200	20 200
25.6max	66.1max	40.5	9	0.8	6	4	8	1	34	119	20 700	34 600	34 600
25.6max	66.1max	40.5	9	0.8	6	4	8	—	34	119	16 500	27 700	27 700
25.6max	66.1max	40.5	9	0.8	6	4	8	1	34	119	20 700	34 600	34 600
30.6max	80.1max	49.5	11	0.8	6	4	12	1	40	215	30 500	52 600	52 000
30.6max	80.1max	49.5	11	0.8	6	4	12	1	40	215	30 500	52 600	52 000
37 max	100 max	63	15	1	6	4	17	1	49	438	45 400	85 100	85 100
37 max	100 max	63	15	1	6	4	17	1	49	438	45 400	85 100	85 100
37 max	100 max	63	15	1	6	4	17	1	49	438	45 400	85 100	85 100

Standard Type Item Follows Full Complement Type/With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



Stud dia. mm	Identification number				Mass (Ref.) g	D	C	d_1			
	Shield type		Sealed type								
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring							
6	CF 6 VBR	CF 6 VB	CF 6 VBUUR	CF 6 VBUU	19	16	11	6			
8	CF 8 VBR	CF 8 VB	CF 8 VBUUR	CF 8 VBUU	29	19	11	8			
	CF 8 VBRM	CF 8 VBM	CF 8 VBUURM	CF 8 VBUUM	29	19	11	8			
10	CF 10 VBR	CF 10 VB	CF 10 VBUUR	CF 10 VBUU	46	22	12	10			
	CF 10 VBRM	CF 10 VBM	CF 10 VBUURM	CF 10 VBUUM	46	22	12	10			
	CF 10-1 VBR	CF 10-1 VBM	CF 10-1 VBUUR	CF 10-1 VBUU	61	26	12	10			
	CF 10-1 VBRM	CF 10-1 VBM	CF 10-1 VBUURM	CF 10-1 VBUUM	61	26	12	10			
12	CF 12 VBR	CF 12 VB	CF 12 VBUUR	CF 12 VBUU	97	30	14	12			
	CF 12-1 VBR	CF 12-1 VB	CF 12-1 VBUUR	CF 12-1 VBUU	107	32	14	12			
16	CF 16 VBR	CF 16 VB	CF 16 VBUUR	CF 16 VBUU	173	35	18	16			
18	CF 18 VBR	CF 18 VB	CF 18 VBUUR	CF 18 VBUU	255	40	20	18			
20	CF 20 VBR	CF 20 VB	CF 20 VBUUR	CF 20 VBUU	465	52	24	20			
	CF 20-1 VBR	CF 20-1 VB	CF 20-1 VBUUR	CF 20-1 VBUU	390	47	24	20			
24	CF 24 VBR	CF 24 VB	CF 24 VBUUR	CF 24 VBUU	820	62	29	24			
	CF 24-1 VBR	CF 24-1 VB	CF 24-1 VBUUR	CF 24-1 VBUU	1140	72	29	24			
30	CF 30 VBR	CF 30 VB	CF 30 VBUUR	CF 30 VBUU	1 870	80	35	30			
	CF 30-1 VBR	CF 30-1 VB	CF 30-1 VBUUR	CF 30-1 VBUU	2 030	85	35	30			
	CF 30-2 VBR	CF 30-2 VB	CF 30-2 VBUUR	CF 30-2 VBUU	2 220	90	35	30			

Note⁽¹⁾ Minimum allowable value of chamfer dimension r

Remarks 1. Models with a stud diameter d_1 of 10 mm or less have an oil hole (re-greasing fitting) at the head. Other models are provided with an oil hole (grease nipple) at the head and an oil hole each on the outside surface and end surface of the stud.

2. Provided with prepacked grease.

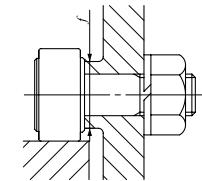
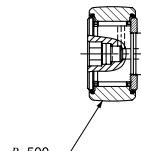
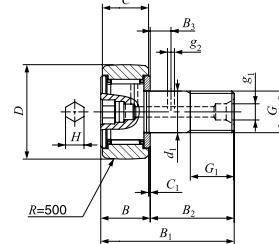
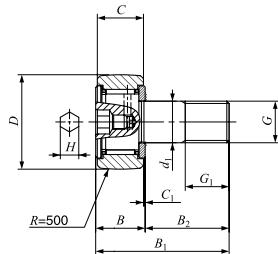
3. A nut is supplied with the stud.

Boundary dimensions mm											Mounting dimension f	Maximum tightening torque	Basic dynamic load rating C	Basic static load rating C_0	Maximum allowable static load
G	G_1	B_{max}	B_{1max}	B_2	B_3	C_1	g_1	g_2	H	$r_{smin}^{(1)}$	Min. mm	N·m	N	N	N
M 6 × 1	8	12.2	28.2	16	—	0.6	—	—	3	0.3	11	2.7	6 980	8 500	1 950
M 8 × 1.25	10	12.2	32.2	20	—	0.6	—	—	4	0.3	13	6.5	8 170	11 200	4 620
M 8 × 1	10	12.2	32.2	20	—	0.6	—	—	4	0.3	13	7.1	8 170	11 200	4 620
M10 × 1.25	12	13.2	36.2	23	—	0.6	—	—	4	0.3	16	13.8	9 570	14 500	8 650
M10 × 1	12	13.2	36.2	23	—	0.6	—	—	4	0.3	16	14.7	9 570	14 500	8 650
M10 × 1.25	12	13.2	36.2	23	—	0.6	—	—	4	0.3	16	13.8	9 570	14 500	8 650
M10 × 1	12	13.2	36.2	23	—	0.6	—	—	4	0.3	16	14.7	9 570	14 500	8 650
M12 × 1.5	13	15.2	40.2	25	6	0.6	4	3	6	0.6	21	21.9	13 500	19 700	13 200
M12 × 1.5	13	15.2	40.2	25	6	0.6	4	3	6	0.6	21	21.9	13 500	19 700	13 200
M16 × 1.5	17	19.6	52.1	32.5	8	0.8	4	3	6	0.6	26	58.5	20 700	37 600	23 200
M18 × 1.5	19	21.6	58.1	36.5	8	0.8	6	3	8	1	29	86.2	25 300	51 300	31 100
M20 × 1.5	21	25.6	66.1	40.5	9	0.8	6	4	8	1	34	119	33 200	64 500	37 500
M20 × 1.5	21	25.6	66.1	40.5	9	0.8	6	4	8	1	34	119	33 200	64 500	37 500
M24 × 1.5	25	30.6	80.1	49.5	11	0.8	6	4	12	1	40	215	46 600	92 000	52 000
M24 × 1.5	25	30.6	80.1	49.5	11	0.8	6	4	12	1	40	215	46 600	92 000	52 000
M30 × 1.5	32	37	100	63	15	1	6	4	17	1	49	438	67 700	144 000	85 900
M30 × 1.5	32	37	100	63	15	1	6	4	17	1	49	438	67 700	144 000	85 900
M30 × 1.5	32	37	100	63	15	1	6	4	17	1	49	438	67 700	144 000	85 900

Thru-Disk Type Cam Follower With Cage/With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



Stud dia. mm	Identification number		Mass (Ref.) g	Boundary dimensions mm				
	Shield type	Sealed type		D	C	d_1	G	G_1
4	CF WBR	CF WBUUR	4.3	10	7	3	M 3 × 0.5	5
	CF FWBR	CF FWBUUR	4.3	10	7	3	M 3 × 0.5	5
4	CF 4 WBR	CF 4 WBUUR	7.4	12	8	4	M 4 × 0.7	6
	CF 4 FWBR	CF 4 FWBUUR	7.4	12	8	4	M 4 × 0.7	6
5	CF 5 WBR	CF 5 WBUUR	10.3	13	9	5	M 5 × 0.8	7.5
	CF 5 FWBR	CF 5 FWBUUR	10.3	13	9	5	M 5 × 0.8	7.5
6	CF 6 WBR	CF 6 WBUUR	18.5	16	11	6	M 6 × 1	8
8	CF 8 WBR	CF 8 WBUUR	28.5	19	11	8	M 8 × 1.25	10
10	CF 10 WBR	CF 10 WBUUR	45	22	12	10	M10 × 1.25	12
	CF 10-1 WBR	CF 10-1 WBUUR	60	26	12	10	M10 × 1.25	12
12	CF 12 WBR	CF 12 WBUUR	95	30	14	12	M12 × 1.5	13
	CF 12-1 WBR	CF 12-1 WBUUR	105	32	14	12	M12 × 1.5	13
16	CF 16 WBR	CF 16 WBUUR	170	35	18	16	M16 × 1.5	17
18	CF 18 WBR	CF 18 WBUUR	250	40	20	18	M18 × 1.5	19
20	CF 20 WBR	CF 20 WBUUR	460	52	24	20	M20 × 1.5	21
	CF 20-1 WBR	CF 20-1 WBUUR	385	47	24	20	M20 × 1.5	21

Remarks1. Models with a stud diameter d_1 of 4 mm or less have no oil hole. For Models with a stud dia. 5 to 10 mm, oil hole (re-greasing fitting) is provided at the head. Other models are provided with an oil hole (grease nipple) at the head and an oil hole each on the outside surface and end surface of the stud.

2. Shield type models with a stud diameter d_1 of 10 mm or less and the sealed type models are provided with prepacked grease. Other models are not provided with prepacked grease. Perform proper lubrication for use.

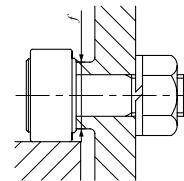
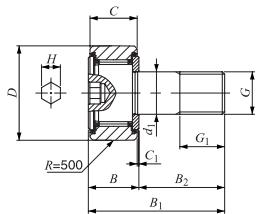
3. A nut is supplied with the stud.

B	B_1	B_2	B_3	C_1	g_1	g_2	H	Mounting dimension f Min. mm	Maximum tightening torque N·m	Basic dynamic load rating C N	Basic static load rating C_0 N	Maximum allowable static load N
8	17	9	—	0.5	—	—	2	6.8	0.34	1 500	1 020	384
	17	9	—	0.5	—	—	2	6.8	0.34	1 200	813	384
9	20	11	—	0.5	—	—	2.5	8.3	0.78	2 070	1 590	834
	20	11	—	0.5	—	—	2.5	8.3	0.78	1 650	1 270	834
10	23	13	—	0.5	—	—	3	9.3	1.6	2 520	2 140	1 260
	23	13	—	0.5	—	—	3	9.3	1.6	1 930	1 730	1 260
12.2max	28.2max	16	—	0.6	—	—	3	11	2.7	3 660	3 650	1 950
12.2max	32.2max	20	—	0.6	—	—	4	13	6.5	4 250	4 740	4 620
13.2max	36.2max	23	—	0.6	—	—	4	16	13.8	5 430	6 890	6 890
13.2max	36.2max	23	—	0.6	—	—	4	16	13.8	5 430	6 890	6 890
15.2max	40.2max	25	6	0.6	4	3	6	21	21.9	7 910	9 790	9 790
15.2max	40.2max	25	6	0.6	4	3	6	21	21.9	7 910	9 790	9 790
19.6max	52.1max	32.5	8	0.8	4	3	6	26	58.5	12 000	18 300	18 300
21.6max	58.1max	36.5	8	0.8	6	3	8	29	86.2	14 800	25 200	25 200
25.6max	66.1max	40.5	9	0.8	6	4	8	34	119	20 700	34 600	34 600
25.6max	66.1max	40.5	9	0.8	6	4	8	34	119	20 700	34 600	34 600

C-Lube Cam Followers [With Cage/With Hexagon Hole]

Selectable product specifications

Material	No symbol		Carbon steel
	F		Stainless steel
Roller guide type	No symbol		Caged
	V		Full complement
Seal structure	No symbol		Shield type
	UU		Sealed type
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



Stud dia. mm	Identification number	Mass (Ref.) g	Boundary dimensions mm						
			D	C	d ₁	G	G ₁	B	B ₁
5	CF 5 WBUUR/SG	10.3	13	9	5	M 5 × 0.8	7.5	10	23
6	CF 6 WBUUR/SG	18.5	16	11	6	M 6 × 1	8	12.2 max	28.2 max
8	CF 8 WBUUR/SG	28.5	19	11	8	M 8 × 1.25	10	12.2 max	32.2 max
10	CF 10 WBUUR/SG	45	22	12	10	M10 × 1.25	12	13.2 max	36.2 max
	CF 10-1 WBUUR/SG	60	26	12	10	M10 × 1.25	12	13.2 max	36.2 max
12	CF 12 WBUUR/SG	95	30	14	12	M12 × 1.5	13	15.2 max	40.2 max
	CF 12-1 WBUUR/SG	105	32	14	12	M12 × 1.5	13	15.2 max	40.2 max
16	CF 16 WBUUR/SG	170	35	18	16	M16 × 1.5	17	19.6 max	52.1 max
18	CF 18 WBUUR/SG	250	40	20	18	M18 × 1.5	19	21.6 max	58.1 max
20	CF 20 WBUUR/SG	460	52	24	20	M20 × 1.5	21	25.6 max	66.1 max
	CF 20-1 WBUUR/SG	385	47	24	20	M20 × 1.5	21	25.6 max	66.1 max

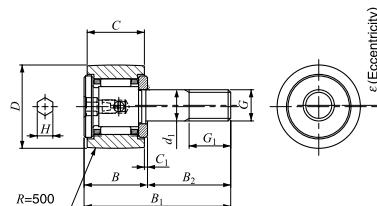
- Remarks 1. Please do not Wash with organic solvent and/or white kerosene which have the ability to remove fat.
 2. To ensure normal rotation of the bearing, apply a load of 1% or more of the basic dynamic load rating at use.
 3. The operating temperature range is -15~+80°C. Continuous operating temperature is +60°C or less.
 4. Regreasing is not possible as the bearing internal space is filled with thermosetting solid-type lubricant C-Lube.
 5. A nut is supplied with the stud.

B ₂	C ₁	H	Mounting dimension f Min. mm	Maximum tightening torque N·m	Basic dynamic load rating C N	Basic static load rating C ₀ N	Maximum allowable static load N
13	0.5	3	9.3	1.6	2 520	2 140	1 260
16	0.6	3	11	2.7	3 660	3 650	1 950
20	0.6	4	13	6.5	4 250	4 740	4 620
23	0.6	4	16	13.8	5 430	6 890	6 890
23	0.6	4	16	13.8	5 430	6 890	6 890
25	0.6	6	21	21.9	7 910	9 790	9 790
25	0.6	6	21	21.9	7 910	9 790	9 790
32.5	0.8	6	26	58.5	12 000	18 300	18 300
36.5	0.8	8	29	86.2	14 800	25 200	25 200
40.5	0.8	8	34	119	20 700	34 600	34 600
40.5	0.8	8	34	119	20 700	34 600	34 600

oli Eccentric tu Type Cam Followe With Cage/With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



CFES···BR

Stud dia d_1 6 to 10mm

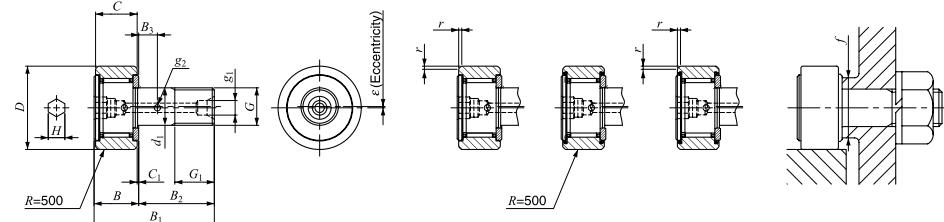
Stud dia. mm	Identification number				Mass (Ref.) g			
	Shield type		Sealed type			D	C	d_1
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring				
6	CFES 6 R	CFES 6 B	CFES 6 UUR	CFES 6 BUU	18.5	16	11	6
8	CFES 8 R	CFES 8 B	CFES 8 UUR	CFES 8 BUU	28.5	19	11	8
10	CFES 10 R	CFES 10 B	CFES 10 UUR	CFES 10 BUU	45	22	12	10
	CFES 10-1 BR	CFES 10-1 B	CFES 10-1 UUR	CFES 10-1 BUU	60	26	12	10
12	CFES 12 BR	CFES 12 B	CFES 12 UUR	CFES 12 BUU	95	30	14	12
	CFES 12-1 BR	CFES 12-1 B	CFES 12-1 UUR	CFES 12-1 BUU	105	32	14	12
16	CFES 16 BR	CFES 16 B	CFES 16 UUR	CFES 16 BUU	170	35	18	16
18	CFES 18 BR	CFES 18 B	CFES 18 UUR	CFES 18 BUU	250	40	20	18

Note⁽¹⁾ Minimum allowable value of chamfer dimension r

Remarks1. Models with a stud diameter d_1 of 10 mm or less have an oil hole (re-greasing fitting) at the head. Other models are provided with an oil hole (grease nipple) at the head and an oil hole each on the outside surface and end surface of the stud.

2. Shield type models with a stud diameter d_1 of 10 mm or less and the sealed type models are provided with prepacked grease. Other models are not provided with prepacked grease. Perform proper lubrication for use.

3. A nut is supplied with the stud.



CFES···BR

Stud dia d_1 12 to 18mm

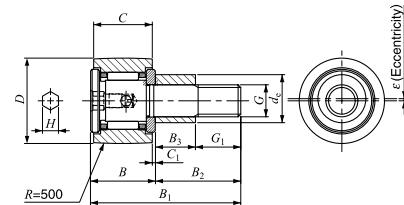
CFES···B CFES···BUUR CFES···BUU

Boundary dimensions mm											Eccentricity ϵ	Mounting dimension f mm	Maximum tightening torque N·m	Basic dynamic load rating C	Basic static load rating C_0	Maximum allowable static load N
G	G_1	B max	B_1 max	B_2	B_3	C_1	g_1	g_2	H	$r_s^{(1)}$ min						
M 6 × 1	8	12.2	28.2	16	—	0.6	—	—	3	0.3	0.25	11	2.7	3 660	3 650	1 980
M 8 × 1.25	10	12.2	32.2	20	—	0.6	—	—	4	0.3	0.25	13	6.5	4 250	4 740	4 670
M10 × 1.25	12	13.2	36.2	23	—	0.6	—	—	4	0.3	0.3	16	13.8	5 430	6 890	6 890
M10 × 1.25	12	13.2	36.2	23	—	0.6	—	—	4	0.3	0.3	16	13.8	5 430	6 890	6 890
M12 × 1.5	13	15.2	40.2	25	6	0.6	4	3	6	0.6	0.4	21	21.9	7 910	9 790	9 790
M12 × 1.5	13	15.2	40.2	25	6	0.6	4	3	6	0.6	0.4	21	21.9	7 910	9 790	9 790
M16 × 1.5	17	19.6	52.1	32.5	8	0.8	4	3	6	0.6	0.5	26	58.5	12 000	18 300	18 300
M18 × 1.5	19	21.6	58.1	36.5	8	0.8	6	3	8	1	0.6	29	86.2	14 800	25 200	25 200

Eccentric Type Cam Followers

Selectable product specifications

Material	No symbol		Carbon steel
	F		Stainless steel
Roller guide type	No symbol		Caged
	V		Full complement
Seal structure	No symbol		Shield type
	UU		Sealed type
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



CFF

Outside diameter of eccentric collar d_e 9 to 13mm

Outside diameter of eccentric collar mm	Identification number				Mass (Ref.) g	D	C	d _e
	Shield type		Sealed type					
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring				
	CFE 6 BR	CFE 6 B	CFE 6 BUUR	CFE 6 BUU	20.5	16	11	9
11	CFE 8 BR	CFE 8 B	CFE 8 BUUR	CFE 8 BUU	32	19	11	11
13	CFE 10 BR	CFE 10 B	CFE 10 BUUR	CFE 10 BUU	49.5	22	12	13
	CFE 10-1 BR	CFE 10-1 B	CFE 10-1 BUUR	CFE 10-1 BUU	65	26	12	13
16	CFE 12 BR	CFE 12 B	CFE 12 BUUR	CFE 12 BUU	105	30	14	16
	CFE 12-1 BR	CFE 12-1 B	CFE 12-1 BUUR	CFE 12-1 BUU	115	32	14	16
22	CFE 16 BR	CFE 16 B	CFE 16 BUUR	CFE 16 BUU	190	35	18	22
24	CFE 18 BR	CFE 18 B	CFE 18 BUUR	CFE 18 BUU	280	40	20	24
27	CFE 20 BR	CFE 20 B	CFE 20 BUUR	CFE 20 BUU	500	52	24	27
	CFE 20-1 BR	CFE 20-1 B	CFE 20-1 BUUR	CFE 20-1 BUU	425	47	24	27
33	CFE 24 BR	CFE 24 B	CFE 24 BUUR	CFE 24 BUU	895	62	29	33
	CFE 24-1 BR	CFE 24-1 B	CFE 24-1 BUUR	CFE 24-1 BUU	1 220	72	29	33
41	CFE 30 BR	CFE 30 B	CFE 30 BUUR	CFE 30 BUU	2 030	80	35	41
	CFE 30-1 BR	CFE 30-1 B	CFE 30-1 BUUR	CFE 30-1 BUU	2 190	85	35	41
	CFE 30-2 BR	CFE 30-2 B	CFE 30-2 BUUR	CFE 30-2 BUU	2 380	90	35	41

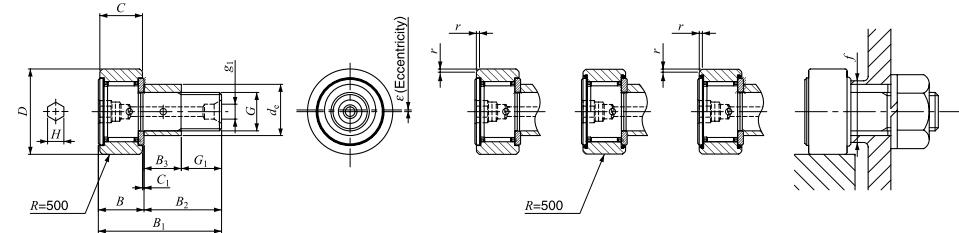
Note⁽¹⁾ Minimum allowable value of chamfer dimension r

Models with a thread diameter G of 10 mm or less have an oil hole (re-greasing fitting) at the head. Other models are provided with an oil hole.

(grease nipple) at the head and an oil hole on the end surface of the stud.

2. Shield type models with a stud thread diameter G of 10 mm or less and the

are not provided with prepacke



CEEE-BB

Outside diameter of eccentric collar d_e 16 to 41mm

CEEE

GEE-BUJ

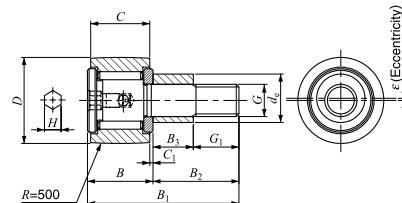
CEEBUW

Boundary dimensions mm										Eccentricity r_s^t	Mounting dimension f Min. mm	Maximum tightening torque N·m	Basic dynamic load rating C	Basic static load rating C_0	Maximum allowable static load N
G	B ₃	B max	B ₁ max	B ₂	C ₁	g ₁	G ₁	H	(r_s^t) min						
M 6 × 1	7.5	12.2	28.2	16	0.6	—	8.5	3	0.3	0.4	11	2.7	3 660	3 650	1 950
M 8 × 1.25	9.5	12.2	32.2	20	0.6	—	10.5	4	0.3	0.4	13	6.5	4 250	4 740	4 620
M10 × 1.25	10.5	13.2	36.2	23	0.6	—	12.5	4	0.3	0.4	16	13.8	5 430	6 890	6 890
M10 × 1.25	10.5	13.2	36.2	23	0.6	—	12.5	4	0.3	0.4	16	13.8	5 430	6 890	6 890
M12 × 1.5	11.5	15.2	40.2	25	0.6	4	13.5	6	0.6	0.8	21	21.9	7 910	9 790	9 790
M12 × 1.5	11.5	15.2	40.2	25	0.6	4	13.5	6	0.6	0.8	21	21.9	7 910	9 790	9 790
M16 × 1.5	15.5	19.6	52.1	32.5	0.8	4	17	6	0.6	0.8	26	58.5	12 000	18 300	18 300
M18 × 1.5	17.5	21.6	58.1	36.5	0.8	6	19	8	1	0.8	29	86.2	14 800	25 200	25 200
M20 × 1.5	19.5	25.6	66.1	40.5	0.8	6	21	8	1	0.8	34	119	20 700	34 600	34 600
M20 × 1.5	19.5	25.6	66.1	40.5	0.8	6	21	8	1	0.8	34	119	20 700	34 600	34 600
M24 × 1.5	25.5	30.6	80.1	49.5	0.8	6	24	12	1	0.8	40	215	30 500	52 600	52 000
M24 × 1.5	25.5	30.6	80.1	49.5	0.8	6	24	12	1	0.8	40	215	30 500	52 600	52 000
M30 × 1.5	32.5	37	100	63	1	6	30.5	17	1	1.5	49	438	45 400	85 100	85 100
M30 × 1.5	32.5	37	100	63	1	6	30.5	17	1	1.5	49	438	45 400	85 100	85 100
M30 × 1.5	32.5	37	100	63	1	6	30.5	17	1	1.5	49	438	45 400	85 100	85 100

Eccentric Type Full Complement Type/With Hexagon Hole

Selectable product specifications

Material	No symbol		Carbon steel
	F		Stainless steel
Roller guide type	No symbol		Caged
	V		Full complement
Seal structure	No symbol		Shield type
	UU		Sealed type
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



CFE---VBR

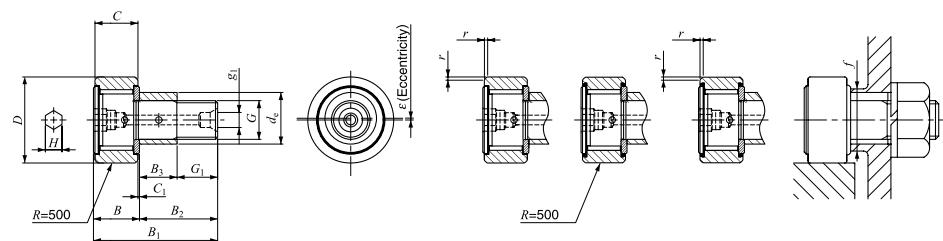
Outside diameter of eccentric collar d_e 9 to 13mm

Outside diameter of eccentric collar mm	Identification number				Mass (Ref.) g	D	C	d_e
	Shield type		Sealed type					
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring				
	CFE VBR	CFE VB	CFE VBUUR	CFE VBUU	21	16	11	9
11	CFE 8 VBR	CFE 8 VB	CFE 8 VBUUR	CFE 8 VBUU	32.	19	11	11
13	CFE 10 VBR CFE 10-1 VBR	CFE 10 VB CFE 10-1 VB	CFE 10 VBUUR CFE 10-1 VBUUR	CFE 10 VBUU CFE 10-1 VBUU	0. 66	22 26	12 12	13 13
16	CFE 12 VBR CFE 12-1 VBR	CFE 12 VB CFE 12-1 VB	CFE 12 VBUUR CFE 12-1 VBUUR	CFE 12 VBUU CFE 12-1 VBUU	107 117	30 32	14 14	16 16
22	CFE 1 VBR	CFE 1 VB	CFE 1 VBUUR	CFE 1 VBUU	193	3	18	22
24	CFE 18 VBR	CFE 18 VB	CFE 18 VBUUR	CFE 18 VBUU	285	40	20	24
27	CFE 20 VBR CFE 20-1 VBR	CFE 20 VB CFE 20-1 VB	CFE 20 VBUUR CFE 20-1 VBUUR	CFE 20 VBUU CFE 20-1 VBUU	505 430	2 47	24 24	27 27
33	CFE 24 VBR CFE 24-1 VBR	CFE 24 VB CFE 24-1 VB	CFE 24 VBUUR CFE 24-1 VBUUR	CFE 24 VBUU CFE 24-1 VBUU	900 1220	62 72	29 29	33 33
41	CFE 0 VBR CFE 0-1 VBR CFE 0-2 VBR	CFE 0 VB CFE 0-1 VB CFE 0-2 VB	CFE 0 VBUUR CFE 0-1 VBUUR CFE 0-2 VBUUR	CFE 0 VBUU CFE 0-1 VBUU CFE 0-2 VBUU	2 030 2 190 2 380	80 8 90	3 3 3	41 41 41

Note⁽¹⁾ Minimum allowable value of chamfer dimension r

Remarks 1. Models with a thread diameter G of 10 mm or less have an oil hole (re-greasing fitting) at the head. Other models are provided with an oil hole (grease nipple) at the head and an oil hole on the end surface of the stud.

2. Provided with prepacked grease.
3. A nut is supplied with the stud.



CFE---VBR

Outside diameter of eccentric collar d_e 16 to 41mm

CFE---VB CFE---VBUUR CFE---VBUU

G	Boundary dimensions mm								Eccentricity ϵ	Mounting dimension f mm	Maximum tightening torque N·m	Basic dynamic load rating C	Basic static load rating C_0 N	Maximum allowable static load N	
	B_3	B_{max}	B_{1max}	B_2	C_1	g_1	G_1	H							
M 6 × 1	7.	12.2	28.2	16	0.6	—	8.	3	0.3	0.4	11	2.7	6 980	8 00	19 0
M 8 × 1.2	9.	12.2	32.2	20	0.6	—	10.	4	0.3	0.4	13	6.	8 170	11 200	4 620
M10 × 1.2	10.	13.2	36.2	23	0.6	—	12.	4	0.3	0.4	16	13.8	9 70	14 00	8 6 0
M10 × 1.2	10.	13.2	36.2	23	0.6	—	12.	4	0.3	0.4	16	13.8	9 70	14 00	8 6 0
M12 × 1.	11.	1.2	40.2	2	0.6	4	13.	6	0.6	0.8	21	21.9	13 00	19 700	13 200
M12 × 1.	11.	1.2	40.2	2	0.6	4	13.	6	0.6	0.8	21	21.9	13 00	19 700	13 200
M16 × 1.	1.	19.6	2.1	32.	0.8	4	17	6	0.6	0.8	26	8.	20 700	37 600	23 200
M18 × 1.	17.	21.6	8.1	36.	0.8	6	19	8	1	0.8	29	86.2	2 300	1 300	31 100
M20 × 1.	19.	2.6	66.1	40.	0.8	6	21	8	1	0.8	34	119	33 200	64 00	37 00
M20 × 1.	19.	2.6	66.1	40.	0.8	6	21	8	1	0.8	34	119	33 200	64 00	37 00
M24 × 1.	2.	30.6	80.1	49.	0.8	6	24	12	1	0.8	40	21	46 600	92 000	2 000
M24 × 1.	2.	30.6	80.1	49.	0.8	6	24	12	1	0.8	40	21	46 600	92 000	2 000
M30 × 1.	32.	37	100	63	1	6	30.	17	1	1.	49	438	67 700	144 000	8 900
M30 × 1.	32.	37	100	63	1	6	30.	17	1	1.	49	438	67 700	144 000	8 900
M30 × 1.	32.	37	100	63	1	6	30.	17	1	1.	49	438	67 700	144 000	8 900

Note⁽¹⁾ Minimum allowable value of chamfer dimension r

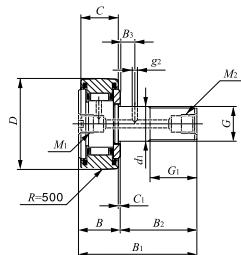
Remarks 1. Models with a thread diameter G of 10 mm or less have an oil hole (re-greasing fitting) at the head. Other models are provided with an oil hole (grease nipple) at the head and an oil hole on the end surface of the stud.

2. Provided with prepacked grease.
3. A nut is supplied with the stud.

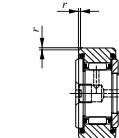
Centralized Lubrication Type Cam Followers | With Cage/With Screwdriver Slot

Selectable product specifications

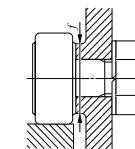
Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	FU1	Cylindrical outer ring
Shape of outer ring	RU1	Crowned outer ring



CF-RU1



CF-FU1



Stud dia. mm	Identification number		Mass (Ref.) g	Boundary dimensions mm				
	With crowned outer ring	With cylindrical outer ring		D	C	d ₁	G	G ₁
6	CF-RU1- 6	CF-FU1- 6	18.5	16	11	6	M 6 X 1	8
8	CF-RU1- 8	CF-FU1- 8	28.5	19	11	8	M 8 X 1.25	10
10	CF-RU1-10 CF-RU1-10-1	CF-FU1-10 CF-FU1-10-1	45 60	22 26	12 12	10	M10 X 1.25 M10 X 1.25	12 12
12	CF-RU1-12 CF-RU1-12-1	CF-FU1-12 CF-FU1-12-1	95 105	30 32	14 14	12	M12 X 1.5 M12 X 1.5	13 13
16	CF-RU1-16	CF-FU1-16	170	35	18	16	M16 X 1.5	17
18	CF-RU1-18	CF-FU1-18	250	40	20	18	M18 X 1.5	19
20	CF-RU1-20 CF-RU1-20-1	CF-FU1-20 CF-FU1-20-1	460 385	52 47	24 24	20	M20 X 1.5 M20 X 1.5	21 21
24	CF-RU1-24 CF-RU1-24-1	CF-FU1-24 CF-FU1-24-1	815 1 140	62 72	29 29	24	M24 X 1.5 M24 X 1.5	25 25
30	CF-RU1-30 CF-RU1-30-1 CF-RU1-30-2	CF-FU1-30 CF-FU1-30-1 CF-FU1-30-2	1 870 2 030 2 220	80 85 90	35 35 35	30	M30 X 1.5 M30 X 1.5 M30 X 1.5	32 32 32

Note⁽¹⁾ Minimum allowable value of chamfer dimension r

Remarks 1. Models with a stud diameter d₁ of 12 mm or less are provided with a lubrication tapped hole on the stud head only. Other models are provided with one lubrication tapped hole each on the head and end surface of the stud.

2. Provided with prepacked grease.
3. A nut is supplied with the stud.

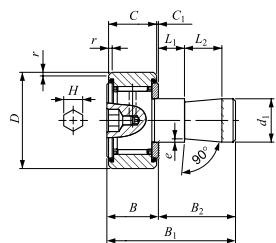
B max	B ₁ max	B ₂	B ₃	C ₁	g ₂	M ₁	M ₂	r ⁽¹⁾ r _{s min}	Mounting dimension f Min. mm	Maximum tightening torque N·m	Basic dynamic load rating C	Basic static load rating C ₀	Maximum allowable static load
12.2	28.2	16	—	0.6	—	M6X 0.75	—	0.3	11	2.7	3 660	3 650	1 950
12.2	32.2	20	—	0.6	—			0.3	13	6.5	4 250	4 740	4 620
13.2	36.2	23	—	0.6	—			0.3	16	13.8	5 430	6 890	6 890
13.2	36.2	23	—	0.6	—			0.3	16	13.8	5 430	6 890	6 890
15.2	40.2	25	—	0.6	—			0.6	21	23.9	7 910	9 790	9 790
15.2	40.2	25	—	0.6	—			0.6	21	23.9	7 910	9 790	9 790
19.6	52.1	32.5	8	0.8	3	PT 1/8	PT 1/8	0.6	26	58.5	12 000	18 300	18 300
21.6	58.1	36.5	8	0.8	3			1	29	86.2	14 800	25 200	25 200
25.6	66.1	40.5	9	0.8	4			1	34	119	20 700	34 600	34 600
25.6	66.1	40.5	9	0.8	4			1	34	119	20 700	34 600	34 600
30.6	80.1	49.5	11	0.8	4			1	40	215	30 500	52 600	52 000
30.6	80.1	49.5	11	0.8	4			1	40	215	30 500	52 600	52 000
37	100	63	15	1	4			1	49	438	45 400	85 100	85 100
37	100	63	15	1	4			1	49	438	45 400	85 100	85 100
37	100	63	15	1	4			1	49	438	45 400	85 100	85 100

asy Counting Type Cam Follower

With Cage/With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
Shape of outer ring	No symbol	Cylindrical outer ring



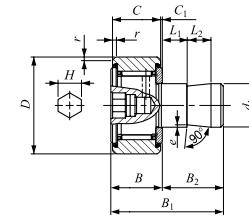
Stud dia d_1 6~10mm

Stud dia. mm	Identification number	Mass (Ref.) g	Boundary dimensions mm							
			D	C	d_1	B_{max}	$B_{1\text{max}}$	B_2	C_1	L_1
6	CF-SFU- 6 B	19.5	16	11	6	12.2	32	19.8	0.6	5
8	CF-SFU- 8 B	29	19	11	8	12.2	32	19.8	0.6	5
10	CF-SFU- 10 B	44	22	12	10	13.2	33	19.8	0.6	5
	CF-SFU- 10-1 B	59	26	12	10	13.2	33	19.8	0.6	5
12	CF-SFU- 12 B	94	30	14	12	15.2	35	19.8	0.6	5
	CF-SFU- 12-1 B	104	32	14	12	15.2	35	19.8	0.6	5
16	CF-SFU- 16 B	164	35	18	16	19.6	44.5	24.9	0.8	10
18	CF-SFU- 18 B	235	40	20	18	21.6	46.5	24.9	0.8	10
20	CF-SFU- 20 B	435	52	24	20	25.6	50.5	24.9	0.8	10
	CF-SFU- 20-1 B	360	47	24	20	25.6	50.5	24.9	0.8	10

Note(*) Minimum allowable value of chamfer dimension r

Remarks1. Models with a stud diameter d_1 of 10 mm or less have an oil hole (re-greasing fitting) at the head. Other models are provided with an oil hole (grease nipple) at the head.

2. Provided with prepacked grease.



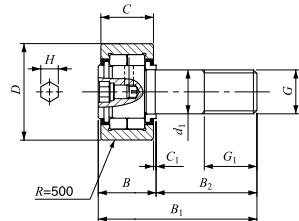
Stud dia d_1 12~20mm

Mounting dimensions mm								Basic dynamic load rating C N	Basic static load rating C_0 N	Maximum allowable static load N
L_2	H	e	$r_s^{\text{(*)}}$ min	D_1	Tolerance	t Min.	f Min.	h (Ref.)		
10	3	0.3	0.3	6	+ 0.012 0	20	11	10	3 660	3 650
10	4	0.5	0.3	8	+ 0.015 0	20	13	10	4 250	4 740
	4	0.5	0.3			20	16	10	5 430	6 890
10	6	1	0.6	12	+ 0.018 0	20	21	10	7 910	9 790
10	6	1	0.6	12		20	21	10	7 910	9 790
10	6	1	0.6	16	+ 0.018 0	25	26	15	12 000	18 300
10	8	1	1	18		25	29	15	14 800	25 200
10	8	1	1	20	+ 0.021 0	25	34	15	20 700	34 600
10	8	1	1	20		25	34	15	20 700	34 600

Cylindrical Roller Cam Followers | Full Complement Type/With Hexagon Hole

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
Seal structure	No symbol	Full complement
UU	Sealed type	
Shape of outer ring	No symbol	Cylindrical outer ring
R	Crowned outer ring	

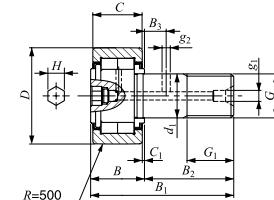


Stud dia d_1 10mm

Stud dia. mm	Identification number	Mass (Ref.) g	Boundary dimensions mm							
			D	C	d_1	G	G_1	B max	B_1 max	B_2
10	NUCF 10 BR	44	22	12	10	M10 × 1.25	12	13.2	36.2	23
	NUCF 10-1 BR	58	26	12	10	M10 × 1.25	12	13.2	36.2	23
12	NUCF 12 BR	86	30	14	12	M12 × 1.5	13	15.2	40.2	25
	NUCF 12-1 BR	97	32	14	12	M12 × 1.5	13	15.2	40.2	25
16	NUCF 16 BR	167	35	18	16	M16 × 1.5	17	19.6	52.1	32.5
18	NUCF 18 BR	244	40	20	18	M18 × 1.5	19	21.6	58.1	36.5
20	NUCF 20 BR	457	52	24	20	M20 × 1.5	21	25.6	66.1	40.5
	NUCF 20-1 BR	384	47	24	20	M20 × 1.5	21	25.6	66.1	40.5
24	NUCF 24 BR	789	62	29	24	M24 × 1.5	25	30.6	80.1	49.5
	NUCF 24-1 BR	1 020	72	29	24	M24 × 1.5	25	30.6	80.1	49.5
30	NUCF 30 BR	1 600	80	35	30	M30 × 1.5	32	37	100	63
	NUCF 30-2 BR	1 970	90	35	30	M30 × 1.5	32	37	100	63

Remarks 1. Model with a stud diameter d_1 of 10 mm is provided with an oil hole (re-greasing fitting) on the stud head only. Other models are provided with one oil hole each on the head, outside surface and end surface of the stud.

2. Provided with prepacked grease.
3. A nut is supplied with the stud.



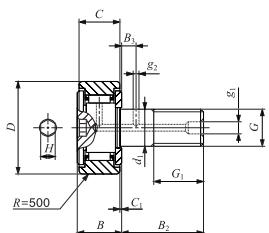
Stud dia d_1 12 to 30mm

B_3	C_1	g_1	g_2	H	Mounting dimension f Min. mm	Maximum tightening torque N-m	Basic dynamic load rating C N	Basic static load rating C_0 N	Maximum allowable static load N
—	0.6	—	—	4	12	13.8	10 400	11 500	5 300
	0.6	—	—	4	12	13.8	10 400	11 500	9 210
6	0.6	4	3	6	17	21.9	14 000	13 400	5 650
	0.6	4	3	6	17	21.9	14 000	13 400	9 040
8	0.8	4	3	6	20	58.5	23 400	27 300	11 800
	0.8	6	3	8	22	86.2	25 200	30 900	20 300
9	0.8	6	4	8	31	119	43 100	58 100	30 000
	0.8	6	4	8	27	119	38 900	49 000	27 200
11	0.8	6	4	12	38	215	58 200	75 300	35 200
	0.8	6	4	12	44	215	63 900	88 800	57 000
15	1	6	4	17	45	438	90 300	121 000	98 300
15	1	6	4	17	45	438	90 300	121 000	98 300

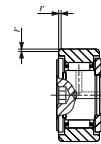
Inch Series Cam Followers With Cage/With Hexagon Hole

Selectable product specifications

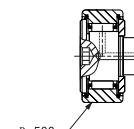
Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



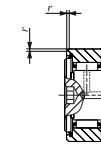
CR...BR



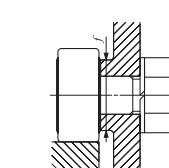
CR...B



CR...BUUR



CR...BUU



CR...BR

Stud dia. mm (inch)	Identification number				Mass (Ref.) g	D	C	d ₁	G UNF	G ₁						
	Shield type		Sealed type													
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring												
.826	CR 8 BR	CR 8 B	CR 8 BUUR	CR 8 BUU	10	12.700 (1/2)	.731 (1/16)	4.826	No.10-32	6.350 (1/4)						
	CR 8-1 BR	CR 8-1 B	CR 8-1 BUUR	CR 8-1 BUU		12.700 (1/2)	9.525 (3/8)	4.826	No.10-32	6.350 (1/4)						
6.350 (1/4)	CR 10 BR	CR 10 B	CR 10 BUUR	CR 10 BUU	19	15.875 (3/8)	10.319 (1/2)	6.350 (1/4)	Y ₄ - 28	7.938 (3/8)						
	CR 10-1 BR	CR 10-1 B	CR 10-1 BUUR	CR 10-1 BUU	21	15.875 (3/8)	11.112 (1/2)	6.350 (1/4)	Y ₄ - 28	7.938 (3/8)						
9.525 (5/8)	CR 12 BR	CR 12 B	CR 12 BUUR	CR 12 BUU	35	19.050 (3/4)	12.700 (1/2)	9.525 (3/8)	Y ₈ - 24	9.525 (3/8)						
	CR 14 BR	CR 14 B	CR 14 BUUR	CR 14 BUU	46	22.225 (3/8)	12.700 (1/2)	9.525 (3/8)	Y ₈ - 24	9.525 (3/8)						
11.112 (11/16)	CR 16 BR	CR 16 B	CR 16 BUUR	CR 16 BUU	73	25.400 (1)	15.875 (3/4)	11.112 (3/8)	Y ₆ - 20	12.700 (1/2)						
	CR 18 BR	CR 18 B	CR 18 BUUR	CR 18 BUU	88	28.575 (1 1/8)	15.875 (3/4)	11.112 (3/8)	Y ₆ - 20	12.700 (1/2)						
12.700 (1/2)	CR 20 BR	CR 20 B	CR 20 BUUR	CR 20 BUU	132	31.750 (1 1/4)	19.050 (3/4)	12.700 (1/2)	Y ₂ - 20	15.875 (3/8)						
	CR 22 BR	CR 22 B	CR 22 BUUR	CR 22 BUU	157	34.925 (1 3/8)	19.050 (3/4)	12.700 (1/2)	Y ₂ - 20	15.875 (3/8)						
15.875 (5/8)	CR 24 BR	CR 24 B	CR 24 BUUR	CR 24 BUU	225	38.100 (1 1/2)	22.225 (3/4)	15.875 (3/8)	Y ₈ - 18	19.050 (3/4)						
	CR 26 BR	CR 26 B	CR 26 BUUR	CR 26 BUU	260	41.275 (1 3/8)	22.225 (3/4)	15.875 (3/8)	Y ₈ - 18	19.050 (3/4)						
19.050 (3/4)	CR 28 BR	CR 28 B	CR 28 BUUR	CR 28 BUU	365	44.450 (1 3/4)	25.400 (1)	19.050 (3/4)	Y ₄ - 16	22.225 (3/8)						
	CR 30 BR	CR 30 B	CR 30 BUUR	CR 30 BUU	410	47.625 (1 3/8)	25.400 (1)	19.050 (3/4)	Y ₄ - 16	22.225 (3/8)						
22.225 (7/8)	CR 32 BR	CR 32 B	CR 32 BUUR	CR 32 BUU	615	50.800 (2)	31.750 (1 1/4)	22.225 (3/8)	Y ₈ - 14	25.400 (1)						
	CR 36 BR	CR 36 B	CR 36 BUUR	CR 36 BUU	750	57.150 (2 1/4)	31.750 (1 1/4)	22.225 (3/8)	Y ₈ - 14	25.400 (1)						

Remarks1. Models with a stud diameter d_1 of 6.3 mm or less have no oil hole. Other models are provided with one oil hole each on the outside surface and end surface of the stud.

2. Provided with prepacked grease.

3. Eccentric Type Inch Series Cam Followers, CRE are also available. If required, please consult to [ECC](#).

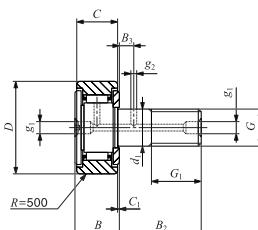
4. A nut is supplied with the stud.

B max	Boundary dimensions mm(inch)								Mounting dimension <i>f</i> Min. mm(inch)	Maximum tightening torque N-m	Basic dynamic load rating <i>C</i> N	Basic static load rating <i>C₀</i> N
	B ₂	B ₃	C ₁	g ₁	g ₂	H	r					
10.2 (0.40)	12.700 (1/2)	— (—)	0.794 (1/16)	— (—)	— (—)	3.175 (1/8)	0.397 (1/64)	.334 (1/32)	1.4	520	140	
10.9 (0.43)	15.875 (3/8)	— (—)	0.794 (1/16)	— (—)	— (—)	3.175 (1/8)	0.397 (1/64)	8.334 (1/32)	1.4	2 520	2 140	
11.8 (0.46)	15.875 (3/8)	— (—)	0.794 (1/16)	— (—)	— (—)	3.175 (1/8)	0.397 (1/64)	11.509 (1/32)	3.4	3 650	3 670	
12.5 (0.49)	19.050 (1/4)	— (—)	0.794 (1/16)	— (—)	— (—)	3.175 (1/8)	0.397 (1/64)	11.509 (1/32)	3.4	3 650	3 670	
14.2 (0.56)	22.225 (3/8)	6.350 (1/4)	0.794 (1/16)	4.762 (3/16)	.381 (1/32)	4.762 (3/16)	0.794 (1/16)	13.494 (1/2)	10.8	4 420	5 110	
14.2 (0.56)	22.225 (3/8)	6.350 (1/4)	0.794 (1/16)	4.762 (3/16)	.381 (1/32)	4.762 (3/16)	0.794 (1/16)	15.081 (1/2)	10.8	4 790	5 810	
17.3 (0.68)	25.400 (1)	6.350 (1/4)	0.794 (1/16)	4.762 (3/16)	3.175 (1/8)	6.350 (1/4)	1.191 (1/64)	17.859 (1/32)	17.4	8 810	10 800	
17.3 (0.68)	25.400 (1)	6.350 (1/4)	0.794 (1/16)	4.762 (3/16)	3.175 (1/8)	6.350 (1/4)	1.588 (1/64)	19.050 (1/32)	17.4	9 180	11 600	
20.4 (0.80)	31.750 (1 1/4)	7.938 (1/16)	0.794 (1/16)	4.762 (3/16)	3.175 (1/8)	6.350 (1/4)	1.588 (1/64)	21.828 (1/32)	27.7	14 200	16 000	
20.4 (0.80)	31.750 (1 1/4)	7.938 (1/16)	0.794 (1/16)	4.762 (3/16)	3.175 (1/8)	6.350 (1/4)	1.588 (1/64)	21.828 (1/32)	27.7	14 200	16 000	
23.6 (0.93)	38.100 (1 1/2)	9.525 (3/8)	0.794 (1/16)	4.762 (3/16)	3.969 (1/16)	7.938 (1/16)	1.588 (1/64)	26.196 (1/32)	55.7	18 600	24 300	
23.6 (0.93)	38.100 (1 1/2)	9.525 (3/8)	0.794 (1/16)	4.762 (3/16)	3.969 (1/16)	7.938 (1/16)	1.588 (1/64)	26.196 (1/32)	55.7	18 600	24 300	
26.8 (1.06)	44.450 (1 3/4)	11.112 (1/16)	0.794 (1/16)	4.762 (3/16)	3.969 (1/16)	7.938 (1/16)	1.588 (1/64)	32.543 (1/32)	100	25 100	38 200	
26.8 (1.06)	44.450 (1 3/4)	11.112 (1/16)	0.794 (1/16)	4.762 (3/16)	3.969 (1/16)	7.938 (1/16)	1.588 (1/64)	32.543 (1/32)	100	25 100	38 200	
33.5 (1.32)	50.800 (2)	12.700 (1/2)	0.794 (1/16)	4.762 (3/16)	4.762 (3/16)	11.112 (1/16)	1.588 (1/64)	37.306 (1 15/32)	162	32 500	63 900	
33.5 (1.32)	50.800 (2)	12.700 (1/2)	0.794 (1/16)	4.762 (3/16)	4.762 (3/16)	11.112 (1/16)	1.588 (1/64)	37.306 (1 15/32)	162	32 500	63 900	

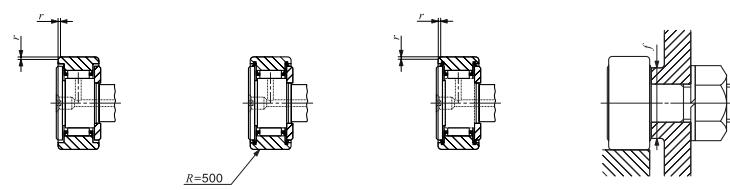
Inch Series Cam Followers With Cage/With Screwdriver slot

Selectable product specifications

Material	No symbol	Carbon steel
	F	Stainless steel
Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



CR...R



CR

CR...UUR

CR...UUR

Stud dia. mm (inch)	Identification number				Mass (Ref.) g						
	Shield type		Sealed type			D	C	d ₁	G UNF	G ₁	
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring							
4.826	CR 8 R	CR 8	CR 8 UUR	CR 8 UU	10	12.700 (1/2)	.731 (1/32)	4.826	No.10-32	6.350 (1/4)	
	CR 8-1 R	CR 8-1	CR 8-1 UUR	CR 8-1 UU		12.700 (1/2)	9.525 (1/8)	4.826	No.10-32	6.350 (1/4)	
6.350 (1/4)	CR 10 R	CR 10	CR 10 UUR	CR 10 UU	19	15.875 (5/8)	10.319 (15/32)	6.350 (1/4)	Y ₄ - 28	7.938 (3/8)	
	CR 10-1 R	CR 10-1	CR 10-1 UUR	CR 10-1 UU	21	15.875 (5/8)	11.112 (1/8)	6.350 (1/4)	Y ₄ - 28	7.938 (3/8)	
9.525 (3/8)	CR 12 R	CR 12	CR 12 UUR	CR 12 UU	35	19.050 (13/16)	12.700 (1/2)	9.525 (3/8)	Y ₈ - 24	9.525 (3/8)	
	CR 14 R	CR 14	CR 14 UUR	CR 14 UU	46	22.225 (5/8)	12.700 (1/2)	9.525 (3/8)	Y ₈ - 24	9.525 (3/8)	
11.112 (7/16)	CR 16 R	CR 16	CR 16 UUR	CR 16 UU	73	25.400 (1)	15.875 (5/8)	11.112 (1/8)	Y ₆ - 20	12.700 (1/2)	
	CR 18 R	CR 18	CR 18 UUR	CR 18 UU	88	28.575 (1 1/8)	15.875 (5/8)	11.112 (1/8)	Y ₆ - 20	12.700 (1/2)	
12.700 (1/2)	CR 20 R	CR 20	CR 20 UUR	CR 20 UU	132	31.750 (1 1/4)	19.050 (3/4)	12.700 (1/2)	Y ₂ - 20	15.875 (5/8)	
	CR 22 R	CR 22	CR 22 UUR	CR 22 UU	157	34.925 (1 1/8)	19.050 (3/4)	12.700 (1/2)	Y ₂ - 20	15.875 (5/8)	
15.875 (5/8)	CR 24 R	CR 24	CR 24 UUR	CR 24 UU	225	38.100 (1 1/2)	22.225 (5/8)	15.875 (5/8)	Y ₈ - 18	19.050 (3/4)	
	CR 26 R	CR 26	CR 26 UUR	CR 26 UU	260	41.275 (1 5/8)	22.225 (5/8)	15.875 (5/8)	Y ₈ - 18	19.050 (3/4)	
19.050 (3/4)	CR 28 R	CR 28	CR 28 UUR	CR 28 UU	365	44.450 (1 3/4)	25.400 (1)	19.050 (3/4)	Y ₄ - 16	22.225 (5/8)	
	CR 30 R	CR 30	CR 30 UUR	CR 30 UU	410	47.625 (1 1/8)	25.400 (1)	19.050 (3/4)	Y ₄ - 16	22.225 (5/8)	
22.225 (5/8)	CR 32 R	CR 32	CR 32 UUR	CR 32 UU	615	50.800 (2)	31.750 (1 1/4)	22.225 (5/8)	Y ₈ - 14	25.400 (1)	
	CR 36 R	CR 36	CR 36 UUR	CR 36 UU	750	57.150 (2 1/4)	31.750 (1 1/4)	22.225 (5/8)	Y ₈ - 14	25.400 (1)	

Remarks1. Models with a stud diameter d_1 of 6.3 mm or less (marked *) are provided with an oil hole on the stud head only. Other models are provided with one oil hole each on the head, outside surface and end surface of the stud.

Provided with prepacked grease.

3. Eccentric Type Inch Series Cam Followers, CRE are also available. If required, please consult to [ECC](#).

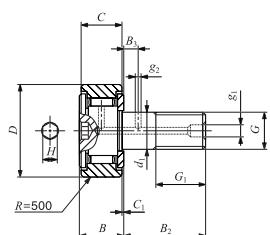
4. A nut is supplied with the stud.

Boundary dimensions mm(inch)							Mounting dimension f Min. mm(inch)	Maximum tightening torque N-m	Basic dynamic load rating C N	Basic static load rating C ₀ N
B max	B ₂	B ₃	C ₁	g ₁	g ₂	r				
10.2 (0.40)	12.700 (1/2)	— (—)	0.741 (1/16)	*3.17 (1/8)	— (—)	0.37 (1/16)	.334 (3/64)	1.4	520	140
10.9 (0.43)	15.875 (5/8)	— (—)	0.794 (1/16)	*3.17 (1/8)	— (—)	0.397 (1/16)	8.334 (2 1/64)	1.4	2520	2140
11.8 (0.46)	15.875 (5/8)	— (—)	0.794 (1/16)	*3.17 (1/8)	— (—)	0.397 (1/16)	11.509 (2 1/64)	3.4	3650	3670
12.5 (0.49)	19.050 (3/4)	— (—)	0.794 (1/16)	*3.17 (1/8)	— (—)	0.397 (1/16)	11.509 (2 1/64)	3.4	3650	3670
14.2 (0.56)	22.225 (5/8)	6.350 (1/4)	0.794 (1/16)	4.76 (3/16)	2.381 (1/16)	0.794 (1/16)	13.494 (1 15/32)	10.8	4420	5110
14.2 (0.56)	22.225 (5/8)	6.350 (1/4)	0.794 (1/16)	4.76 (3/16)	2.381 (1/16)	0.794 (1/16)	15.081 (1 15/32)	10.8	4790	5810
17.3 (0.68)	25.400 (1)	6.350 (1/4)	0.794 (1/16)	4.76 (3/16)	3.175 (1/8)	1.191 (1/16)	17.859 (4 1/64)	17.4	8810	10800
17.3 (0.68)	25.400 (1)	6.350 (1/4)	0.794 (1/16)	4.76 (3/16)	3.175 (1/8)	1.588 (1/16)	19.050 (1 1/4)	17.4	9180	11600
20.4 (0.80)	31.750 (1 1/4)	7.938 (5/16)	0.794 (1/16)	4.76 (3/16)	3.175 (1/8)	1.588 (1/16)	21.828 (5 5/64)	27.7	14200	16000
20.4 (0.80)	31.750 (1 1/4)	7.938 (5/16)	0.794 (1/16)	4.76 (3/16)	3.175 (1/8)	1.588 (1/16)	21.828 (5 5/64)	27.7	14200	16000
23.6 (0.93)	38.100 (1 1/2)	9.525 (5/8)	0.794 (1/16)	4.76 (3/16)	3.969 (5/16)	1.588 (1/16)	26.196 (1 1/16)	55.7	18600	24300
23.6 (0.93)	38.100 (1 1/2)	9.525 (5/8)	0.794 (1/16)	4.76 (3/16)	3.969 (5/16)	1.588 (1/16)	26.196 (1 1/16)	55.7	18600	24300
26.8 (1.06)	44.450 (1 3/4)	11.112 (7/16)	0.794 (1/16)	4.76 (3/16)	3.969 (5/16)	1.588 (1/16)	32.543 (1 15/32)	100	25100	38200
26.8 (1.06)	44.450 (1 3/4)	11.112 (7/16)	0.794 (1/16)	4.76 (3/16)	3.969 (5/16)	1.588 (1/16)	32.543 (1 15/32)	100	25100	38200
33.5 (1.32)	50.800 (2)	12.700 (1/2)	0.794 (1/16)	4.76 (3/16)	4.762 (5/16)	1.588 (1/16)	37.306 (1 15/32)	162	32500	63900
33.5 (1.32)	50.800 (2)	12.700 (1/2)	0.794 (1/16)	4.76 (3/16)	4.762 (5/16)	1.588 (1/16)	37.306 (1 15/32)	162	32500	63900

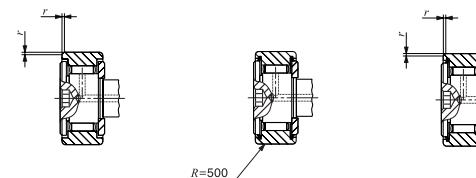
Inch Series Cam Followers Full Complement Type/With Hexagon Hole

Selectable product specifications

Material	No symbol		Carbon steel
	F		Stainless steel
Roller guide type	No symbol		Caged
	V		Full complement
Seal structure	No symbol		Shield type
	UU		Sealed type
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



CR...VBUU



CR...VB

CR...VBUUR

CR...VBUU

Stud dia. mm (inch)	Identification number				Mass (Ref.) g						
	Shield type		Sealed type			D	C	d ₁	G UNF	G ₁	
	With crowned outer ring	With cylindrical outer ring	With crowned outer ring	With cylindrical outer ring							
4.8 6	CR 8 VBR	CR 8 VB	CR 8 VBUUR	CR 8 VBUU	9	12.700(1 1/2)	.731(1/2)	.826	6.10 32	.350(7/8)	
	CR 8-1 VBR	CR 8-1 VB	CR 8-1 VBUUR	CR 8-1 VBUU	10	12.700(1 1/2)	9.525(3/8)	4.826	No.10-32	6.350(7/8)	
6.350 (1/4)	CR 10 VBR	CR 10 VB	CR 10 VBUUR	CR 10 VBUU	19	15.875(7/8)	10.319(1 1/2)	6.350(7/8)	7/8 - 28	7.938(7/8)	
	CR 10-1 VBR	CR 10-1 VB	CR 10-1 VBUUR	CR 10-1 VBUU	21	15.875(7/8)	11.112(7/8)	6.350(7/8)	7/8 - 28	7.938(7/8)	
9.525 (5/8)	CR 12 VBR	CR 12 VB	CR 12 VBUUR	CR 12 VBUU	36	19.050(1 1/2)	12.700(1 1/2)	9.525(7/8)	7/8 - 24	9.525(7/8)	
	CR 14 VBR	CR 14 VB	CR 14 VBUUR	CR 14 VBUU	47	22.225(7/8)	12.700(1 1/2)	9.525(7/8)	7/8 - 24	9.525(7/8)	
11.112 (1 1/16)	CR 16 VBR	CR 16 VB	CR 16 VBUUR	CR 16 VBUU	74	25.400(1 1/2)	15.875(7/8)	11.112(7/8)	7/8 - 20	12.700(1 1/2)	
	CR 18 VBR	CR 18 VB	CR 18 VBUUR	CR 18 VBUU	85	28.575(1 1/2)	15.875(7/8)	11.112(7/8)	7/8 - 20	12.700(1 1/2)	
12.700 (1/2)	CR 20 VBR	CR 20 VB	CR 20 VBUUR	CR 20 VBUU	137	31.750(1 1/2)	19.050(3/4)	12.700(1 1/2)	7/2 - 20	15.875(7/8)	
	CR 22 VBR	CR 22 VB	CR 22 VBUUR	CR 22 VBUU	160	34.925(1 1/2)	19.050(3/4)	12.700(1 1/2)	7/2 - 20	15.875(7/8)	
15.875 (5/8)	CR 24 VBR	CR 24 VB	CR 24 VBUUR	CR 24 VBUU	230	38.100(1 1/2)	22.225(7/8)	15.875(7/8)	7/8 - 18	19.050(7/8)	
	CR 26 VBR	CR 26 VB	CR 26 VBUUR	CR 26 VBUU	265	41.275(1 1/2)	22.225(7/8)	15.875(7/8)	7/8 - 18	19.050(7/8)	
19.050 (3/4)	CR 28 VBR	CR 28 VB	CR 28 VBUUR	CR 28 VBUU	372	44.450(1 1/2)	25.400(1)	19.050(7/8)	7/4 - 16	22.225(7/8)	
	CR 30 VBR	CR 30 VB	CR 30 VBUUR	CR 30 VBUU	418	47.625(1 1/2)	25.400(1)	19.050(7/8)	7/4 - 16	22.225(7/8)	
22.225 (7/8)	CR 32 VBR	CR 32 VB	CR 32 VBUUR	CR 32 VBUU	627	50.800(2)	31.750(1 1/2)	22.225(7/8)	7/8 - 14	25.400(1)	
	CR 36 VBR	CR 36 VB	CR 36 VBUUR	CR 36 VBUU	759	57.150(2 1/2)	31.750(1 1/2)	22.225(7/8)	7/8 - 14	25.400(1)	

Remarks1. Models with a stud diameter d_1 of 6.35 mm or less have no oil hole. Other models are provided with one oil hole each on the outside surface and end surface of the stud.

2. Provided with prepacked grease.

3. Eccentric Type Inch Series Cam Followers, CRE are also available. If required, please consult to .

4. A nut is supplied with the stud.

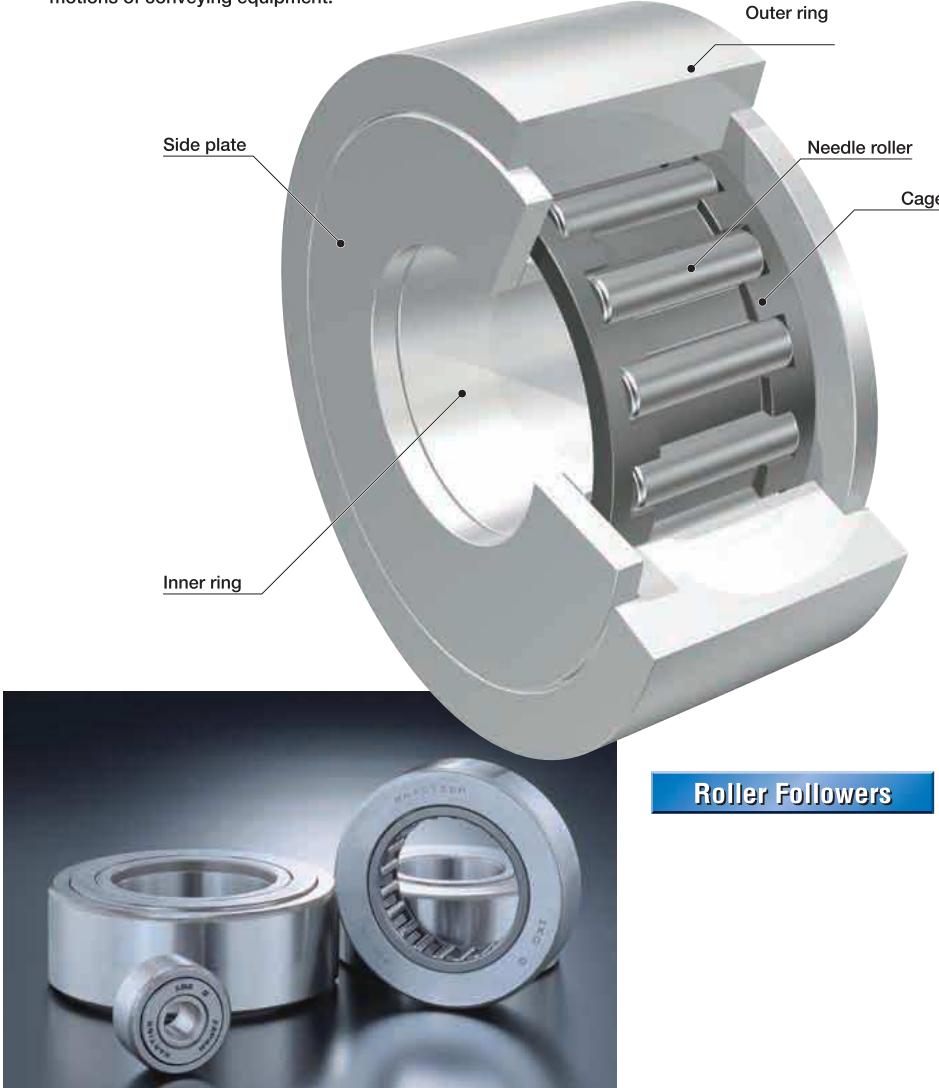
B_{max}	Boundary dimensions mm(inch)								Mounting dimension f Min. mm(inch)	Maximum tightening torque N-m	Basic dynamic load rating C N	Basic static load rating C_0 N
	B_2	B_3	C_1	g_1	g_2	H	r					
10.2(0.40)	12.700(1 1/2)	— (—)	.794(1/2)	— (—)	— (—)	3.175(7/8)	.397(7/64)	.334(7/64)	1.4	260	750	
10.9(0.43)	15.875(7/8)	— (—)	0.794(1/2)	— (—)	— (—)	3.175(7/8)	0.397(7/64)	8.334(21/64)	1.4	4 710	5 410	
11.8(0.46)	15.875(7/8)	— (—)	0.794(1/2)	— (—)	— (—)	3.175(7/8)	0.397(7/64)	11.509(29/64)	3.4	5 830	7 660	
12.5(0.49)	19.050(7/4)	— (—)	0.794(1/2)	— (—)	— (—)	3.175(7/8)	0.397(7/64)	11.509(29/64)	3.4	6 340	8 530	
14.2(0.56)	22.225(7/8)	.350(7/16)	0.794(1/2)	.762(7/16)	2.381(7/16)	4.762(7/16)	0.794(7/32)	13.494(17/16)	10.8	8 710	12 300	
14.2(0.56)	22.225(7/8)	.350(7/16)	0.794(1/2)	.762(7/16)	2.381(7/16)	4.762(7/16)	0.794(7/32)	15.081(19/16)	10.8	8 710	12 300	
17.3(0.68)	25.400(1)	.350(7/16)	0.794(1/2)	.762(7/16)	3.175(7/8)	6.350(7/16)	1.191(7/64)	17.859(45/64)	17.4	13 100	22 700	
17.3(0.68)	25.400(1)	.350(7/16)	0.794(1/2)	.762(7/16)	3.175(7/8)	6.350(7/16)	1.191(7/64)	19.050(7/4)	17.4	13 100	22 700	
20.4(0.80)	31.750(1 1/2)	7.938(7/16)	0.794(1/2)	.762(7/16)	3.175(7/8)	6.350(7/16)	1.588(7/16)	21.828(55/64)	27.7	23 600	31 700	
20.4(0.80)	31.750(1 1/2)	7.938(7/16)	0.794(1/2)	.762(7/16)	3.175(7/8)	6.350(7/16)	1.588(7/16)	21.828(55/64)	27.7	23 600	31 700	
23.6(0.93)	38.100(1 1/2)	9.525(7/8)	0.794(1/2)	.762(7/16)	3.969(7/8)	7.938(7/16)	1.588(7/16)	26.196(1 1/16)	55.7	28 200	40 100	
23.6(0.93)	38.100(1 1/2)	9.525(7/8)	0.794(1/2)	.762(7/16)	3.969(7/8)	7.938(7/16)	1.588(7/16)	26.196(1 1/16)	55.7	28 200	40 100	
26.8(1.06)	44.450(1 3/4)	11.112(7/16)	0.794(1/2)	.762(7/16)	3.969(7/8)	7.938(7/16)	1.588(7/16)	32.543(1 1/32)	100	35 300	55 600	
26.8(1.06)	44.450(1 3/4)	11.112(7/16)	0.794(1/2)	.762(7/16)	3.969(7/8)	7.938(7/16)	1.588(7/16)	32.543(1 1/32)	100	35 300	55 600	
33.5(1.32)	50.800(2)	12.700(1 1/2)	0.794(1/2)	.762(7/16)	.762(7/16)	11.112(7/16)	1.588(7/16)	37.306(1 15/32)	162	45 700	80 600	
33.5(1.32)	50.800(2)	12.700(1 1/2)	0.794(1/2)	.762(7/16)	.762(7/16)	11.112(7/16)	1.588(7/16)	37.306(1 15/32)	162	45 700	80 600	



De ription	Dimen on Table
Advantage of Roller Followers	Separable Roller Followers
Identification Number	Non-Separable Roller Followers
Load Rating and Life	Cylindrical Roller Followers
Maximum Allowable Static Load	Non-Separable Roller Followers, Inch Series
Accuracy	
Clearance	
Fit	
Track Capacity	
Allowable Rotational Speed	
Lubrication	
Oil Hole	
Mounting	

Roller Followers are bearings designed for outer ring rotation, in which needle rollers are incorporated in a thick walled outer ring.

Roller Followers include separable and non-separable types. These bearings are available in a variety of types to suit almost any kind of application. They are widely used for cam mechanisms and for linear motions of conveying equipment.



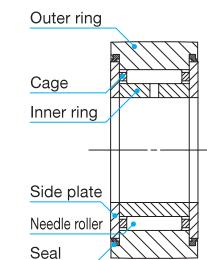
Roller Follower Series with reliability and actual operation results

Separable Roller Followers NAST

Combining an outer ring, inner ring and Needle Roller Cage, which can be separated from one another, assembles these bearings. Thus, handling is easy. Oil lubrication is also easy, making them suitable for high-speed rotations.

There are two types: type without inner ring RNAST and type with inner ring NAST.

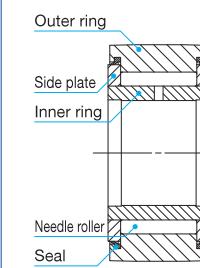
Selectable product specifications



Non-Separable Roller Followers NART

These non-separable type bearings have side plates fixed on both sides of the inner ring, and include the caged type and the full complement type.

Selectable product specifications

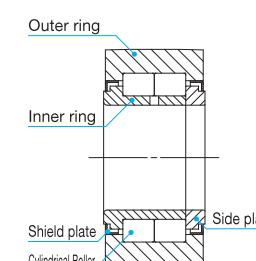


Cylindrical Roller Followers

NURT

These full complement type bearings incorporate cylindrical rollers in the outer ring in two rows and can withstand large radial loads and some axial loads.

Selectable product specifications

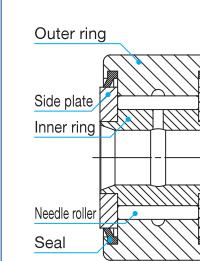


Non-Separable Roller Followers, Inch Series

CRY

CRY type is Inch Series of NART series, which has large load capacity, coated with black oxide film treatment.

Selectable product specifications



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Identification Number

Some examples of the identification number of Roller Followers are shown below. For applicable roller guide method, seal structure and shape of outer ring outside surface, refer dimension table of each series.

Examples of identification number	
Example 1	NAST 10 ZZUU R
Example 2	NART 10 V UU R
Example 3	NURT 15 V UU R
Example 4	CRY 12 V UU R
Model code	
Metric series	RNAST Separable Roller Follower Without inner ring NAST Separable Roller Follower With inner ring NART Non-separable Roller Follower NURT Cylindrical Roller Follower
Inch series	CRY Non-separable Roller Follower
Size	
The size indicates the bore diameter of the inner ring. (unit: mm) In the inch series, the outer ring outside diameter is indicated in units of 1/16 inch.	
Roller guide method	
No symbol	With cage
V	Full complement type
Seal structure (Separable Roller Follower)	
No symbol	Open type
ZZ	Shield type
ZZUU	Sealed type
Seal structure (Other Roller Follower)	
No symbol	Shield type
UU	Sealed type
Shape of outer ring outside surface	
R	With crowned outer ring
No symbol	With cylindrical outer ring

Load Rating Lf

Basic dynamic load rating C

The basic dynamic load rating is defined as the constant radial load that 90% of a group of identical Roller Followers can be operated 1,000,000 revolutions individually under the same conditions free from any material damage caused by rolling fatigue.

Basic static load rating C₀

The basic static load rating is the static radial load constant in direction and magnitude that gives the contact stress shown at the center of the contact area of the roller element and the raceway receiving the maximum load.

Bearing life

Basic rating life is calculated as follows from a.

$$L_{10} = \left(\frac{C}{P_r} \right)^{10/3} \quad (1)$$

where, L_{10} : Basic rating life, 10⁶rev.

C : Basic dynamic load rating, N

P_r : Dynamic equivalent radial load, N

Accordingly, when the rotational speed per minute is given, the basic rating life is represented as the total service hours according to the following equations:

$$L_h = \frac{10^6 L_{10}}{60n} \quad (2)$$

where, L_h : Basic rating life represented by service hours, h

n : Rotation speed, min⁻¹

Static Safety factor

The static safety factor f_s is defined as in the following equation and its general values are shown in Table 1.

$$f_s = \frac{C_0}{P_0} \quad (3)$$

where, C_0 : Basic static load rating, N

P_0 : Static equivalent load, N

Table 1 Static safety factor

Operating conditions of the bearing	f_s
When high rotational accuracy is required	≥ 3
For ordinary operation conditions	≥ 1.5
For ordinary operation conditions not requiring very smooth rotation When there is almost no rotation	≥ 1

Load factor

It is not unusual for the actual Roller Followers to exceed the calculated loads, due to vibration and shocks produced when operating the machine. The actual bearing load is obtained by multiplying the calculated load by the load factor shown in Table 2.

Table 2 Load Factor

Operating conditions	f_w
Smooth operation without shocks	1 ~ 1.2
Ordinary operation	1.2 ~ 1.5
Operation subjected to vibration and shocks	1.5 ~ 3

Maximum Allowable Safe Load

The load that is applicable to Roller Followers is, in some cases, determined by the strength of the outer ring rather than by the load rating of the needle roller bearing. Therefore, the maximum allowable load that is limited by the strength of outer ring is specified.

Accuracy

Dimensional accuracy and rotational accuracy of Roller Followers are based on Tables 3, 4.1, 4.2 and 5. Tolerances for the smallest single roller set bore diameter of Separable Roller Followers are shown in Table 5. Roller Followers with special accuracy can also be manufactured. Please contact [SKF](#).

Table 3 Tolerances

Series		Metric series		Inch series		unit: μm	
		Crowned outer ring	Cylindrical outer ring	Crowned outer ring	Cylindrical outer ring		
Dimensions and symbols	$d \leq 9.5$	See Table 4.1		5	5		
	$9.5 < d$			2			
				2			
Bore dia. of inner ring d		See Table 4.1			5		
Outside dia. of outer ring D			0 50	See Table 4.2			
Width of outer ring C			20				
Width of inner ring B		Separable Roller Follower Non-separable Roller Follower Cylindrical Roller Follower	0 120		250		
Width of bearing B			h_2	h_2			
Roller set bore dia. F_w			See Table 5.				

Table 4.1 Tolerances and allowable values of inner rings (Metric series)

d Nominal bore dia. mm	Δ_{dmp} Single plane mean bore dia. deviation	V_{dip} Bore dia. variation in a single radial plane	V_{dmp} Mean bore dia. variation	K_{ia} Radial runout of assembled bearing inner ring (Max.)	V_{Bs} Width variation (Max.)	unit: μm
Over	Incl.	High	Low	(Max.)	(Max.)	
2.5	10		8		6	0
10	18		8		6	0
18	30				8	3
30	50		2	5	9	5
						20

Table 4.2 Tolerances and allowable values of outer rings (Metric series with Cylindrical outer ring)

D Nominal outside dia. of outer ring mm	Δ_{Dmp} Single plane mean outside dia. deviation	V_{Dip} Outside dia. variation in a single radial plane (Max.)	V_{Dmp} Mean outside dia. variation (Max.)	K_{ca} Radial runout of assembled bearing outer ring (Max.)	V_{Cs} Width variation (Max.)	unit: μm
Over	Incl.	High	Low			
6	18		8		6	5
18	30		9	2	7	5
30	50			4	8	20
50	80			6		25
80	120		5	9		5
						Same as the tolerance values of V_{Bs} for d of the inner of the same bearing

Table 4.3 Tolerances and allowable values of outer ring (Inch series cylindrical outer ring) unit: μm

D Nominal outside dia. of outer ring mm	Δ_{Dmp} Single plane mean outside dia. deviation	V_{Dip} Bore dia. variation in a single radial plane (Max.)	V_{Dmp} Mean Bore dia. variation (Max.)	K_{ca} Radial runout of assembled bearing outer ring (Max.)
Over	Incl.	High	Low	
6	18	-25	10	6
18	3		12	7
30	5		14	8
50	8		16	10
80	12		19	11

Table 5 Tolerances of smallest single roller set bore diameter $F_{ws min}$ unit: μm

F_w Nominal roller set bore diameter mm	$\Delta_{Fws min}$ Deviation of smallest single roller set bore diameter	High	Low
Over	Incl.		
6	10	+ 22	+ 13
10	18	+ 27	+ 16
18	30	+ 3	+ 20
30	50	+ 4	+ 25
50	80	+ 49	+ 30

Fit

Roller Followers are generally used under the loading conditions in which the load direction is fixed in relation to the inner ring and rotates in relation to the outer ring. The recommended fits for shafts are shown in Table 6. Those for the inch series are shown in the dimension table.

Table 6 Recommended fit (Metric series)

Type	Tolerance class of shaft
Separable Roller Followers	without inner ring
	with inner ring
	g6, h6
	Cylindrical Roller Followers

Clearance

Radial internal clearances of Roller Followers are based on Table 7.

Table 7 Radial internal clearance

Identification number ⁽¹⁾				Radial internal clearance
Metric series			Inch series	
Separable Roller Followers	Non-separable Roller Followers	Cylindrical Roller Followers	Non-separable Roller Followers	Min.
NAST 6R	NART 5R	—	—	5
NAST 8R ~ NAST12R	NART 6R ~ NART 2R	—	—	20
NAST15R ~ NAST25R	NART15R ~ NART20R	—	—	30
NAST30R ~ NAST40R	NART25R ~ NART40R	—	—	40
NAST45R, NAST50R	NART45R, NART50R	—	—	50
—	—	NURT 5R ~ NURT -1R	—	20
—	—	NURT 5R ~ NURT4 -1R	—	25
—	—	NURT45R ~ NURT5 -1R	—	30
—	—	—	CRY12R ~ CRY56R	35
—	—	—	CRY64R	45
—	—	—	—	70

Note⁽¹⁾ Also applicable to the full complement type, cylindrical outer ring type, shield type and sealed type.

Track Capacity

Track capacity is defined as the load that can be continuously applied on a Roller Follower placed on a steel track surface without causing deformation and indentation on the track surface when the outer ring of the Roller Follower makes contact with the mating track surface (plane). The track capacities shown in Tables 8.1 and 8.2 are applicable when the hardness of the mating track surface is 40HRC (Tensile strength 1250N/mm²). When the hardness of the mating track surface differs from 40HRC, the track capacity is

Table 8.1 Track capacity (Metric series)

Roller Followers with crowned outer ring			Roller Followers with cylindrical outer ring					
Identification number ⁽¹⁾	Separable Roller Followers	Non-separable Roller Followers	Identification number	Track capacity	Identification number ⁽²⁾	Track capacity	Identification number	Track capacity
RNAST 5R	NART 5R	—	1 040	RNAST 5	2 310	—	—	—
(R)NAST 6R	NART 6R	—	1 330	(R)NAST 6	3 550	NAST 6ZZ	3 550	—
(R)NAST 8R	NART 8R	—	1 850	(R)NAST 8	3 980	NAST 8ZZ	4 490	—
(R)NAST10R	NART10R	—	2 470	(R)NAST10	5 610	NAST10ZZ	6 890	—
(R)NAST12R	NART12R	—	2 710	(R)NAST12	5 990	NAST12ZZ	7 350	—
(R)NAST15R	NART15R	NURT15 R	3 060	(R)NAST15	6 550	NAST15ZZ	8 030	NURT 15 11 500
—	—	NURT15-1R	3 910	—	—	—	NURT 15-1	13 700
(R)NAST17R	NART17R	NURT17 R	3 660	(R)NAST17	10 900	NAST17ZZ	11 700	NURT 17 13 600
—	—	NURT17-1R	4 530	—	—	—	NURT 17-1	16 000
(R)NAST20R	NART20R	NURT20 R	4 530	(R)NAST20	12 800	NAST20ZZ	13 800	NURT 20 20 000
—	—	NURT20-1R	5 190	—	—	—	NURT 20-1	22 100
(R)NAST25R	NART25R	NURT25 R	5 190	(R)NAST25	14 100	NAST25ZZ	15 300	NURT 25 22 100
—	—	NURT25-1R	6 580	—	—	—	NURT 25-1	26 400
(R)NAST30R	NART30R	NURT30 R	6 580	(R)NAST30	22 100	NAST30ZZ	22 100	NURT 30 31 600
—	—	NURT30-1R	8 020	—	—	—	NURT 30-1	36 700
(R)NAST35R	NART35R	NURT35 R	8 020	(R)NAST35	25 700	NAST35ZZ	25 700	NURT 35 36 700
—	—	NURT35-1R	9 220	—	—	—	NURT 35-1	40 800
(R)NAST40R	NART40R	NURT40 R	9 220	(R)NAST40	26 900	NAST40ZZ	30 300	NURT 40 44 200
—	—	NURT40-1R	10 800	—	—	—	NURT 40-1	49 700
(R)NAST45R	NART45R	NURT45 R	9 990	(R)NAST45	28 500	NAST45ZZ	32 200	NURT 45 47 000
—	—	NURT45-1R	12 400	—	—	—	NURT 45-1	55 300
(R)NAST50R	NART50R	NURT50 R	10 800	(R)NAST50	30 200	NAST50ZZ	34 000	NURT 50 49 700
—	—	NURT50-1R	14 000	—	—	—	NURT 50-1	60 800

Notes⁽¹⁾ Also applicable to the full complement type, shield type, and sealed type.

⁽²⁾ Also applicable to the sealed type.

Table 8.2 Track capacity (Inch series)

Crowned outer ring		Cylindrical outer ring	
Identification number ⁽¹⁾	Track capacity	Identification number ⁽¹⁾	Track capacity
CRY12 R	853	CRY12	4 490
CRY14 R	1 050	CRY14	5 240
CRY16 R	1 420	CRY16	7 270
CRY18 R	1 660	CRY18	7 700
CRY20 R	2 160	CRY20	10 700
CRY22 R	2 450	CRY22	11 800
CRY24 R	3 410	CRY24	15 400
CRY26 R	3 820	CRY26	16 700
CRY28 R	4 210	CRY28	21 000
CRY30 R	4 610	CRY30	22 500
CRY32 R	5 690	CRY32	30 800
CRY36 R	6 640	CRY36	34 700
CRY40 R	8 970	CRY40	44 900
CRY44 R	10 200	CRY44	49 400
CRY48 R	11 400	CRY48	64 300
CRY52 R	12 700	CRY52	69 600
CRY56 R	14 100	CRY56	87 000

Note⁽¹⁾ Also applicable to the sealed type.

Table 9 Track capacity factor

Hardness HRC	Tensile strength N/mm ²	Track capacity factor	
		Crowned outer ring	Cylindrical outer ring
20	760	0.22	0.37
25	840	0.31	0.46
30	950	0.45	0.58
35	1 080	0.65	0.75
38	1 180	0.85	0.89
40	1 250	1.00	1.00
42	1 340	1.23	1.15
44	1 435	1.52	1.32
46	1 530	1.85	1.51
48	1 635	2.27	1.73
50	1 760	2.80	1.99
52	1 880	3.46	2.29
54	2 015	4.21	2.61
56	2 150	5.13	2.97
58	2 290	6.26	3.39

obtained by multiplying the value by the track capacity factor shown in Table 9.

If lubrication between the outer ring and the mating track surface is insufficient, seizure and/or wear may occur depending on the application. Therefore, pay attention to lubrication and surface roughness of the mating track especially in the case of high-speed rotation such as for cam mechanisms.

Allowable Rotational Speed

The allowable rotational speed of Roller Followers is affected by mounting and operating conditions. For reference, Table 10 shows *dn* values when only pure radial loads are applied. Under actual operating conditions, the recommended *dn* value is 1/10 of the value shown in the table in consideration of the axial loads that may act on the bearing.

Table 10 *dn* values of Roller Followers⁽¹⁾

Type	Lubricant	Grease	Oil
Caged type		84 000	140 000
Full complement type		42 000	70 000
Cylindrical Roller Follower		72 000	120 000

Note⁽¹⁾ *dn* value = *d* × *n*
where, *d* : Bore diameter of bearing mm
n : Rotational speed rpm

lubrication

In Sealed Type Roller Followers, Cylindrical Roller Followers and Inch series Roller Followers, ALVANIA GREASE S2 (SHELL) is prepacked as the lubricating grease. For Roller Followers without prepacked grease, grease or oil should be supplied through the oil hole of the inner ring for use. If they are used without lubrication, wear of rolling contact surfaces may take place, leading to a short bearing life.

Oil Hole

Open Type Separable Roller Followers have no oil hole. Inner rings of other types of Metric series Roller Followers have an oil hole. Inch series inner rings have an oil groove and an oil hole.

1N=0.102kgf=0.2248lbs.
1mm=0.03937inch

- ④ In case of Roller Followers without an inner ring, the shaft requires heat treatment and grinding finish. The recommended surface hardness of the shaft is 58~64HRC, and the recommended roughness of the shaft is 0.2 μmR_a or less.

Also, the outer ring and cage are guided by side surfaces of the mounting parts. Therefore, it is recommended that the side surfaces of the mounting parts be finished by grinding or at least by machining. (See Fig. 3.)

- ⑤ In Non-separable Roller Followers, the side plates are press-fitted. Therefore, when mounting the Roller Followers, do not push the side plates.

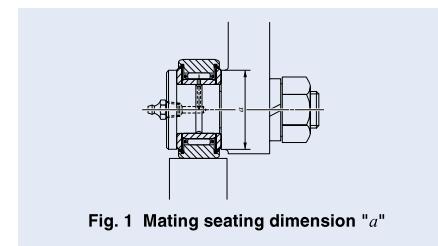


Fig. 1 Mating seating dimension "a"

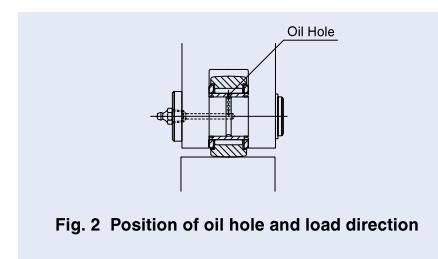


Fig. 2 Position of oil hole and load direction

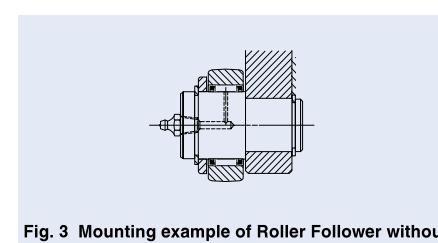
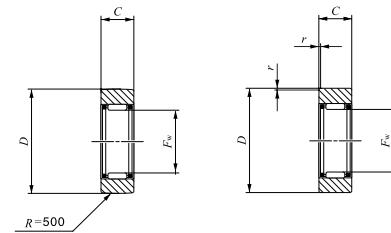


Fig. 3 Mounting example of Roller Follower without inner ring

Separable Roller Followers, Open Type With Cage/Without Inner Ring

Selectable product specifications

Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Open type
	ZZ	Shield type
	ZZUU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



RNAST···R

RNAST

Shaft dia. mm	Identification number		Mass (Ref.) g	Boundary dimensions mm				Basic dynamic load rating <i>C</i> N	Basic static load rating <i>C₀</i> N
	Open type			<i>F_w</i>	<i>D</i>	<i>C</i>	<i>r_{s min}</i> (¹)		
	Crowned outer ring	Cylindrical outer ring							
7	RNAST R	RNAST	8.9	7	16	7.8	0.	2 710	2 90
0	RNAST R	RNAST	1 .9	10	19	9.8	0.	4 160	4 550
2	RNAST R	RNAST	2 .5	12	24	9.8	0.6	5 650	5 890
4	RNAST 0 R	RNAST 0	42.5	14	0	11.8	1	9 790	9 680
6	RNAST R	RNAST	49.5	16	2	11.8	1	10 500	10 900
0	RNAST R	RNAST	50	20	5	11.8	1	12 400	14 00
2	RNAST 7 R	RNAST 7	90	22	40	15.8	1	17 600	20 900
5	RNAST 0 R	RNAST 0	1 5	25	47	15.8	1	19 400	24 500
30	RNAST R	RNAST	152	0	52	15.8	1	20 800	28 400
38	RNAST 30 R	RNAST 30	255	8	62	19.8	1	30 500	45 400
42	RNAST 3 R	RNAST 3	375	42	72	19.8	1	32 400	50 600
0	RNAST 40 R	RNAST 40	420	50	80	19.8	1.5	35 900	61 100
5	RNAST 4 R	RNAST 4	460	55	85	19.8	1.5	37 400	66 400
0	RNAST 0 R	RNAST 0	500	60	90	19.8	1.5	38 900	71 700

Note(¹) Minimum allowable value of chamfer dimension *r*

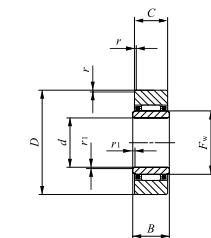
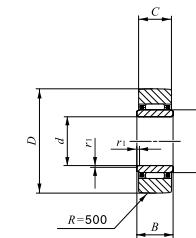
Remarks1. No oil hole is provided.

2. Not provided with prepacked grease. Perform proper lubrication for use.

Separable Roller Followers, Open Type With Cage/With Inner Ring

Selectable product specifications

Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Open type
	ZZ	Shield type
	ZZUU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
	R	Crowned outer ring



NAST···R

NAST

Shaft dia. mm	Identification number		Mass (Ref.) g	Boundary dimensions mm						Basic dynamic load rating <i>C</i> N	Basic static load rating <i>C₀</i> N	Assembled inner ring	
	Open type			<i>d</i>	<i>D</i>	<i>B</i>	<i>C</i>	<i>r_{s min}</i> (¹)	<i>r_{ls min}</i> (¹)				
	Crowned outer ring	Cylindrical outer ring											
	NAST R	NAST	17.8	6	19	10	9.8	0.	0.	10	4 160	4 550	LRT 0 0 S
	NAST R	NAST	28	8	24	10	9.8	0.6	0.	12	5 650	5 890	LRT 0 S
0	NAST 0 R	NAST 0	49.5	10	0	12	11.8	1	0.	14	9 790	9 680	LRT 0 4 S
	NAST R	NAST	58	12	2	12	11.8	1	0.	16	10 500	10 900	LRT 0 S
	NAST R	NAST	62	15	5	12	11.8	1	0.	20	12 400	14 00	LRT 0 S
7	NAST 7 R	NAST 7	109	17	40	16	15.8	1	0.	22	17 600	20 900	LRT 7 S
0	NAST 0 R	NAST 0	157	20	47	16	15.8	1	0.	25	19 400	24 500	LRT 0 S
	NAST R	NAST	180	25	52	16	15.8	1	0.	0	20 800	28 400	LRT 30 S
30	NAST 30 R	NAST 30	20	0	62	20	19.8	1	0.6	8	0 500	45 400	LRT 303 0 S
3	NAST 3 R	NAST 3	440	5	72	20	19.8	1	0.6	42	2 400	50 600	LRT 3 4 0 S
40	NAST 40 R	NAST 40	5 0	40	80	20	19.8	1.5	1	50	5 900	61 100	LRT 40 0 0 S
4	NAST 4 R	NAST 4	580	45	85	20	19.8	1.5	1	55	7 400	66 400	LRT 4 0 S
0	NAST 0 R	NAST 0	6 5	50	90	20	19.8	1.5	1	60	8 900	71 700	LRT 0 0 0 S

Note(¹) Minimum allowable value of chamfer dimension *r* or *r'*

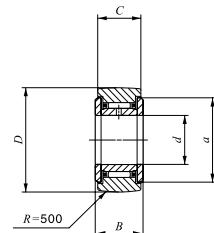
Remarks1. No oil hole is provided.

2. Not provided with prepacked grease. Perform proper lubrication for use.

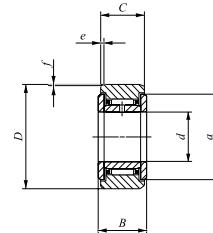
Separable Roller Followers, Shield Type With Cage/With Inner Ring

Selectable product specifications

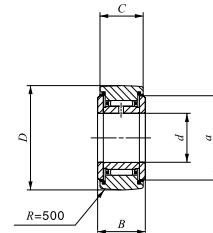
Roller guide type	No symbol		Caged
	V		Full complement
Seal structure	No symbol		Open type
	zz		Shield type
	ZZUU		Sealed type
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



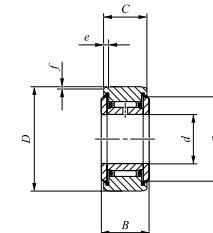
NAST...ZZR



NAST...ZZ



NAST...ZZUUR



NAST...ZZU

Shaft dia. mm	Identification number				Mass (Ref.) g
	Shield type		Sealed type		
	Crowned outer ring	Cylindrical outer ring	Crowned outer ring	Cylindrical outer ring	
6	NAST 6 ZZR	NAST 6 ZZ	NAST 6 ZZUUR	NAST 6 ZZUU	24.5
8	NAST 8 ZZR	NAST 8 ZZ	NAST 8 ZZUUR	NAST 8 ZZUU	39
10	NAST 10 ZZR	NAST 10 ZZ	NAST 10 ZZUUR	NAST 10 ZZUU	65
12	NAST 12 ZZR	NAST 12 ZZ	NAST 12 ZZUUR	NAST 12 ZZUU	75
15	NAST 15 ZZR	NAST 15 ZZ	NAST 15 ZZUUR	NAST 15 ZZUU	83
17	NAST 17 ZZR	NAST 17 ZZ	NAST 17 ZZUUR	NAST 17 ZZUU	135
20	NAST 20 ZZR	NAST 20 ZZ	NAST 20 ZZUUR	NAST 20 ZZUU	195
25	NAST 25 ZZR	NAST 25 ZZ	NAST 25 ZZUUR	NAST 25 ZZUU	225
30	NAST 30 ZZR	NAST 30 ZZ	NAST 30 ZZUUR	NAST 30 ZZUU	400
35	NAST 35 ZZR	NAST 35 ZZ	NAST 35 ZZUUR	NAST 35 ZZUU	550
40	NAST 40 ZZR	NAST 40 ZZ	NAST 40 ZZUUR	NAST 40 ZZUU	710
45	NAST 45 ZZR	NAST 45 ZZ	NAST 45 ZZUUR	NAST 45 ZZUU	760
50	NAST 50 ZZR	NAST 50 ZZ	NAST 50 ZZUUR	NAST 50 ZZUU	830

Remarks1. The inner ring has an oil hole.

2. The sealed type is provided with prepacked grease. The shield type is not provided with prepacked grease. Perform proper lubrication for use.

	Boundary dimensions mm						Basic dynamic load rating C N	Basic static load rating C ₀ N
			C		f			
6	19	14	13.8	14	2.5	0.8	4 160	4 550
8	24	14	13.8	17.5	2.5	0.8	5 650	5 890
10	30	16	15.8	23.5	2.5	0.8	9 790	9 680
12	32	16	15.8	25.5	2.5	0.8	10 500	10 900
15	35	16	15.8	29	2.5	0.8	12 400	14 300
17	40	20	19.8	32.5	3	1	17 600	20 900
20	47	20	19.8	38	3	1	19 400	24 500
25	52	20	19.8	43	3	1	20 800	28 400
30	62	25	24.8	50.5	4	1.2	30 500	45 400
35	72	25	24.8	53.5	4	1.2	32 400	50 600
40	80	26	25.8	61.5	4	1.2	35 900	61 100
45	85	26	25.8	66.5	4	1.2	37 400	66 400
50	90	26	25.8	76	4	1.2	38 900	71 700

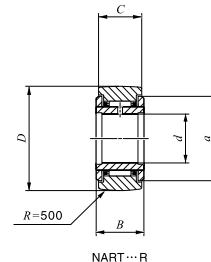
Non-separable roller Followers With Cage/With Inner Ring

Full Complement Type/With Inner Ring

Selectable product specifications

Roller guide type	No symbol		Caged
	V		Full complement
Seal structure	No symbol		Shield type
	UU		Sealed type

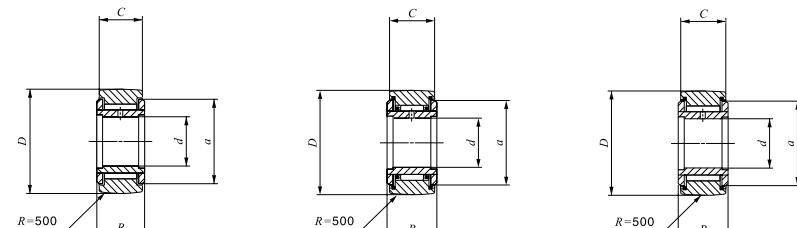
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



Shaft dia. mm	Identification number				Mass (Ref.) g
	Shield type Crowned outer ring		Sealed type Crowned outer ring		
	With cage	Full complement	With cage	Full complement	
5	NART 5 R —	— NART 5 VR	NART 5 UUR —	— NART 5 VUUR	14. 1.1
6	NART 6 R —	— NART 6 VR	NART 6 UUR —	— NART 6 VUUR	1.
8	NART 8 R —	— NART 8 VR	NART 8 UUR —	— NART 8 VUUR	41. 4.
10	NART 10 R —	— NART 10 VR	NART 10 UUR —	— NART 10 VUUR	4. .
12	NART 12 R —	— NART 12 VR	NART 12 UUR —	— NART 12 VUUR	71 73
15	NART 15 R —	— NART 15 VR	NART 15 UUR —	— NART 15 VUUR	1 1
17	NART 17 R —	— NART 17 VR	NART 17 UUR —	— NART 17 VUUR	149 1
20	NART 20 R —	— NART 20 VR	NART 20 UUR —	— NART 20 VUUR	2 2
25	NART 25 R —	— NART 25 VR	NART 25 UUR —	— NART 25 VUUR	2 29
30	NART 30 R —	— NART 30 VR	NART 30 UUR —	— NART 30 VUUR	47 4
35	NART 35 R —	— NART 35 VR	NART 35 UUR —	— NART 35 VUUR	64 6
40	NART 40 R —	— NART 40 VR	NART 40 UUR —	— NART 40 VUUR	84 8
45	NART 45 R —	— NART 45 VR	NART 45 UUR —	— NART 45 VUUR	91 93
50	NART 50 R —	— NART 50 VR	NART 50 UUR —	— NART 50 VUUR	9 1.01

Remarks1. The inner ring has an oil hole.

lubrication for use.

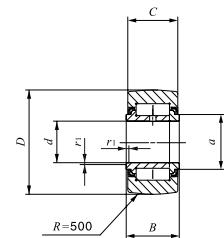


Boundary dimensions mm					Basic dynamic load rating C N	Basic static load rating C₀ N	Maximum allowable static load N
d	D	B	C	a			
1	1	1	11	1	3	3	3
1	1	1	11	1	1	37	731
19	19	1	11	14	4	474	474
19	19	1	11	14	79	13	13
4	4	1	14	17.	4	9	9
4	4	1	14	17.	11	1	1
1	3	1	14	3.	3	74	74
1	3	1	14	3.	1	11	17
1	3	1	14	.		47	47
1	3	1	14	.	1		1
1	3	19	1	9	137	14	14
1	3	19	1	9		34	4
17	17	4	1	3.	17	1	1
17	17	4	1	3.	3	43	331
47	47		4	3	3	37	37
47	47		4	3	41	73	73
			4	43	47	34	34
			4	43	4	791	791
3	3	9	.		33	14	14
3	3	9	.		99	11	9
3	7	9	3.	37		74	74
3	7	9	3.	31	11	11	11
4	4	3	3	1.	449	1	1
4	4	3	3	1.	73	14	14
4	4	3	3	.	4	11	11
4	4	3	3	.	3	11	11
9	9	3	3	7	4	9	9
9	9	3	3	7	43	19	19

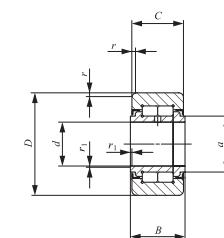
Cylindrical roller Followers | Full Complement Type/With Inner Ring

Selectable product specifications

Roller guide type	No symbol		Full complement
Seal structure	No symbol		Shield type
	UU		Sealed type
Shape of outer ring	No symbol		Cylindrical outer ring
	R		Crowned outer ring



NURT...R



NURT

Shaft dia. mm	Identification number		Ma (Ref.) g	Boundary dimension mm				
	Crowned outer ring	Cylindrical outer ring		d	D	B	C	a
15	NURT 15 R	NURT 15	100	1		19	18	0
	NURT 15-1 R	NURT 15-1	160	1		19	18	0
17	NURT 17 R	NURT 17	17	0	17	1	0	
	NURT 17-1 R	NURT 17-1	2	17	7	1	0	
20	NURT 20 R	NURT 20	2	0	7	5	4	7
	NURT 20-1 R	NURT 20-1	3 1	0		5	4	7
25	NURT 25 R	NURT 25	2 1		6	5	4	1
	NURT 25-1 R	NURT 25-1	4 0			5	4	1
30	NURT 30 R	NURT 30	466	0	6	9	8	
	NURT 30-1 R	NURT 30-1	697	0	7	9	8	
35	NURT 35 R	NURT 35	6 0		7	9	8	
	NURT 35-1 R	NURT 35-1	8 0		0	9	8	
40	NURT 40 R	NURT 40	817	0	0	2	0	9
	NURT 40-1 R	NURT 40-1	11 0	0	90	2	0	9
45	NURT 45 R	NURT 45	8			2	0	
	NURT 45-1 R	NURT 45-1	1 400		100	2	0	
50	NURT 50 R	NURT 50	9 0	0	90	2	0	
	NURT 50-1 R	NURT 50-1	1 690	0	110	2	0	

Note⁽¹⁾ Minimum allowable value of chamfer dimension r_s or r_{1s}

Remarks 1. The inner ring has an oil hole.

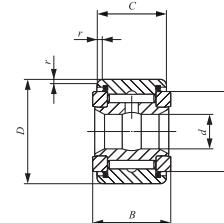
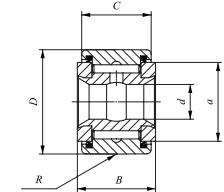
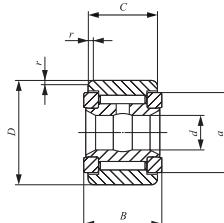
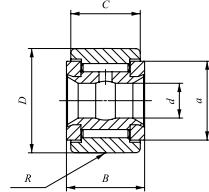
2. Provided with prepacked grease.

r_s ⁽¹⁾ min	r_{1s} ⁽¹⁾ min	Basic dynamic load rating C N	Basic static load rating C_0 N	Maximum allowable static load N
0.6	0.	00	7 00	11 00
	0.	00	7 00	7 00
1	0.	00	0 900	0 00
	0.	00	0 900	0 900
1	0.	900	9 000	7 00
	0.	900	9 000	9 000
1	0.	100	100	0 000
	0.	100	100	100
1	0.	00	7 00	0 00
	0.	00	7 00	7 00
1	0.6	6 900	00	7 000
	0.6	6 900	00	0 00
1	0.6	6 00	1 000	7 00
	0.6	6 00	1 000	1 000
1	0.6	91 00	1 000	7 700
	0.6	91 00	1 000	1 000
1	0.6	96 00	1 000	100
	0.6	96 00	1 000	1 000

Non-separable roller Followers, Inch Series Full Complement Type /With Inner Ring

Selectable product specifications

Roller guide type	No symbol	Caged
	V	Full complement
Seal structure	No symbol	Shield type
	UU	Sealed type
Shape of outer ring	No symbol	Cylindrical outer ring
R	Crowned outer ring	Crowned outer ring



CRY...VR

CRY...V

CRY...VUUR

CRY...VUU

Stud dia. mm (inch)	Identification number				Mass (Ref.) g	Boundary dimensions mm(inch)				
	Shield type		Sealed type			d	D	B	C	
	Crowned outer ring	Cylindrical outer ring	Crowned outer ring	Cylindrical outer ring						
6.350 ($\frac{1}{4}$)	CRY 12 VR	CRY 12 V	CRY 12 VUUR	CRY 12 VUU	27	6 3 ($\frac{1}{8}$)	9 ($\frac{1}{8}$)	288(62)	2 7 ($\frac{1}{8}$)	
	CRY 14 VR	CRY 14 V	CRY 14 VUUR	CRY 14 VUU	36	6 3 ($\frac{1}{8}$)	22 22 ($\frac{1}{8}$)	288(62)	2 7 ($\frac{1}{8}$)	
7.938 ($\frac{5}{16}$)	CRY 16 VR	CRY 16 V	CRY 16 VUUR	CRY 16 VUU	68	7 938($\frac{5}{16}$)	2 ($\frac{1}{8}$)	7 63(687)	87 ($\frac{1}{8}$)	
	CRY 18 VR	CRY 18 V	CRY 18 VUUR	CRY 18 VUU	77	7 938($\frac{5}{16}$)	28 7 ($\frac{1}{8}$)	7 63(687)	87 ($\frac{1}{8}$)	
9.525 ($\frac{3}{8}$)	CRY 20 VR	CRY 20 V	CRY 20 VUUR	CRY 20 VUU	9	9 2 ($\frac{1}{8}$)	3 7 ($\frac{1}{8}$)	2 638(8 2)	9 ($\frac{1}{8}$)	
	CRY 22 VR	CRY 22 V	CRY 22 VUUR	CRY 22 VUU	36	9 2 ($\frac{1}{8}$)	3 92 ($\frac{1}{8}$)	2 638(8 2)	9 ($\frac{1}{8}$)	
11.112 ($\frac{11}{16}$)	CRY 24 VR	CRY 24 V	CRY 24 VUUR	CRY 24 VUU	86	2 ($\frac{1}{8}$)	38 ($\frac{1}{2}$)	23 8 3(937)	22 22 ($\frac{1}{8}$)	
	CRY 26 VR	CRY 26 V	CRY 26 VUUR	CRY 26 VUU	227	2 ($\frac{1}{8}$)	27 ($\frac{1}{8}$)	23 8 3(937)	22 22 ($\frac{1}{8}$)	
12.700 ($\frac{1}{2}$)	CRY 28 VR	CRY 28 V	CRY 28 VUUR	CRY 28 VUU	29	2 7 ($\frac{1}{8}$)	($\frac{1}{4}$)	26 988(62)	2 ($\frac{1}{8}$)	
	CRY 30 VR	CRY 30 V	CRY 30 VUUR	CRY 30 VUU	363	2 7 ($\frac{1}{8}$)	7 62 ($\frac{1}{8}$)	26 988(62)	2 ($\frac{1}{8}$)	
15.875 ($\frac{5}{8}$)	CRY 32 VR	CRY 32 V	CRY 32 VUUR	CRY 32 VUU	76	87 ($\frac{1}{8}$)	8 ($\frac{1}{2}$)	33 338(3 2)	3 7 ($\frac{1}{8}$)	
	CRY 36 VR	CRY 36 V	CRY 36 VUUR	CRY 36 VUU	99	87 ($\frac{1}{8}$)	7 ($\frac{1}{2}$)	33 338(3 2)	3 7 ($\frac{1}{8}$)	
19.050 ($\frac{3}{4}$)	CRY 40 VR	CRY 40 V	CRY 40 VUUR	CRY 40 VUU	8 6	9 ($\frac{1}{8}$)	63 ($\frac{1}{2}$)	39 688(62)	38 ($\frac{1}{8}$)	
	CRY 44 VR	CRY 44 V	CRY 44 VUUR	CRY 44 VUU	2	9 ($\frac{1}{8}$)	69 8 ($\frac{1}{2}$)	39 688(62)	38 ($\frac{1}{8}$)	
25.400 (1)	CRY 48 VR	CRY 48 V	CRY 48 VUUR	CRY 48 VUU	6	2 ($\frac{1}{8}$)	76 2 ($\frac{3}{4}$)	6 38(8 2)	($\frac{1}{8}$)	
	CRY 52 VR	CRY 52 V	CRY 52 VUUR	CRY 52 VUU	6	2 ($\frac{1}{8}$)	82 ($\frac{3}{4}$)	6 38(8 2)	($\frac{1}{8}$)	
28.575 ($\frac{11}{16}$)	CRY 56 VR	CRY 56 V	CRY 56 VUUR	CRY 56 VUU	2 2	28 7 ($\frac{1}{8}$)	88 9 ($\frac{3}{4}$)	2 388(62)	8 ($\frac{1}{2}$)	
31.750 ($\frac{1}{2}$)	CRY 64 VR	CRY 64 V	CRY 64 VUUR	CRY 64 VUU	3 2	3 7 ($\frac{1}{8}$)	6 ($\frac{1}{4}$)	8 738(2 3 2)	7 ($\frac{1}{2}$)	

Remarks 2 The inner ring has an oil groove and an oil hole

Provided with prepacked grease

a	R	r	Shaft dia. mm						Basic dynamic load rating C N	Basic static load rating C ₀ N		
			Push fit		Drive fit		Press fit					
			Min.	Max.	Min.	Max.	Min.	Max.				
(67)	2 (10)	79 ($\frac{1}{2}$)	6 332	6 3 2	6 3 8	6 3 8	6 3 3	6 363	8 7	2 3		
(67)	2 (10)	79 ($\frac{1}{2}$)	6 332	6 3 2	6 3 8	6 3 8	6 3 3	6 363	8 7	2 3		
9 6(772)	3 (12)	9 ($\frac{1}{2}$)	7 92	7 93	7 93	7 9	7 9	7 9	3	22 7		
9 6(772)	3 (12)	88 ($\frac{1}{2}$)	7 92	7 93	7 93	7 9	7 9	7 9	3	22 7		
2 (98)	36 (14)	88 ($\frac{1}{2}$)	9 7	9 7	9 23	9 33	9 28	9 38	23 6	3 7		
2 (98)	36 (14)	88 ($\frac{1}{2}$)	9 7	9 7	9 23	9 33	9 28	9 38	23 6	3 7		
28 8 (3)	(20)	88 ($\frac{1}{2}$)	9				2		28 2			
28 8 (3)	(20)	88 ($\frac{1}{2}$)	9				2		28 2			
32 7 (287)	(20)	88 ($\frac{1}{2}$)	2 682	2 692	2 698	2 7 8	2 7 8	2 7 8	3 3	6		
32 7 (287)	(20)	88 ($\frac{1}{2}$)	2 682	2 692	2 698	2 7 8	2 7 8	2 7 8	3 3	6		
36 (7)	6 (24)	88 ($\frac{1}{2}$)	8 7	867	873	883	883	893	7	8 6		
36 (7)	6 (24)	88 ($\frac{1}{2}$)	8 7	867	873	883	883	893	7	8 6		
3 3 (7)	76 (30)	2 38 ($\frac{1}{2}$)	9 32	9 2	9 8	9 8	9 8	9 68	6	6		
3 3 (7)	76 (30)	2 38 ($\frac{1}{2}$)	9 32	9 2	9 8	9 8	9 8	9 68	6	6		
(2 2)	76 (30)	2 38 ($\frac{1}{2}$)	2 377	2 39	2 397	2	2 8	2 2	77 6	72		
(2 2)	76 (30)	2 38 ($\frac{1}{2}$)	2 377	2 39	2 397	2	2 8	2 2	77 6	72		
6 9(2 37)	76 (30)	2 38 ($\frac{1}{2}$)	28 22	28 6	28 72	28 8	28 83	28 9		239		
7 (2797)	76 (30)	2 38 ($\frac{1}{2}$)	3 727	3 7	3 77	3 76	3 78	3 77	2	3 7		

**APPLICATIONS
SPECIAL SPECIFICATIONS
MISCELLANEOUS TABLES**

Application

Special Specifications

Miscellaneous Tables

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