

CAM FOLLOWERS



Cam follower with pre-installed grease nipple

Newly available versatile cam follower which has conquered disadvantages in traditional products!!

CF..AB
Standard type

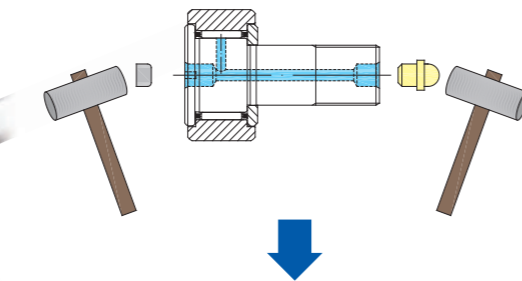
CF..MAB
Stainless type

CFH..AB
Eccentric type

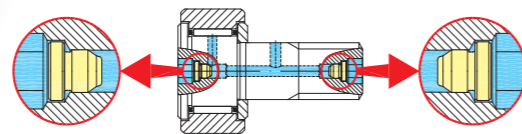
CFH..MAB
Eccentric stainless type

Ready use instantly after unpack the box thanks to pre-installed grease nipple.

•Conventional type: Need to fit a nipple



•Grease nipple fitted



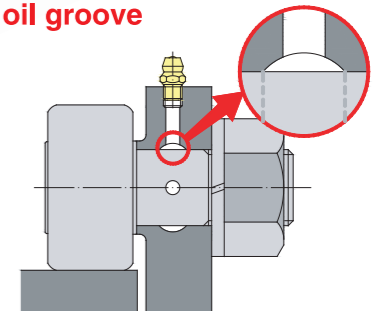
Lubrication available from both stud head side and thread side. No restriction for mounting location.

NUCF..AB

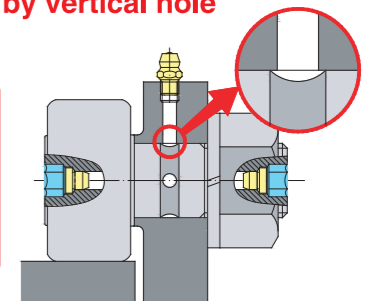
Double-row cylindrical roller type

stud diameter
16 to 30mm

•Need to machine an internal oil groove



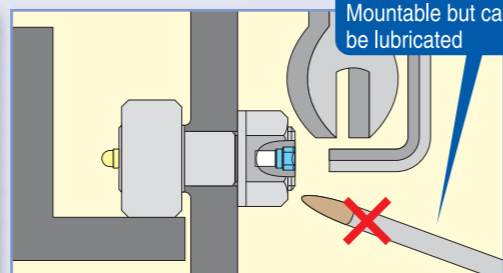
•Lubrication enabled only by vertical hole



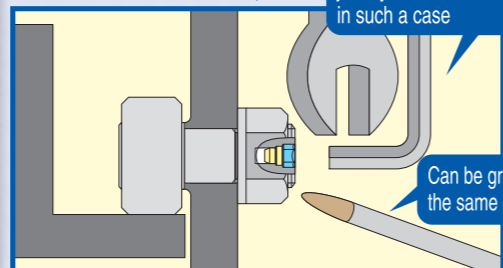
Lubrication area at the side of stud has an oil groove to eliminate bothersome groove machining process in the mounting side(NUCF type).

No restriction for mounting location thanks to hexagon socket shape in stud head and thread side. Easy mounting and removal is available thanks to having hexagon socket shape in both side.

Conventional type (CF..B):
Mountable but cannot be lubricated



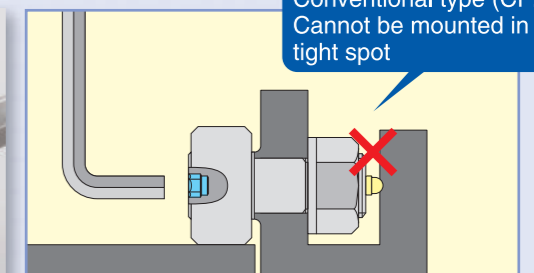
Mounting can be completed just by the screw side only in such a case



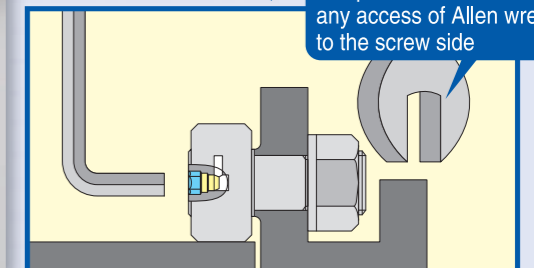
Can be greased in the same direction

No restriction for mounting location thanks to hexagon socket shape in stud head and thread side. Easy mounting and removal is available thanks to having hexagon socket shape in both side.

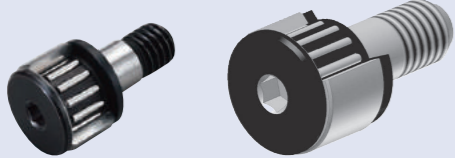
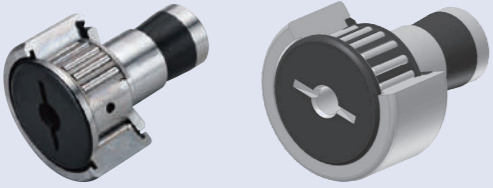
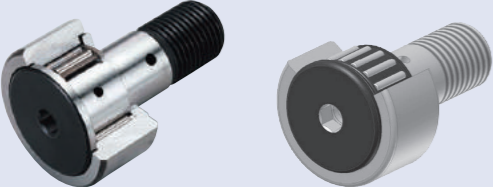
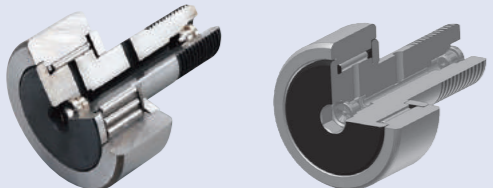
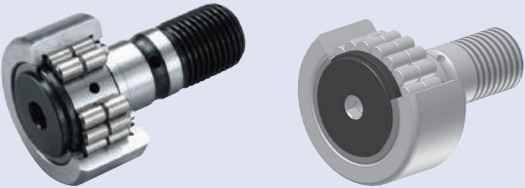
Conventional type (CF..A):
Cannot be mounted in a tight spot

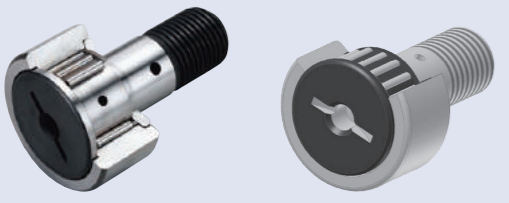
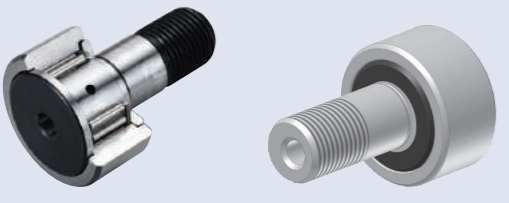

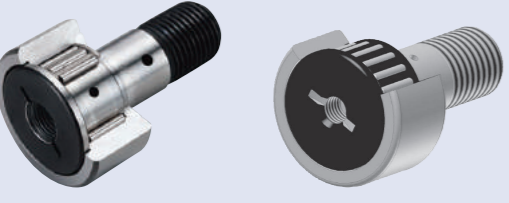
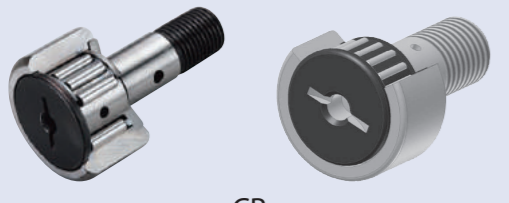


Installation can be completed even without any access of Allen wrench to the screw side



Type and Part Code

Type	Applicable axis diameter	Feature	Part Code
 <p>CFS Compact outer ring</p>	$\phi 2.5 \sim \phi 6$	Built-in very thin needle roller. Enables compact design due to very small outer ring diameter in comparison to stud diameter.	<p>CFS 6 V A</p> <p>↑ ↑ ↑ ↑</p> <p>Type Stud diameter</p> <p>A: With hexagon socket on the stud head</p> <p>V: Full complement None: With cage</p>
 <p>CF-SFU Easy mounting</p>	$\phi 6 \sim \phi 20$	A type with step on stud to allow easy mounting. Optimal for devices with limited space for stud tightening. Available with seal only.	<p>CF-SFU 16 V R</p> <p>↑ ↑ ↑ ↑</p> <p>Type Stud diameter</p> <p>R: Crowned outer ring None: Cylindrical outer ring</p> <p>V: Full complement None: With cage</p>
 <p>CF-A Hexagon hole</p>	$\phi 3 \sim \phi 30$	Hexagon sockets on the stud head. Easy mounting with hex-wrench. Available with hexagon sockets at the thread side mode (CF-B). (Applicable for shaft diameter 12 or more)	<p>V: Full complement None: With cage</p> <p>UU: With seal None: With shield</p> <p>R: Crowned outer ring None: Cylindrical outer ring</p> <p>CF 16 V UU R A N</p> <p>↑ ↑ ↑ ↑ ↑ ↑ ↑</p> <p>Type Stud diameter</p> <p>A: With hexagon socket on the stud head B: With hexagon socket on the thread side (Applicable for shaft diameter 12 or more)</p> <p>N: Option (Dedicated grease nipple)</p>
 <p>CF-AB</p>	$\phi 10 \sim \phi 30$	Both of stud head and thread ends have hexagon holes and integrated concave grease nipples. Available for mounting with either hexagon sockets and lubrication from both sides.	<p>V: Full complement None: With cage</p> <p>UU: With seal None: With shield</p> <p>R: Crowned outer ring None: Cylindrical outer ring</p> <p>CF 16 V UU R AB</p> <p>↑ ↑ ↑ ↑ ↑ ↑</p> <p>Type Stud diameter</p> <p>AB: With hexagon socket on both sides. (With integrated concave nipple)</p>
 <p>NUCF-AB</p>	$\phi 16 \sim \phi 30$	Cam follower which allows high radial loading and moderate axial loading with integrated cylindrical roller in double rows. Integrated concave grease nipples and hexagon sockets on both sides allow mounting and lubrication from either side.	<p>NUCF 16 R AB</p> <p>↑ ↑ ↑ ↑</p> <p>Type Stud diameter</p> <p>AB: With hexagon socket both sides. (With integrated concave nipple)</p> <p>R: Crowned outer ring None: Cylindrical outer rings</p>

Type	Applicable axis diameter	Feature	Part Code
 <p>CF</p>	$\phi 5 \sim \phi 30$	General purpose cam follower with screwdriver groove on the stud head.	<p>V: Full complement None: With cage</p> <p>UU: With seal None: With shield</p> <p>CF 16 V UU R N</p> <p>↑ ↑ ↓ ↓ ↓ ↓</p> <p>Type Stud diameter R: Crowned outer ring Option None: Cylindrical outer ring (Dedicated grease nipple)</p>
 <p>CFH-A Hexagon socket, Eccentric</p>	$\phi 5 \sim \phi 30$	Available for the same mounting hole as general type. Compact and high accuracy eccentric cam followers with integrated structure enables easy fine positioning adjustment simply by rotating stud due to eccentric stud head shifting 0.2 to 1mm from stud mounting axis.	<p>V: Full complement None: With cage</p> <p>UU: With seal None: With shield</p> <p>CFH 16 V UU R A</p> <p>↑ ↑ ↓ ↓ ↓ ↓</p> <p>Type Stud diameter R: Crowned outer ring None: Cylindrical outer ring A: With hexagon socket on the stud head B: With hexagon socket on the thread side (Applicable for shaft diameter 12 or more)</p>
 <p>CFH-AB</p>	$\phi 12 \sim \phi 30$	Eccentric cam follower with integrated concave grease nipples on both sides. Available for mounting and lubrication with hexagon holes on both sides.	<p>V: Full complement None: With cage</p> <p>UU: With seal None: With shield</p> <p>CFH 16 V UU R AB</p> <p>↑ ↑ ↓ ↓ ↓ ↓</p> <p>Type Stud diameter R: Crowned outer ring None: Cylindrical outer ring AB: With hexagon socket on both sides (With integrated concave nipple)</p>
 <p>CFT Lubrication tap hole</p>	$\phi 6 \sim \phi 30$	Cam follower with tap for piping at stud head and thread of general type. Optimal for location that requires concentrated lubrication piping.	<p>V: Full complement None: With cage</p> <p>UU: With seal None: With shield</p> <p>CFT 16 V UU R A</p> <p>↑ ↑ ↓ ↓ ↓ ↓</p> <p>CFT: Standard typed CFHT: Eccentric type Stud diameter R: Crowned outer ring None: Cylindrical outer ring A: With hexagon socket on the stud head (Applicable shaft diameter $\phi 12 \sim \phi 30$) B: With hexagon socket on the thread side (Applicable shaft diameter $\phi 12 \sim \phi 30$) None: Standard type</p>
 <p>CR Inch type</p>	$\phi 4.826 \sim \phi 22.225$	Cam followers in inch dimension.	<p>R: Crowned outer ring None: Cylindrical outer ring</p> <p>CR 16 UU R</p> <p>↑ ↑ ↓ ↓</p> <p>Type Stud diameter UU: With seal None: With shield</p>

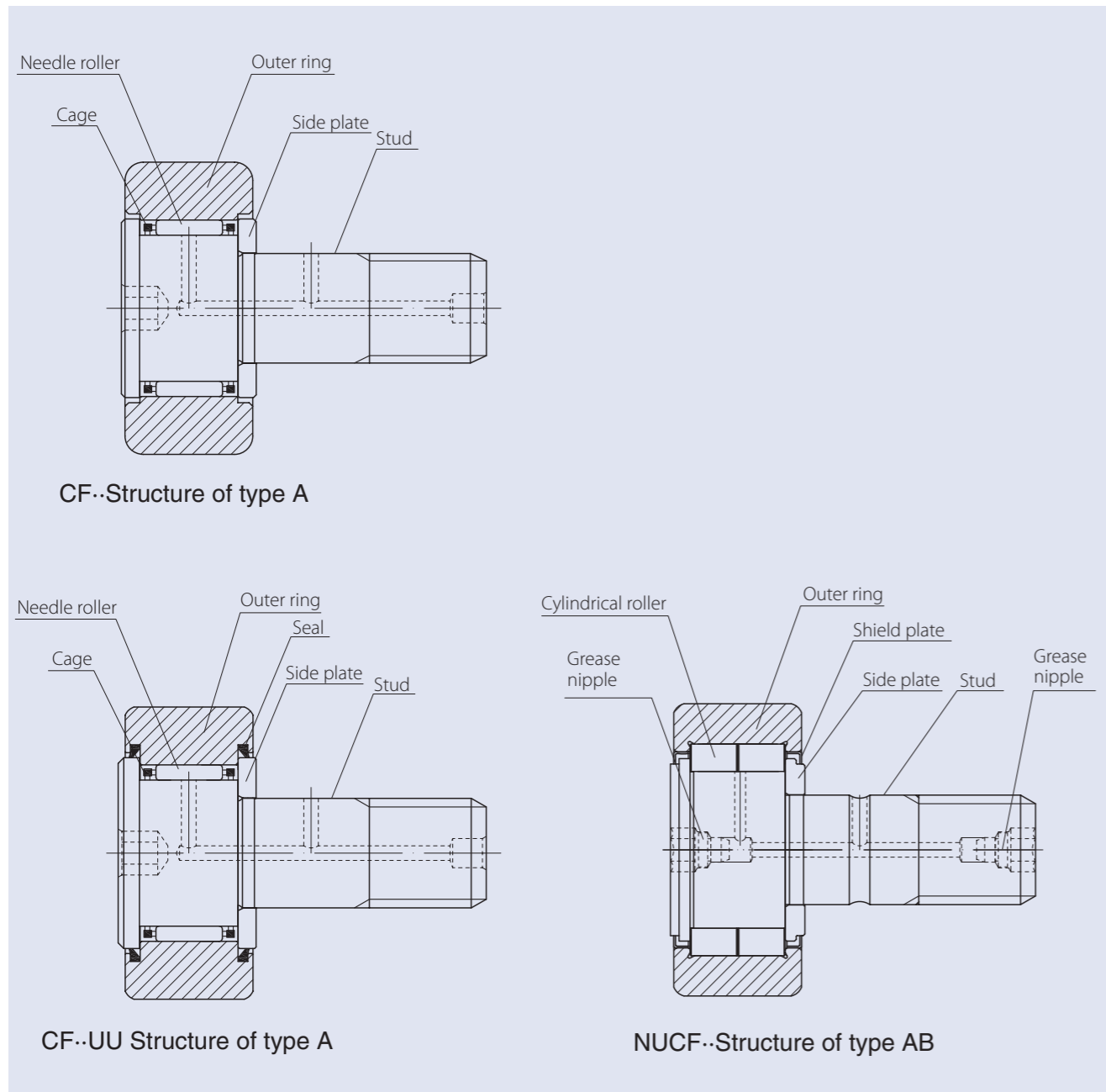
Structure and Features

Cam followers are compact and high rigid bearings with stud. It has a structure that an outer ring with built-in "roller" rolls over a track (raceway) and is utilized as guide roller for cam mechanism or linier motion. The cam follower is designed with a thick-walled outer ring in order to provide high rigidity to endure heavy load or impact load at contact portion with the track.

Outer rings have two shapes – crowned outer ring and cylindrical outer ring. The cylindrical outer ring is effective for heavy duty applications since it contacts with large contact area of the associated objects so that can mitigate the contact surface pressure. The crowned outer ring is suited for absorbing eccentric load since it absorbs angular misalignment due to a mount error. They have two internal structures – one with cage and one with full complement. Caged type cam followers are suited for high speed application, since the guiding feature of cage enables the rotation of "rollers" to be stable. Compared with caged type cam followers, full complement type is effective for applications with low-speed operation of heavy load due to its larger load rating. Full complement type also includes double-raw cylindrical roller type which allows moderate axial loading.

Cam followers shall be fixed by tightening hexagon nut at stud thread by holding the stud with screw driver or hex-wrench.

Cam followers with eccentric axis on the stud thread have an advantage to adjust the variation of mounting position within its eccentric range, without requesting high machining accuracy of mounting hole position.



Accuracy standard

Accuracy of cam follower is indicated in Table-1 and Table-2 below.

Table-1 Accuracy

Unit: μm

Name	Category	Cam follower series in metric (CF--, NUCF--)		Compact type (CFS--)	Cam follower series in inch (CR--)	
		Crowned outer ring	Cylindrical outer ring	Cylindrical outer ring	Crowned outer ring	Cylindrical outer ring
Dimension tolerance of outer ring outer diameter (D)		0 -50	Refer to Table-2	Refer to Table-2	0 -50	0 -25
Dimension tolerance of stud diameter (d)		h7		h6	+25 0	
Dimension tolerance of outer ring width (C)		0 -120		0 -120	0 -130	

Table-2 Accuracy of outer ring (Metric series and compact type roller outer ring) Unit: μm

Nominal outer ring outer diameter D (mm)		Dimension tolerance of mean outside diameter in a single plane Δ_{Dmp}		Radial runout of outer ring K_{ea}
Over	Incl.	high	low	max.
6 (5 or more)	18	0	-8	15
18	30	0	-9	15
30	50	0	-11	20
50	80	0	-13	25
80	120	0	-15	35

Radial internal clearance

Table below indicates radial internal clearance of cam follower.

Table-3 Radial internal clearance

Unit: μm

Part code				Radial internal clearance	
Cam follower series in metric (CF)	Compact type (CFS)	Double-row cylindrical roller cam follower (NUCF)	Inch type series (CR)	min.	max.
CF3 ~ 5	CFS2.5 ~ 5		CR8 ~ 8-1	3	17
CF6 ~ 8	CFS6		CR10 ~ 10-2	5	20
CF10 ~ 12-1			CR12 ~ 22	5	25
CF16 ~ 20-1			CR24 ~ 26	10	30
CF24 ~ 30-2				10	40
		NUCF16 ~ 24		0	25
		NUCF24-1 ~ 30-2		5	30

Fits

Cam followers require machining of mounting hole to eliminate play at fitting portion especially for the portion which is subjected to impact shock due to its application in cantilevered mounting. Table-4 indicates recommended fits between cam follower and its mounting hole.

Table-4 Dimension tolerance of stud mounting hole

Part code	Dimension tolerance of stud mounting hole
Cam follower series in metric (CF)	H7
Compact type (CFS)	H6
Double-row cylindrical roller cam follower (NUCF)	H7
Cam follower series in inch (CR)	F7

Maximum permissible load

Permissible load of cam follower is subjected to change in accordance with bending strength and shear strength of its stud in addition to standard rating load of needle bearing due to its design with stud. This load is indicated as maximum permissible load.

Track load capacity

Track load capacity means a permissible load under which the outer ring of cam follower and the mating surface are allowable to be used over a long period without causing any deformation nor compression mark. Track load capacity depicted in dimension table indicates a value for which hardness of steel mating material is assumed to be HRC40. In the case that the hardness of mating material is not HRC40, track load capacity in the dimension table shall be multiplied by value of track load factor obtained by Figure-1.

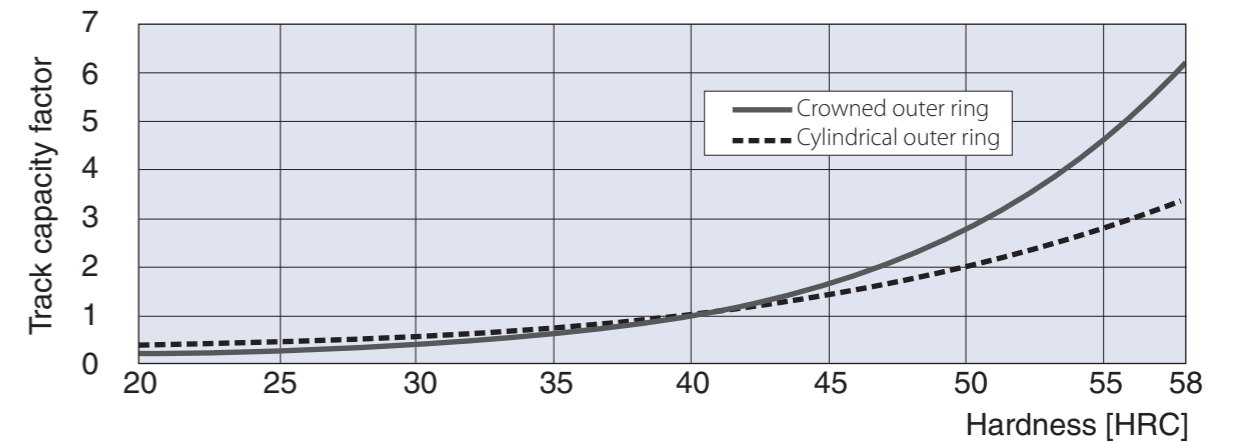


Figure-1 Track capacity factor

Lubrication

All the JNS cam followers are lubricated with pre-packed high quality lithium soap-based grease grade 2 (RoHS compliant) so that they are ready to use. For applications requiring high prevention measure against invasion of foreign matter or leakage of lubricant, products with seal(part code--UU) which integrate special synthetic lubber with high abrasion resistance are also available.

Grease shall be packed up to volume approximately one-third to one-half of internal space of bearing. Lubrication interval varies depending on operation condition. Referential interval may be every six to twenty four months for cam followers with cages and every one to six months for full complement type with grease in the same type.

Some excessive grease may leak at the beginning of usage or immediately after re-greasing even for the products with seal. Aging operation period is recommended prior to application in which no contamination by grease is allowed in and around device. Wipe and clean any leaked extra grease after this operation.

Dedicated grease nipple shall be knocked in onto cam follower by pressing flange portion of the nipple using fixture shown in Figure-2.

Accessories

Accessories for cam follower of standard specification are shown in Table-5. Dedicated grease nipple is available upon customer request by ordering products with suffix "N" added to part code.

Also, type CF-AB and type NUCF-AB have integrated dedicated concave grease nipples installed at both sides.

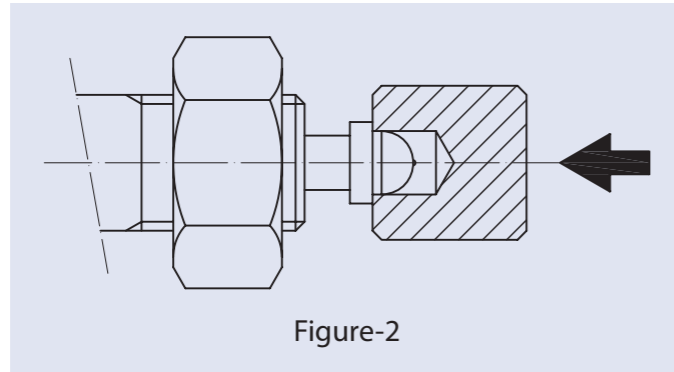





Figure-2

Example) CF 12 UUR -N
└─Dedicated grease nipple

Table-5 Accessories

Part code		 Stop plug ^{*1)}	 Resin plug ^{*2)}	 Hexagon nuts style 2	Grease
CF CFH CR	Without seal	Attached	Attached	Attached	Packed
	With seal	Attached	Attached	Attached	Packed
CFT	Without seal	—	—	Attached	Packed
	With seal	—	—	Attached	Packed
CFS		—	—	Attached	Packed
CF-SFU		Attached	Attached	—	Packed
NUCF		—	—	Attached	Packed

*1) Stop plug is used for plugging unused lubrication hole(s).

*2) Resin plug is used for preventing leakage of grease.

DIMENSIONS OF GREASE NIPPLES

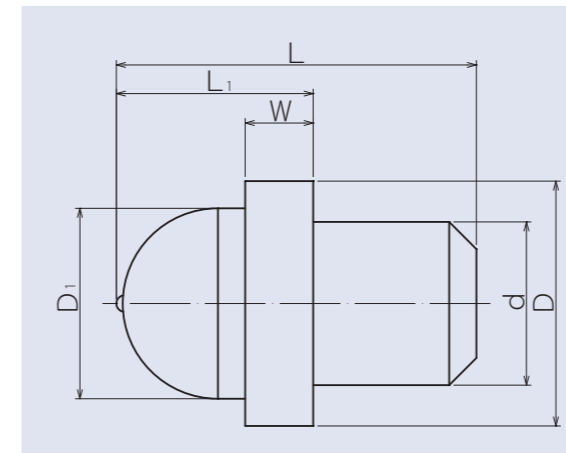


Table-6

Applicable part code	Nipple dimension					
	d	D	D ₁	L	L ₁	W
CF, CFH	d	D	D ₁	L	L ₁	W
CF5	3.2	7.5	6	9	5.5	1.5
CF6 ~ CF10-1	4	7.5	6	10	5.5	1.5
CF12 ~ CF18	6	8	6	11	6	2
CF20 ~ CF30-2	8	10	6	16	7	3

Dimensions of supply nozzle for CF..AB type

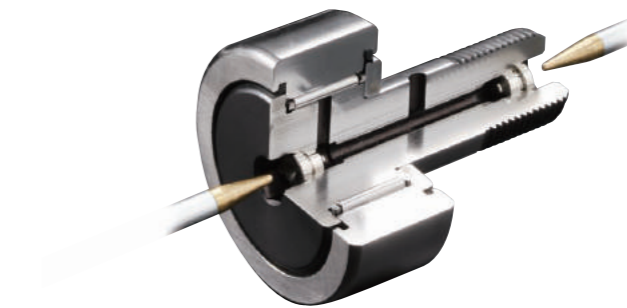


Table-7 Dimension of recommended lubrication nozzle (for CF..AB, NUCF..AB)

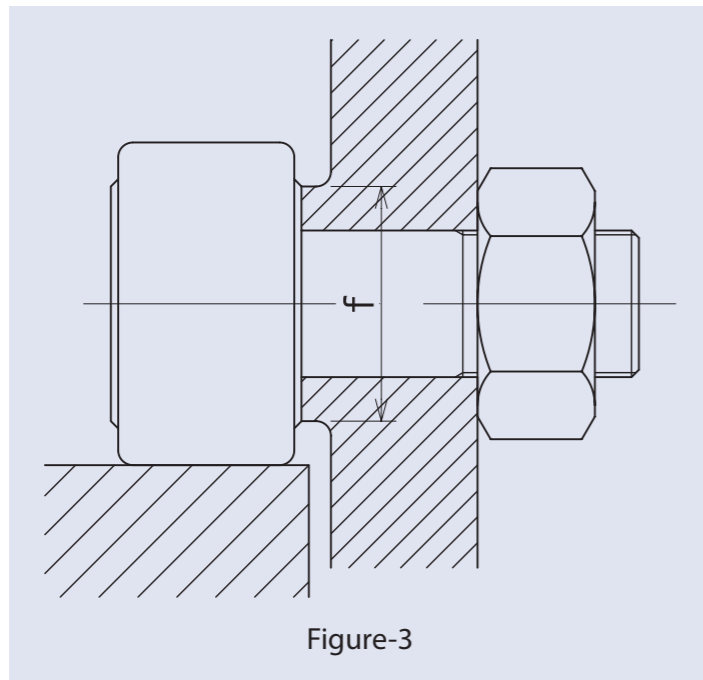
Type	Dimension and shape	Applied model number	
NPAB-1		CF10ABK(M10 × 1)	NUCF16AB
		CF10-1ABK(M10 × 1)	NUCF18AB
		CF12AB	
		CF12-1AB	
		CF16AB	
		CF18AB	
NPAB-2		CF20AB	NUCF20AB
		CF20-1AB	NUCF20-1AB
		CF24AB	NUCF24AB
		CF24-1AB	NUCF24-1AB
		CF30AB	NUCF30AB
		CF30-1AB	NUCF30-2AB

Mounting

Mounting part

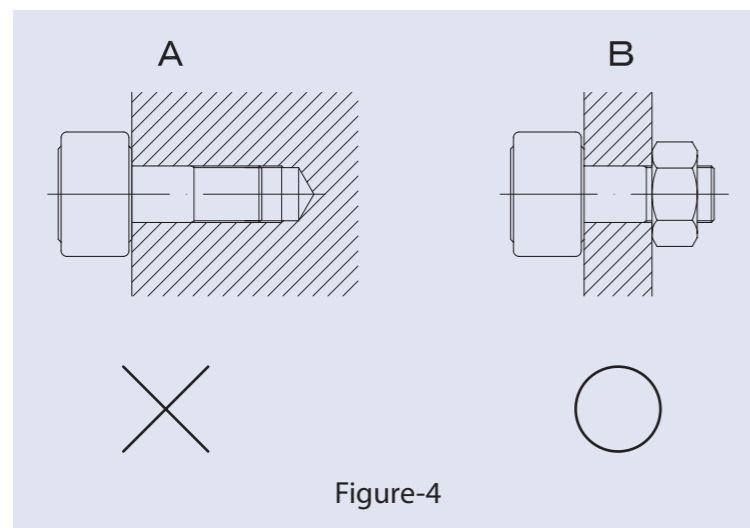
Hole for stud shall be perpendicular to mounting surface so as to ensure even contact between outer ring and rolling surface of mating material. Corner chamfer of hole shall be as small as around C0.5. Counter bore diameter shall be dimension f or more as described in the dimension table.

Type CF-R with crowned outer ring is recommended in the case of application with insufficient contact between outer ring and rolling surface of mating material.

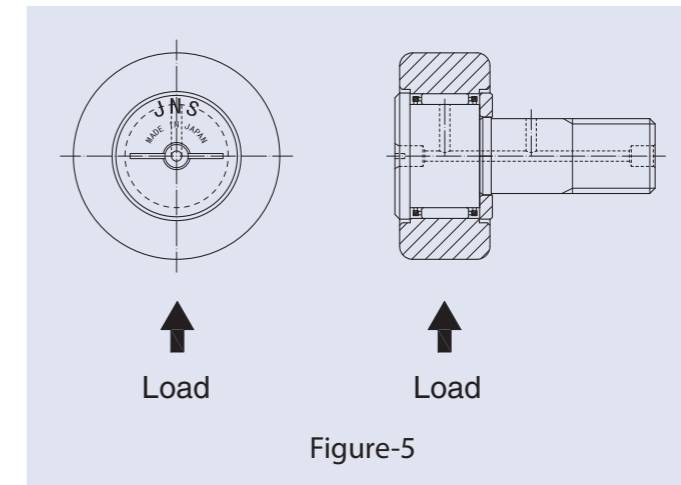


Mounting method

- Cam follower shall be mounted so as not to incline against direction of the motion.
- Mounting method to tighten cam follower directly to bracket by adding female thread to it without using nut as depicted in Figure-4 (A) is NOT recommended. This method may cause damage on stud due to concentration of bending stress in male thread portion in the event of loosening since it is difficult to tighten the stud sufficiently.



- For application with heavy load, lubrication hole of stud shall be located outside of loading range (on the side to receive load). Location of the lubrication hole is indicated by "JNS" marking on the side of stud flange. (Refer to Figure-5)
Hole at the center of stud is used as stopper for tightening or lubricant supply hole for grease lubrication.



Precaution for using spring washer

It is important to ensure that spring washer used for mounting cam follower has no burr or sharp edge. Debris scraped from nut or mounting bracket by burr or sharp edge of washer during tightening can invade stud thread and can cause insufficient tightness or damage to thread.

Tightening torque of stud

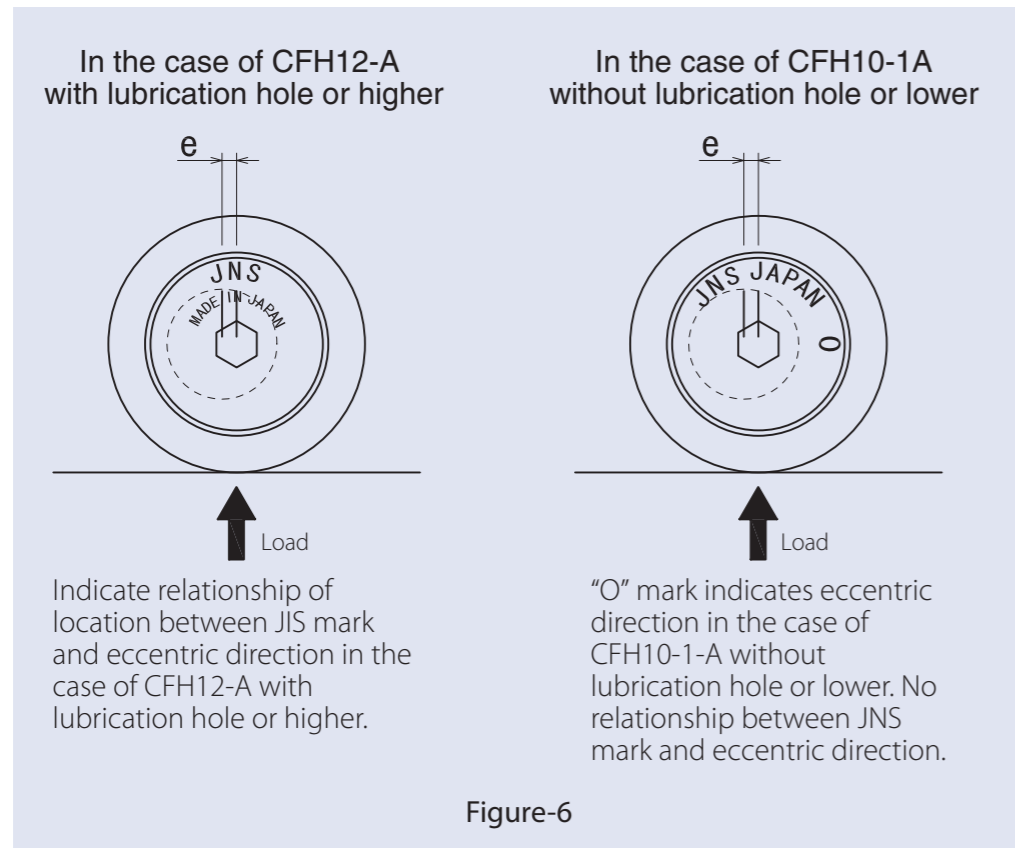
Stud of cam follower is subjected to bending stress or tensile stress by bearing load. Tightening torque shall be set not to exceed the value in the dimension table.

Using double spring washers, double thin nut of JIS B 1181 or special nut with locking feature is recommended in the case of possible loosening of mounting screw due to vibration or impact shock.

Mounting of eccentric cam follower

Adjustment of eccentric shall be performed in accordance with the following procedure.

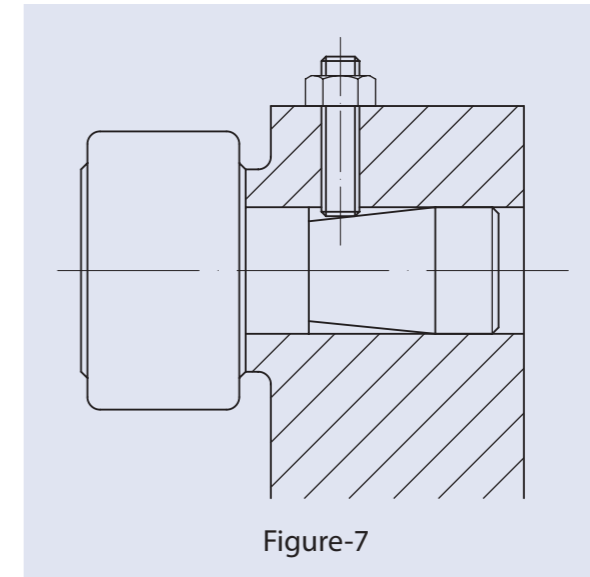
- (1) Insert stud to mounting hole and tighten nut as the stud can turn loosely. Marking of stud shall face location indicated in Figure-6 in relation to direction of load.
- (2) Gap between cam follower and mating contact surface may be adjusted by turning stud using hexagon hole on the stud head.
- (3) After completing adjustment, tighten nut with holding rotation of stud. Make it sure not to exceed maximum tightening torque of the nut.



Mounting of CF-SFU type

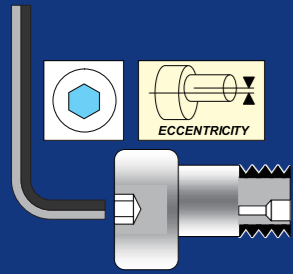
Refer to Figure-7 for mounting method of easy mounting of CF-SFU type.

Type CF-SFU is NOT recommended for application in the part subjected to vibration or shock impact as much as its mounting is simple. Standard cam followers with nut are recommended for application with possible vibration or shock impact.



CAM FOLLOWERS

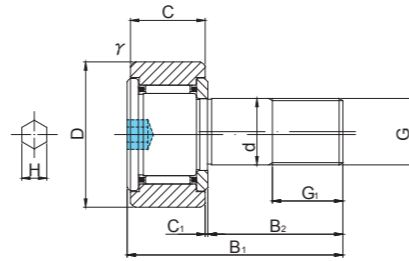
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON STUD HEAD



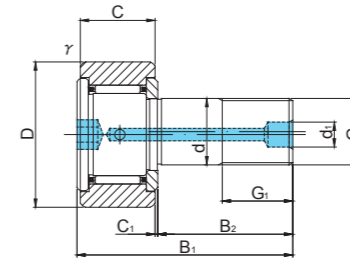
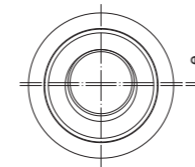
CFH..A



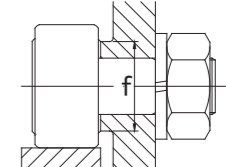
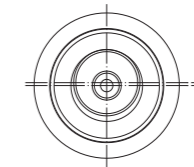
CFH..VA



CFH5(V)A~CFH10-1(V)A



CFH12(V)A~CFH12-1(V)A



CFH..A TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)															Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity		Max tightening torque N·m	Mass g (approx)
		Cylindrical outer ring		Crowned outer ring R250(CF5) R500(CF6 ~ CF12-1)		D	C	d	G	G1	B1	B2	C1	d1	H	rs min	e	f min	Cylindrical outer ring N	Crowned outer ring N								
		Without seals	With seals	Without seals	With seals																							
5	0 -0.012	CFH 5A	CFH 5UUA	CFH 5RA	CFH 5UURA	13	9	5	M5×0.8	7.5	23	13	0.5	—	3	0.3	0.2	9.7	3 140	2 770	1 420	29 000	2 250	530	2	10.5		
		CFH 5VA	CFH 5VUUA	CFH 5VRA	CFH 5VUURA														5 100	5 500	1 420	11 600						
6	0 -0.012	CFH 6A	CFH 6UUA	CFH 6RA	CFH 6UURA	16	11	6	M6×1	8	28	16	0.6	—	3	0.3	0.25	11	3 630	3 630	2 110	25 000	3 430	1 080	3	18.5		
		CFH 6VA	CFH 6VUUA	CFH 6VRA	CFH 6VUURA														6 960	8 530	2 110	12 000						
8	0 -0.015	CFH 8A	CFH 8UUA	CFH 8RA	CFH 8UURA	19	11	8	M8×1.25	10	32	20	0.6	—	4	0.3	0.25	13	4 310	4 710	4 710	20 000	4 020	1 370	8	28.5		
		CFH 8VA	CFH 8VUUA	CFH 8VRA	CFH 8VUURA														8 130	11 170	4 710	9 000						
10	0 -0.015	CFH10A	CFH10UUA	CFH10RA	CFH10UURA	22	12	10	M10×1.25	12	36	23	0.6	—	5	0.3	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45		
		CFH10VA	CFH10VUUA	CFH10VRA	CFH10VUURA														9 510	14 500	7 450	7 500						
10	0 -0.015	CFH10-1A	CFH10-1UUA	CFH10-1RA	CFH10-1UURA	26	12	10	M10×1.25	12	36	23	0.6	—	5	0.3	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60		
		CFH10-1VA	CFH10-1VUUA	CFH10-1VRA	CFH10-1VUURA														9 510	14 500	7 450	7 500						
12	0 -0.018	CFH12A	CFH12UUA	CFH12RA	CFH12UURA	30	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95		
		CFH12VA	CFH12VUUA	CFH12VRA	CFH12VUURA														13 430	19 700	11 270	6 000						
12	0 -0.018	CFH12-1A	CFH12-1UUA	CFH12-1RA	CFH12-1UURA	32	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105		
		CFH12-1VA	CFH12-1VUUA	CFH12-1VRA	CFH12-1VUURA														13 430	19 700	11 270	6 000						

* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

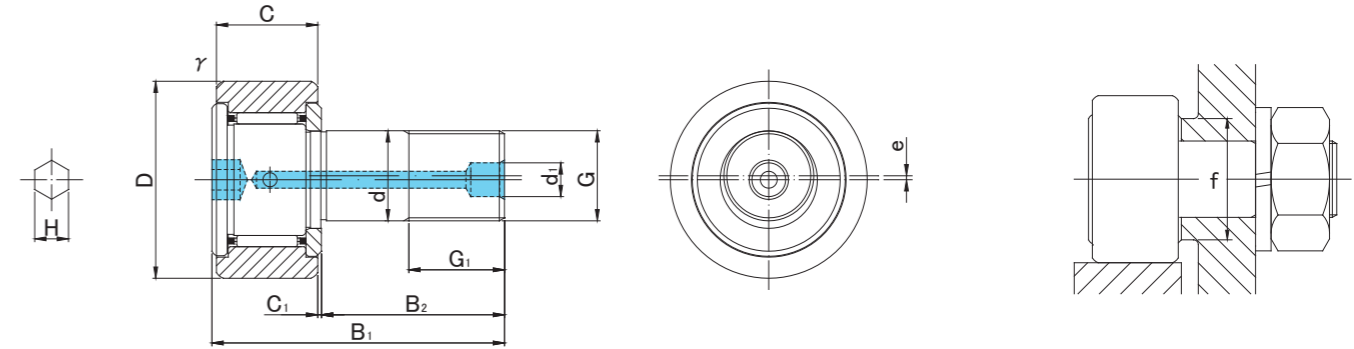
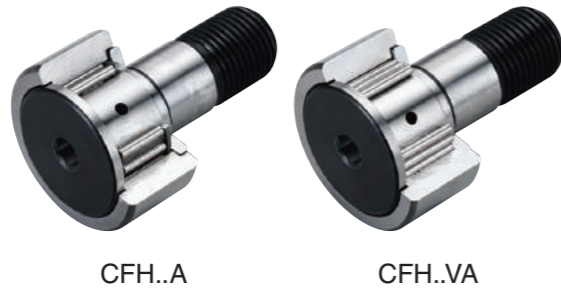
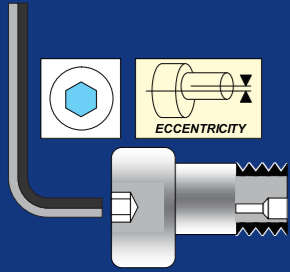
ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF5	—	—	Attached
CF6/CF8/CF10/CF10-1	—	—	Attached
CF12/CF12-1/CF16/CF18	φ 6 Attached	φ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	φ 8 Attached	φ 8 Attached	Attached

CAM FOLLOWERS

SOLID ECCENTRIC TYPE

HEXAGON SOCKET ON STUD HEAD



CFH..A TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)														Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity		Max tightening torque N·m	Mass g (approx)
		Cylindrical outer ring		Crowned outer ring R250(CF5) R500(CF6~CF18) R1000(CF20 ≤)		D	C	d	G	G1	B1	B2	C1	d1	H	rs min	e	f min	Cylindrical outer ring N					Crowned outer ring N			
		Without seals	With seals	Without seals	With seals																						
16	0 -0.018	CFH16A	CFH16UUA	CFH16RA	CFH16UURA	35	18	16	M16x1.5	17	52	32.5	0.8	6	6	0.6	0.5	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170	
		CFH16VA	CFH16VUUA	CFH16VRA	CFH16VUURA														20 680	37 630	19 800	4 500					
18	0 -0.018	CFH18A	CFH18UUA	CFH18RA	CFH18UURA	40	20	18	M18x1.5	19	58	36.5	0.8	6	6	1	0.6	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250	
		CFH18VA	CFH18VUUA	CFH18VRA	CFH18VUURA														25 280	51 350	26 560	3 500					
20	0 -0.021	CFH20A	CFH20UUA	CFH20RA	CFH20UURA	52	24	20	M20x1.5	21	66	40.5	0.8	8	8	1	0.7	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460	
		CFH20VA	CFH20VUUA	CFH20VRA	CFH20VUURA														33 120	64 480	32 140	3 500					
20	0 -0.021	CFH20-1A	CFH20-1UUA	CFH20-1RA	CFH20-1UURA	47	24	20	M20x1.5	21	66	40.5	0.8	8	8	1	0.7	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385	
		CFH20-1VA	CFH20-1VUUA	CFH20-1VRA	CFH20-1VUURA														33 120	64 480	32 140	3 500					
24	0 -0.021	CFH24A	CFH24UUA	CFH24RA	CFH24UURA	62	29	24	M24x1.5	25	80	49.5	0.8	8	8	1	0.8	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815	
		CFH24VA	CFH24VUUA	CFH24VRA	CFH24VUURA														46 550	92 020	49 500	3 000					
24	0 -0.021	CFH24-1A	CFH24-1UUA	CFH24-1RA	CFH24-1UURA	72	29	24	M24x1.5	25	80	49.5	0.8	8	8	1	0.8	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140	
		CFH24-1VA	CFH24-1VUUA	CFH24-1VRA	CFH24-1VUURA														46 550	92 020	49 500	3 000					
30	0 -0.021	CFH30A	CFH30UUA	CFH30RA	CFH30UURA	80	35	30	M30x1.5	32	100	63	1	8	8	1	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870	
		CFH30VA	CFH30VUUA	CFH30VRA	CFH30VUURA														67 620	144 060	73 700	2 200					
30	0 -0.021	CFH30-1A	CFH30-1UUA	CFH30-1RA	CFH30-1UURA	85	35	30	M30x1.5	32	100	63	1	8	8	1	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030	
		CFH30-1VA	CFH30-1VUUA	CFH30-1VRA	CFH30-1VUURA														67 620	144 060	73 700	2 200					
30	0 -0.021	CFH30-2A	CFH30-2UUA	CFH30-2RA	CFH30-2UURA	90	35	30	M30x1.5	32	100	63	1	8	8	1	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220	
		CFH30-2VA	CFH30-2VUUA	CFH30-2VRA	CFH30-2VUURA														67 620	144 060	73 700	2 200					

* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

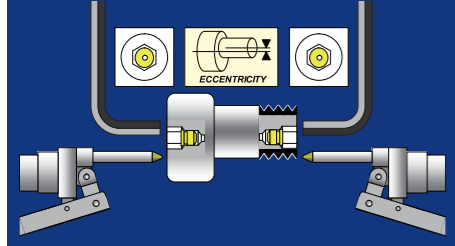
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF5	—	—	Attached
CF6/CF8/CF10/CF10-1	—	—	Attached
CF12/CF12-1/CF16/CF18	φ 6 Attached	φ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	φ 8 Attached	φ 8 Attached	Attached

CAM FOLLOWERS

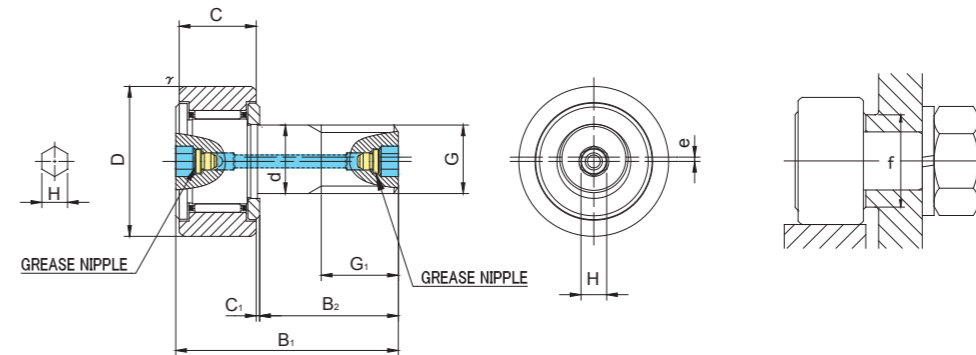
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CFH..AB



CFH..VAB



CFH..AB TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)												Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
		Cylindrical outer ring		Crowned outer ring R500(CF10 ~ CF18) R1000(CF20 ≤)		D	C	d	G	G1	B1	B2	C1	H	rs min	e	f min					Cr N	Cor N		
12	0 -0.018	CFH12AB	CFH12UUAB	CFH12RAB	CFH12UURAB	30	14	12	M12×1.5	13	40	25	0.6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CFH12VAB	CFH12VUUAB	CFH12VRAB	CFH12VUURAB													13 430	19 700	11 270	6 000				
12	0 -0.018	CFH12-1AB	CFH12-1UUAB	CFH12-1RAB	CFH12-1UURAB	32	14	12	M12×1.5	13	40	25	0.6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CFH12-1VAB	CFH12-1VUUAB	CFH12-1VRAB	CFH12-1VUURAB													13 430	19 700	11 270	6 000				
16	0 -0.018	CFH16AB	CFH16UUAB	CFH16RAB	CFH16UURAB	35	18	16	M16×1.5	17	52	32.5	0.8	6	0.6	0.5	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CFH16VAB	CFH16VUUAB	CFH16VRAB	CFH16VUURAB													20 680	37 630	19 800	4 500				
18	0 -0.018	CFH18AB	CFH18UUAB	CFH18RAB	CFH18UURAB	40	20	18	M18×1.5	19	58	36.5	0.8	6	1	0.6	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CFH18VAB	CFH18VUUAB	CFH18VRAB	CFH18VUURAB													25 280	51 350	26 560	3 500				
20	0 -0.021	CFH20AB	CFH20UUAB	CFH20RAB	CFH20UURAB	52	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CFH20VAB	CFH20VUUAB	CFH20VRAB	CFH20VUURAB													33 120	64 480	32 140	3 500				
20	0 -0.021	CFH20-1AB	CFH20-1UUAB	CFH20-1RAB	CFH20-1UURAB	47	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CFH20-1VAB	CFH20-1VUUAB	CFH20-1VRAB	CFH20-1VUURAB													33 120	64 480	32 140	3 500				

CFH..AB TYPE has oil holes (grease nipple) which are prepared in the stud head and thread side, also an oil hole is prepared outer surface of stud.

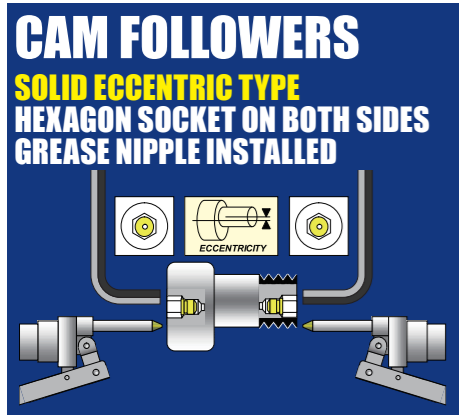
* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

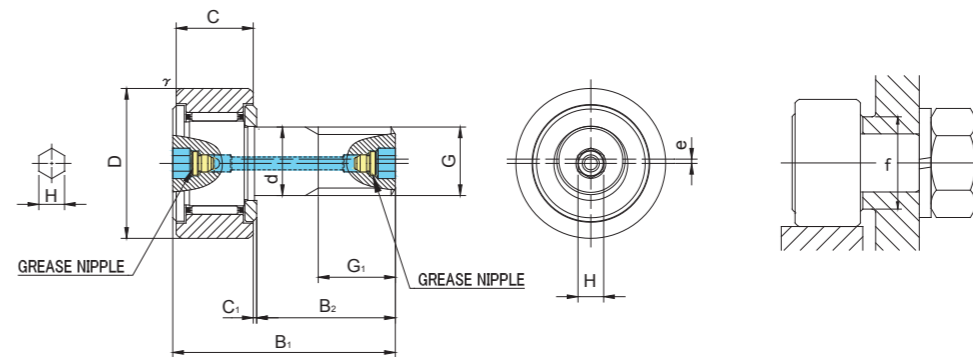
TYPE	Grease Nipple	NUT
All types	Installed	Attached



CFH..AB



CFH..VAB



CFH..AB TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)												Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
		Cylindrical outer ring		Crowned outer ring R1000(CF24 ≤)		D	C	d	G	G1	B1	B2	C1	H	r _s min	e	f min					Cr N	Cor N		
24	0 -0.021	CFH24AB	CFH24UUAB	CFH24RAB	CFH24UURAB	62	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CFH24VAB	CFH24VUUAB	CFH24VRAB	CFH24VUURAB													46 550	92 020	49 500	3 000				
24	0 -0.021	CFH24-1AB	CFH24-1UUAB	CFH24-1RAB	CFH24-1UURAB	72	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1VAB	CFH24-1VUUAB	CFH24-1VRAB	CFH24-1VUURAB													46 550	92 020	49 500	3 000				
30	0 -0.021	CFH30AB	CFH30UUAB	CFH30RAB	CFH30UURAB	80	35	30	M30×1.5	32	100	63	1	8	1	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CFH30VAB	CFH30VUUAB	CFH30VRAB	CFH30VUURAB													67 620	144 060	73 700	2 200				
30	0 -0.021	CFH30-1AB	CFH30-1UUAB	CFH30-1RAB	CFH30-1UURAB	85	35	30	M30×1.5	32	100	63	1	8	1	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1VAB	CFH30-1VUUAB	CFH30-1VRAB	CFH30-1VUURAB													67 620	144 060	73 700	2 200				
30	0 -0.021	CFH30-2AB	CFH30-2UUAB	CFH30-2RAB	CFH30-2UURAB	90	35	30	M30×1.5	32	100	63	1	8	1	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2VAB	CFH30-2VUUAB	CFH30-2VRAB	CFH30-2VUURAB													67 620	144 060	73 700	2 200				

CFH..AB TYPE has oil holes (grease nipple) which are prepared in the stud head and thread side, also an oil hole is prepared outer surface of stud.

* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

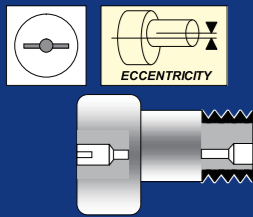
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE		
All types	Installed	Attached

CAM FOLLOWERS

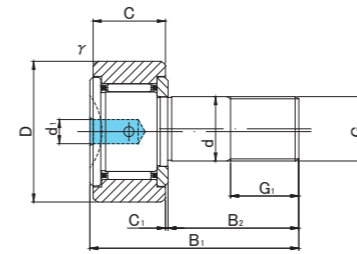
SOLID ECCENTRIC TYPE
SCREWDRIVER SLOT HEAD



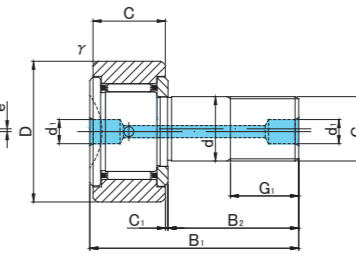
CFH



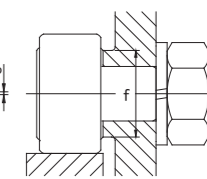
CFH.V



CFH5(V)~CFH10-1(V)



CFH12(V)~CFH16(V)



CFH TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)												Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
		Cylindrical outer ring		Crowned outer ring R250(CF5) R500 (CF6 ~ CF16)		D	C	d	G	G1	B1	B2	C1	d1	r _s min	e	f min					Cr N	Cor N		
5	0 -0.012	CFH 5	CFH 5UU	CFH 5R	CFH 5UUR	13	9	5	M5x0.8	7.5	23	13	0.5	3.1	0.3	0.2	9.7	3 140	2 770	1 420	29 000	2 250	530	2	10.5
		CFH 5V	CFH 5VUU	CFH 5VR	CFH 5VUUR													5,100	5,500	1 420	11,600				
6	0 -0.012	CFH 6	CFH 6UU	CFH 6R	CFH 6UUR	16	11	6	M6x1	8	28	16	0.6	4	0.3	0.25	11	3 630	3 630	2 110	25 000	3 430	1 080	3	18.5
		CFH 6V	CFH 6VUU	CFH 6VR	CFH 6VUUR													6 960	8 530	2 110	12 000				
8	0 -0.015	CFH 8	CFH 8UU	CFH 8R	CFH 8UUR	19	11	8	M8x1.25	10	32	20	0.6	4	0.3	0.25	13	4 310	4 710	4 710	20 000	4 020	1 370	8	28.5
		CFH 8V	CFH 8VUU	CFH 8VR	CFH 8VUUR													8 130	11 170	4 710	9 000				
10	0 -0.015	CFH10	CFH10UU	CFH10R	CFH10UUR	22	12	10	M10x1.25	12	36	23	0.6	4	0.3	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CFH10V	CFH10VUU	CFH10VR	CFH10VUUR													9 510	14 500	7 450	7 500				
10	0 -0.015	CFH10-1	CFH10-1UU	CFH10-1R	CFH10-1UUR	26	12	10	M10x1.25	12	36	23	0.6	4	0.3	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CFH10-1V	CFH10-1VUU	CFH10-1VR	CFH10-1VUUR													9 510	14 500	7 450	7 500				
12	0 -0.018	CFH12	CFH12UU	CFH12R	CFH12UUR	30	14	12	M12x1.5	13	40	25	0.6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CFH12V	CFH12VUU	CFH12VR	CFH12VUUR													13 430	19 700	11 270	6 000				
12	0 -0.018	CFH12-1	CFH12-1UU	CFH12-1R	CFH12-1UUR	32	14	12	M12x1.5	13	40	25	0.6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CFH12-1V	CFH12-1VUU	CFH12-1VR	CFH12-1VUUR													13 430	19 700	11 270	6 000				
16	0 -0.018	CFH16	CFH16UU	CFH16R	CFH16UUR	35	18	16	M16x1.5	17	52	32.5	0.8	6	0.6	0.5	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CFH16V	CFH16VUU	CFH16VR	CFH16VUUR													20 680	37 630	19 800	4 500				

* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

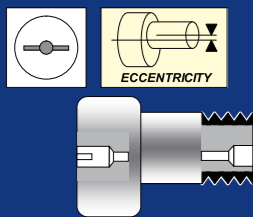
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF5	—	—	Attached
CF6/CF8/CF10/CF10-1	—	φ 4 Attached	Attached
CF12/CF12-1/CF16/CF18	φ 6 Attached	φ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	φ 8 Attached	φ 8 Attached	Attached

CAM FOLLOWERS

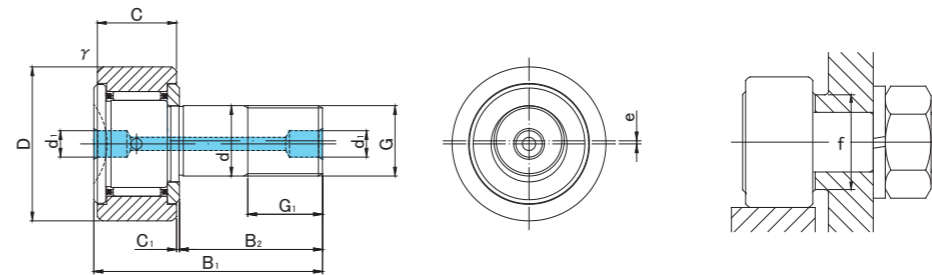
SOLID ECCENTRIC TYPE SCREWDRIVER SLOT HEAD



CFH



CFH.V



CFH TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)												Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
		Cylindrical outer ring		Crowned outer ring R500(CF18) R1000(CF20 ≤)		D	C	d	G	G1	B1	B2	C1	d1	r _s min	e	f min					Cr N	Cor N		
18	0 -0.018	CFH18	CFH18UU	CFH18R	CFH18UUR	40	20	18	M18×1.5	19	58	36.5	0.8	6	1	0.6	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CFH18V	CFH18VUU	CFH18VR	CFH18VUUR													25 280	51 350	26 560	3 500				
20	0 -0.021	CFH20	CFH20UU	CFH20R	CFH20UUR	52	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CFH20V	CFH20VUU	CFH20VR	CFH20VUUR													33 120	64 480	32 140	3 500				
20	0 -0.021	CFH20-1	CFH20-1UU	CFH20-1R	CFH20-1UUR	47	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CFH20-1V	CFH20-1VUU	CFH20-1VR	CFH20-1VUUR													33 120	64 480	32 140	3 500				
24	0 -0.021	CFH24	CFH24UU	CFH24R	CFH24UUR	62	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CFH24V	CFH24VUU	CFH24VR	CFH24VUUR													46 550	92 020	49 500	3 000				
24	0 -0.021	CFH24-1	CFH24-1UU	CFH24-1R	CFH24-1UUR	72	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1V	CFH24-1VUU	CFH24-1VR	CFH24-1VUUR													46 550	92 020	49 500	3 000				
30	0 -0.021	CFH30	CFH30UU	CFH30R	CFH30UUR	80	35	30	M30×1.5	32	100	63	1	8	1	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CFH30V	CFH30VUU	CFH30VR	CFH30VUUR													67 620	144 060	73 700	2 200				
30	0 -0.021	CFH30-1	CFH30-1UU	CFH30-1R	CFH30-1UUR	85	35	30	M30×1.5	32	100	63	1	8	1	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1V	CFH30-1VUU	CFH30-1VR	CFH30-1VUUR													67 620	144 060	73 700	2 200				
30	0 -0.021	CFH30-2	CFH30-2UU	CFH30-2R	CFH30-2UUR	90	35	30	M30×1.5	32	100	63	1	8	1	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2V	CFH30-2VUU	CFH30-2VR	CFH30-2VUUR													67 620	144 060	73 700	2 200				

* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

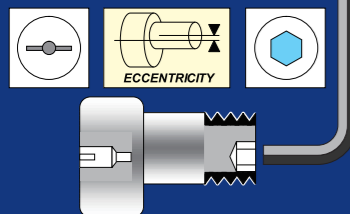
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF5	—	—	Attached
CF6/CF8/CF10/CF10-1	—	φ 4 Attached	Attached
CF12/CF12-1/CF16/CF18	φ 6 Attached	φ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	φ 8 Attached	φ 8 Attached	Attached

CAM FOLLOWERS

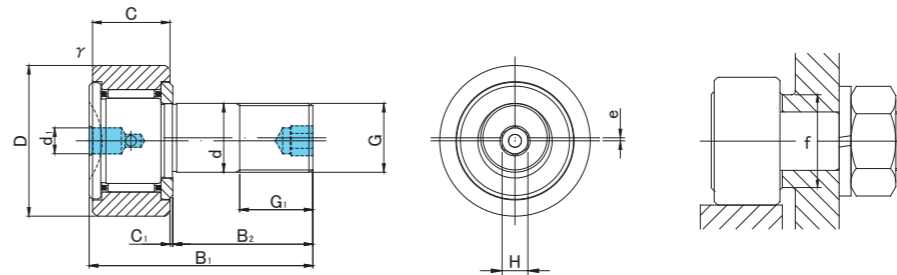
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON THREAD SIDE
SCREWDRIVER SLOT HEAD



CFH..B



CFH..VB



CFH..B TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation				Dimensions (mm)												Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity		Max tightening torque N·m	Mass g (approx)	
		Cylindrical outer ring		Crowned outer ring R500(CF12 ~ CF18) R1000(CF20 ≤)		D	C	d	G	G1	B1	B2	C1	d1	H	rs min	e					f min	Cylindrical outer ring N			Crowned outer ring N
		Without seals	With seals	Without seals	With seals																					
12	0 -0.018	CFH12B	CFH12UUB	CFH12RB	CFH12UURB	30	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CFH12VB	CFH12VUUB	CFH12VRB	CFH12VUURB														13 430	19 700	11 270	6 000				
12	0 -0.018	CFH12-1B	CFH12-1UUB	CFH12-1RB	CFH12-1UURB	32	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CFH12-1VB	CFH12-1VUUB	CFH12-1VRB	CFH12-1VUURB														13 430	19 700	11 270	6 000				
16	0 -0.018	CFH16B	CFH16UUB	CFH16RB	CFH16UURB	35	18	16	M16×1.5	17	52	32.5	0.8	6	6	0.6	0.5	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CFH16VB	CFH16VUUB	CFH16VRB	CFH16VUURB														20 680	37 630	19 800	4 500				
18	0 -0.018	CFH18B	CFH18UUB	CFH18RB	CFH18UURB	40	20	18	M18×1.5	19	58	36.5	0.8	6	6	1	0.6	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CFH18VB	CFH18VUUB	CFH18VRB	CFH18VUURB														25 280	51 350	26 560	3 500				
20	0 -0.021	CFH20B	CFH20UUB	CFH20RB	CFH20UURB	52	24	20	M20×1.5	21	66	40.5	0.8	8	8	1	0.7	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CFH20VB	CFH20VUUB	CFH20VRB	CFH20VUURB														33 120	64 480	32 140	3 500				
20	0 -0.021	CFH20-1B	CFH20-1UUB	CFH20-1RB	CFH20-1UURB	47	24	20	M20×1.5	21	66	40.5	0.8	8	8	1	0.7	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CFH20-1VB	CFH20-1VUUB	CFH20-1VRB	CFH20-1VUURB														33 120	64 480	32 140	3 500				
24	0 -0.021	CFH24B	CFH24UUB	CFH24RB	CFH24UURB	62	29	24	M24×1.5	25	80	49.5	0.8	8	8	1	0.8	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CFH24VB	CFH24VUUB	CFH24VRB	CFH24VUURB														46 550	92 020	49 500	3 000				
24	0 -0.021	CFH24-1B	CFH24-1UUB	CFH24-1RB	CFH24-1UURB	72	29	24	M24×1.5	25	80	49.5	0.8	8	8	1	0.8	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1VB	CFH24-1VUUB	CFH24-1VRB	CFH24-1VUURB														46 550	92 020	49 500	3 000				
30	0 -0.021	CFH30B	CFH30UUB	CFH30RB	CFH30UURB	80	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CFH30VB	CFH30VUUB	CFH30VRB	CFH30VUURB														67 620	144 060	73 700	2 200				
30	0 -0.021	CFH30-1B	CFH30-1UUB	CFH30-1RB	CFH30-1UURB	85	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1VB	CFH30-1VUUB	CFH30-1VRB	CFH30-1VUURB														67 620	144 060	73 700	2 200				
30	0 -0.021	CFH30-2B	CFH30-2UUB	CFH30-2RB	CFH30-2UURB	90	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2VB	CFH30-2VUUB	CFH30-2VRB	CFH30-2VUURB														67 620	144 060	73 700	2 200				

* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF12/CF12-1/CF16/CF18	φ 6 Attached	φ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-2	φ 8 Attached	φ 8 Attached	Attached