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NOSE SEIKO CO., LTD. NARA PLANT

NEEDLE ROLLER BEARINGS

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STAINLESS STEEL

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A Specialist in Needle Roller Bearing Manufacturing

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JNS supports custom manufacturing in cutting-edge industries where high precision and high performance are required.

Product lineups that meet cutting-edge industry needs

Our needle bearing products boast high-precision, high-rigidity, and high-durability. They are widely used in production lines for advanced products, such as digital home appliances, as well as in manufacturing facilities for semiconductor manufacturing devices, precise construction machinery, and electron microscopes. Our technology supports every type of industry in the world.

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Aside from providing our customers with a stable supply of products, immediate delivery has been the standard at Nose Seiko for many years. We achieve this through our flexible and efficient production system—the result of extensive industry experience—that ensures we are always able to keep an extensive array of products on hand. Nose Seiko strives to provide optimum convenience for customers, responding to emergency orders within the shortest possible delivery time. Our customers appreciate our commitment to high standards.

Needle Roller Bearings

A needle roller bearing featuring high-precision rigid outer rings and retainers. Its space-saving design provides low cross-sectional height.

Cam Followers

Our stud-type cam followers have a thick outer ring and can support heavy radial loads. They are designed for applications where the outer ring rotates. Also available in miniature models.

Roller Followers

Our roller followers have a thick outer ring to support large radial loads. This bearing is designed for applications where the outer ring rotates.

Needle Roller Bearings
(STAINLESS STEEL)

A durable stainless-steel bearing that is rust- and corrosion-resistant. Used in lithium ion battery intergrated system, semi-conductors,medical equipments, and food machinery.

Cam Followers
(STAINLESS STEEL)

A durable stainless-steel bearing that is rust- and corrosion-resistant. Used in cutting-edge technological fields for anticorrosive, clean, and vacuum applications.

Roller Followers
(STAINLESS STEEL)

A durable stainless-steel bearing that is rust- and corrosion-resistant. Used in cutting-edge technological fields for anticorrosive, clean, and vacuum applications.

JNS provides the highest quality products to fulfill satisfaction of the worldwide customers.

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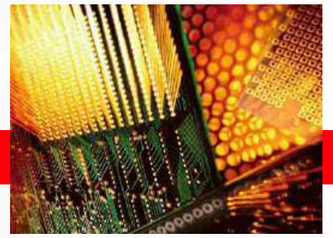

GLOBAL NETWORK

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In order to fulfill satisfaction of the worldwide customers

Nose Seiko consistently answers any type of orders by supplying products with best quality all the time. Thanks to such assurance for the quality, it promises comfortable and secure purchasing of whatever product required whenever needed for the customers all over the world.

The JNS network spans over 50 countries

Our network of sales distributors currently over 50 countries in North and South America, Europe, Asia, Oceania, the Middle East, and Africa. The extensive scale of our network is a proof of the superior quality of our delivery system, which proves trust in the worldwide customers.

NEEDLE ROLLER BEARINGS

1 Bearing Life and Load Rating

1-1 Bearing life

Bearings are subjected to certain intensity of repeating stress on their track ring and rolling element even during operation under proper loading, appropriate mounting and sufficient lubrication. The stress may cause scaly damage formed on surface after certain time period due to its concentration at shallow vicinity under the surface. This phenomenon is called flaking (peeling-off of surface). Phenomenon that causes bearing to be unusable due to flaking caused by repeating cyclic stress under normal operating condition is called "life" of the bearing. Generally, bearing life is defined by total number of rotation of the bearing until flaking is generated on track surface. However, recognizing average life as criteria of bearing life is not appropriate for actual selection of bearing since fatigue limit of material varies. It shall be practical to consider the life guaranteed to most bearings (basic rating life) as a criterion. Phenomenon that bearing becomes inoperative due to heat-seizure, wear, fracture, scoring are regarded as "failure" caused by operating conditions and selection of bearing so that they and the life should be considered as different phenomena.

1-2 Basic rating life

Basic rating life of bearing shall be defined as a total number of rotation that 90% of the group of the same bearings can run without causing flaking due to rolling fatigue when they are operated under the same conditions.

In the case of rotation in certain constant speed, the basic rating life can be expressed in a total rotation time as well.

1-3 Basic dynamic load rating

A given static radial load under which a bearing theoretically endures basic rating life of one million rotations is referred to as a basic dynamic load rating.

1-4 Dynamic equivalent load

Dynamic equivalent radial load

A load that is virtually applied to the center of a bearing under which to obtain a life equivalent to that when both radial load and axial load are subjected to the bearing at the same time is called the dynamic equivalent radial load. In the case of needle bearing, its radial type is capable for loading radial load only so that just a radial load will be applied.

1-5 Bearing life calculation formula

The following relationship is applied to basic rating life, basic dynamic load rating and dynamic equivalent load of bearing.

$$L_{10} = (Cr / Pr)^{10/3} \quad \cdots\cdots (1.1)$$

L_{10} : Basic rating life 10^6rotation
Cr : Basic dynamic load rating N
Pr : Dynamic equivalent radial load N

Basic rating life time can be expressed as total rotation time with given rotation per minute by the following formula.

$$L_h = 10^6 L_{10} / 60n = 500 f_h^{10/3} \quad \cdots\cdots (1.2)$$

$$f_h = f_n Cr / Pr \quad \cdots\cdots (1.3)$$

$$f_n = (33.3 / n)^{3/10} \quad \cdots\cdots (1.4)$$

L_h : Basic rating life expressed in hour h
n : Rotation per minute rpm
f_h : Bearing life factor
f_n : Speed factor

1-6 Operating conditions and bearing life factor of bearing

Operating machinery and demanded life

Bearings should be selected based on setting up demanded life in accordance with operating machinery and operating condition.

Demanded life is determined by endurance duration for operating machinery and reliable operating periods.

Table-1 indicates demanded life that can be a typical reference.

Table-1 Operating condition and demanded life time factor (reference)

Operating conditions	Bearing life factor f_h				
	~3	2~4	3~5	4~7	6~
Short duration or occasional operation	Home appliance Electrical tools	Agricultural machinery Office equipment			
Short duration or occasional operation, but necessity for ensuring reliable operation	Medical equipment Measuring instrument	Home air conditioning Construction machinery Crane	Elevator	Crane (sheave wheel)	
Long duration operation but not full time		Small size motor General gear system Woodworking machinery Passenger car	Machine tools Factory general purpose motor Crusher	Important gear system Calendar roller for rubber and plastic Printing machine	
Continuous operation over eight hours a day		Rolling machine Escalator Conveyer Centrifugal separator	Air conditioner Large size motor Compressor, pump	Mine hoist Press machine	Pulp, papermaking machine
Operate 24 hours a day and must be non stop without accident					Water-work system Power generator system

1-7 Corrected rating life

Formula for basic rating life described above is applied to bearings whose reliability is 90%, whose material is for general purpose bearing and are manufactured in general quality standard as well as those operated under standard operating conditions. Corrected rating life should be calculated using correction factor a_1, a_2 and a_3 in the case that the reliability is over 90% or that life needs to be obtained for special bearing properties or for special operating conditions.

$$L_{na} = a_1 a_2 a_3 L_{10} \quad \cdots\cdots\cdots\cdots\cdots\cdots \quad (1.5)$$

L_{na} : Adjustment rating life 10^6 rotation

a_1 : Reliability factor

a_2 : Bearing special properties factor

a_3 : Operating conditions factor

1-7-1 Reliability factor

Reliability factor a_1

This is the bearing life corrected factor for reliability (100-n) % when probability of failure is n %. Value of the reliability factor a_1 is shown in Table-2.

Table-2 Reliability factor a_1

Reliability (%)	L_n	a_1
90	L_{10}	1
95	L_5	0.62
96	L_4	0.53
97	L_3	0.44
98	L_2	0.33
99	L_1	0.21

1-7-2 Bearing special properties factor

Bearing special properties factor a_2

Bearing special properties factor a_2 is used for adjusting variation of properties concerning life in the case that material type, quality or manufacturing process is special. This factor shall be a_2=1 for standard material and manufacturing method. It can be $a_2 > 1$ when special modified material or manufacturing method is used due to improved quality of bearing material or progress of manufacturing technology.

1-7-3 Operating conditions factor

Operating conditions factor a_3

This is a factor to adjust impact of operating conditions of bearing, especially effect of lubrication to fatigue life.

Bearing life is essentially a fatigue phenomenon of surface layer which is subjected to repeating cyclic load. Therefore, this factor will be a_3=1 under ideal lubrication condition when rolling element and track surface are completely isolated by oil film and surface failure can be ignored. Under poor lubrication condition such as low lubricant viscosity or under significantly slow rotation speed of rolling element, it would be $a_3 < 1$.

On the contrary, it can be $a_3 > 1$ under especially excellent lubrication condition. Generally, the bearing special properties factor a_2 can not be set to value exceeding 1 when $a_3 < 1$.

1-8 Adjustment of Basic Dynamic Load Rating for temperature and hardness factors

1-8-1 Temperature factor

While operating temperature of bearing is individually defined in accordance with material and structure, bearing is capable to be used at temperatures higher than 150 °C by applying special treatment for thermal resistance. However this will cause reduction of basic dynamic load rating as a result of reduction of permissive contact stress. Basic dynamic load rating with consideration for temperature increase is given by the following formula.

$$C_1 = f_1 Cr \cdots\cdots (1.6)$$

C_1 : Basic dynamic load rating with consideration for temperature increase N

f_1 : Temperature factor (Refer to Figure-1)

Cr : Basic dynamic load rating N

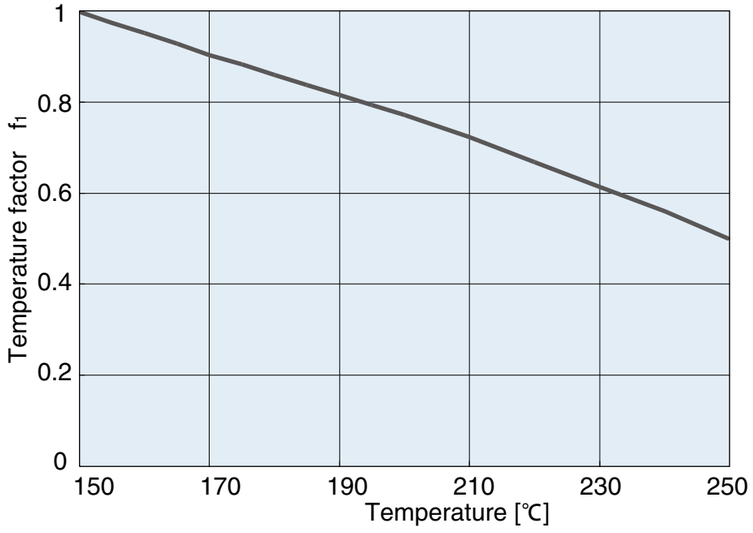


Figure-1

1-8-2 Hardness factor

The raceway surface should be HRC58 to 64 in the case of using shaft or housing as raceway instead of bearing inner ring or outer ring respectively. Basic dynamic load rating may be reduced in the case the surface hardness is lower than HRC58. Basic dynamic load rating with consideration for surface hardness is given by the following formula.

$$C_2 = f_2 Cr \cdots\cdots (1.7)$$

C_2 : Basic dynamic load rating with consideration for hardness N

f_2 : Hardness factor (Refer to Figure-2)

Cr : Basic dynamic load rating N

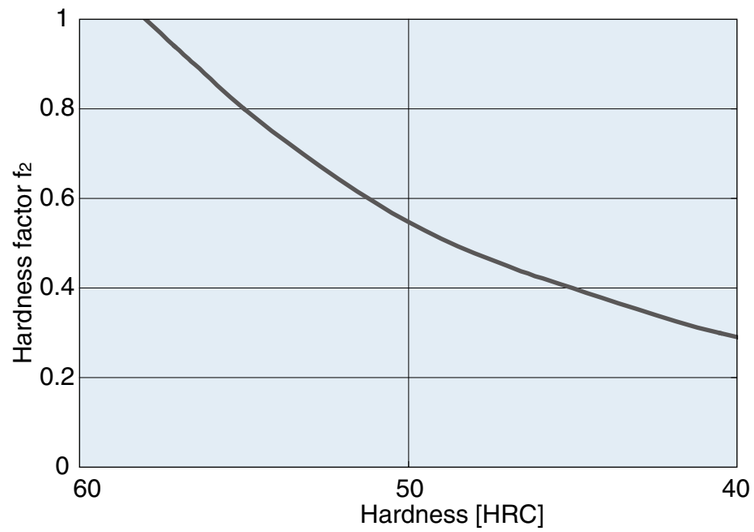


Figure-2

1-9 Basic static load rating

Basic static load rating is specified as a static load which corresponds to contact stress indicated in the table below at rolling element and the center of contact of track that are subjected to the maximum load. Total permanent deformation of rolling element and track occurred by the contact stress may be approximately 0.0001 times of diameter of the rolling element.

Type of bearing	Contact stress MPa
Roller bearing	4000

1-10 Static equivalent load

A load that is virtually applied to the center of a bearing under which to obtain a contact stress equivalent to the maximum contact stress that occurs at contact surface between rolling element and track, when both radial load and axial load are subjected to the bearing at the same time, is called a static equivalent load.

In the case of needle bearing, its radial type is capable for loading radial load only so that just a radial load will be applied.

$$P_{0r} = F_r \quad \cdots\cdots (1.8)$$

P_{0r} : Static equivalent radial load N

1-11 Static safety factor

Although permissive limit of static equivalent load is typically regarded as basic static load rating, its limit shall be set with consideration for safety since conditions required for bearings broadly vary. The static safety factor fs is given by the following formula (1.9). Table-3 shows its typical values.

$$f_s = \frac{C_{0r}}{P_{0r}} \quad \cdots\cdots (1.9)$$

f_s : Safety factor

C_{0r} : Basic static load rating N

Table-3 Static safety factor

Operating conditions of bearing	f_s
With high rotation accuracy With impact load	≧ 3
With standard rotation accuracy	≧ 1.5
With standard rotation accuracy and low speed	≧ 1

1-12 Permissive rotation speed

Increasing bearing rotation speed may cause a rise in bearing temperature due to abrasion heat generated inside of the bearing, which results in failure with heat-seizure. A threshold rotation speed up to which long duration of safe operation is enabled is referred to as a permissive rotation speed.

Permissive rotation speed varies depending on type, size and load of bearing, lubrication method and its radial clearance. It is an experimental value at which operation is enabled without causing heat generation exceeding certain limit.

2 Bearing load

2-1 Load factor

Operation in actual machinery is subjected to a load larger than theoretical axial directional load due to vibration and impact shock.

Actual load is given by calculation of load applied to axes system using load factor shown in Table-4.

$$K = f_w \cdot K_c \quad \cdots\cdots (2.1)$$

K : Actual load applied to axes system N

K_c : Theoretical calculation value N

f_w : Load factor (Table-4)

Table-4 Load factor

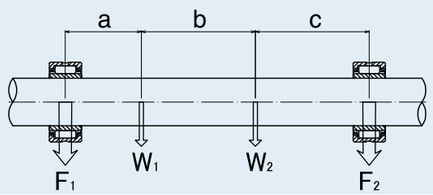
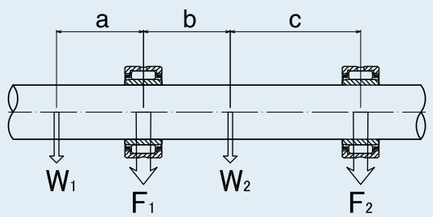
Degree of load	Examples	f_w
Smooth motion without any impacts	Air conditioner, measurement instruments, office equipment	1 ~1.2
With standard rotation	Gear box, vehicle, paper-making machine	1.2~1.5
Operation with vibration and impact shock	Rolling machine, construction machinery, crusher	1.5~3

2-2 Load distribution

Load distribution to bearing

Axes system is assumed as a static beam supported by bearings in order to distribute load acting on the axes system to the bearings. Table-5 shows calculation example of load distribution.

Table-5 Example of calculation of load distribution

Examples	Load calculation
	$F_1 = \frac{W_1(b+c) + W_2c}{a+b+c}$ $F_2 = \frac{W_1a + W_2(a+b)}{a+b+c}$
	$F_1 = \frac{W_1(a+b+c) + W_2c}{b+c}$ $F_2 = \frac{W_2b - W_1a}{b+c}$

2-3 Load transmission

Bearing loads in belt or chain transmission

The force acting on pulley or sprocket wheel when power is transmitted by a belt or chain is given by the following formula.

$$T = 9550P/N \quad \cdots\cdots (2.2)$$

$$Ft = 2000 \cdot T/d \quad \cdots\cdots (2.3)$$

- T : Torque acting on pulley or sprocket wheel N·m
- F_t : Effective force transmitted by belt or chain N
- P : Transmitted power kW
- N : Rotation per minute rpm
- d : Effective diameter of pulley or sprocket wheel mm

Load F_r acting on pulley shaft is given by multiplying effective transmitted force F_t by belt factor f_b shown in Table-6 in the case of belt transmission.

$$Fr = f_b F_t \quad \cdots\cdots (2.4)$$

Table-6 Belt factor

Type of belt	f_b
V belt	2 ~2.5
Flat belt (with tension pulley)	2.5~3
Flat belt (without tension pulley)	4 ~5

In the case of chain transmission, load acting on sprocket wheel shaft is given by the formula (2.4) as same as that of belt transmission using value between 1.2 and 1.5 as chain factor corresponding to f_b.

Bearing loads in gear transmission

In the case of power transmission by gear, methods of calculation vary depending on the type of gear since force acting on the gear is divided into radial load and axial load and their direction and ratio vary depending on the type of gear. In the case of the simplest flat gear, direction of load is radial load only and it is given by the following formula.

$$T = 9550P/N \quad \cdots\cdots (2.5)$$

$$Ft = 2000 \cdot T/d \quad \cdots\cdots (2.6)$$

$$Fr = Ft \cdot \tan\alpha \quad \cdots\cdots (2.7)$$

$$F_c = \sqrt{F_t^2 + F_r^2} \quad \cdots\cdots (2.8)$$

- T : Torque acting on gear N·m
- F_t : Force in tangent direction of gear N
- F_r : Force in radial direction of gear N
- F_c : Combine force acting perpendicular to gear N
- P : Transmitted power kW
- N : Rotation per minute rpm
- d : Pitch circle diameter of drive gear mm
- α : Pressure angle of gear

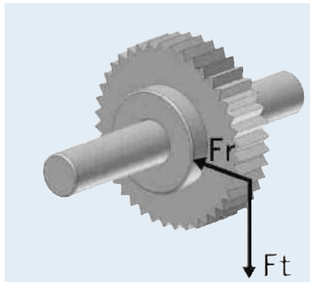


Figure-3

Value that is given by multiplying theoretical load by gear factor f_z in Table-7 shall be used as actual load since degree of vibration and impact shock affecting the theoretical load obtained by the formula above varies depending on the type of gear and accuracy of gear surface finish.

$$F = f_z F_c \quad \cdots\cdots (2.9)$$

Table-7 Gear factor

Type of gear	f_z
Precision gear (Both of pitch error and geometric error is 0.02 mm or less)	1.05~1.1
Ordinary machined gear (Both of pitch error and geometric error is between 0.02 mm and 0.1 mm)	1.1 ~1.3

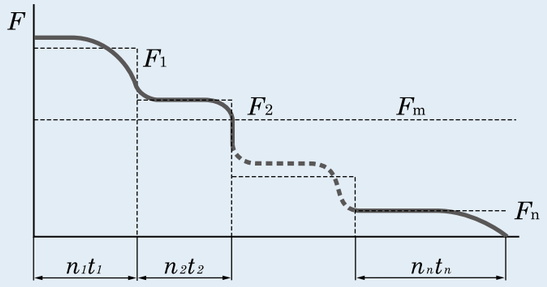
Average load

Average load F_m which is converted so as to apply even life to each bearing may be used in the case that load acting on bearing is unstable and changes in various cycle.

(1) Fluctuating step load

Average load F_m is given by formula (2.10) in the case that bearing load F_1, F_2, F_3⋯ is applied with rotation speed and operation duration of n_1, n_2, n_3⋯ and t_1, t_2, t_3⋯ respectively.

$$Fm = [(F_1^{10/3} \cdot n_1 t_1 + F_2^{10/3} \cdot n_2 t_2 + \cdots + F_n^{10/3} \cdot n_n t_n) / (n_1 t_1 + n_2 t_2 + \cdots + n_n t_n)]^{3/10} \quad \cdots\cdots (2.10)$$

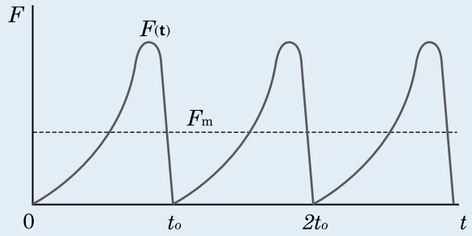


Figur-4 Load changing in stepping increment

(2) Continuously fluctuating load

Average load is given by formula (2.11) in the case that the load can be expressed in function $F(t)$ of time t with cycle t_0.

$$F_m = \left[\frac{1}{t_0}\int_0^{t_0} F(t)^{10/3} dt\right]^{3/10} \quad \cdots\cdots (2.11)$$

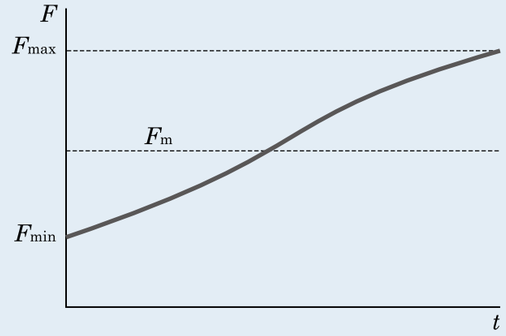


Figur-5 Load changing in function of time

(3) Roughly linear load

Average load F_m is approximately given by formula (2.12).

$$F_m = \frac{F_{min} + 2F_{max}}{3} \quad \cdots\cdots (2.12)$$



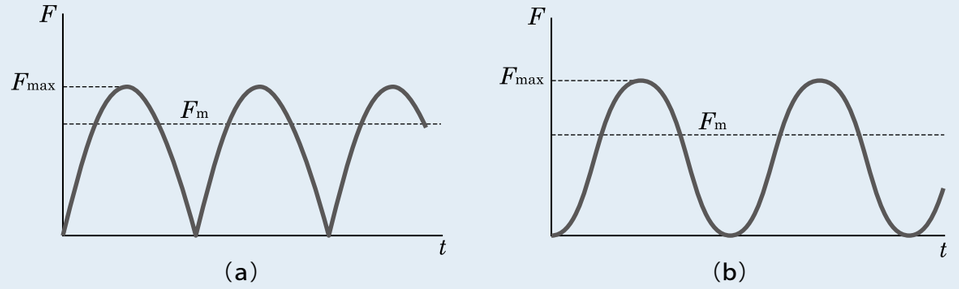
Figur-6 Load changing in linear increase

(4) Sinusoidal fluctuating load

Average load F_m is approximately given by formula (2.13) and formula (2.14).

$$\text{(a): } F_m = 0.75F_{max} \quad \cdots\cdots (2.13)$$

$$\text{(b): } F_m = 0.65F_{max} \quad \cdots\cdots (2.14)$$



Figur-7 Load changing in sinusoidal wave fluctuation

3 Bearing accuracy

3-1 Accuracy

Dimensional accuracy, geometrical accuracy and rotation accuracy of bearing are specified in ISO standards and JIS B 1514 (Rolling bearings - Tolerances of bearings).
Accuracy class of needle bearing is specified by four classes from lowest class 0 to 6th, 5th and 4th class in the highest. While high accuracy bearing in 5th or 4th class may be used in application for the case high rotation accuracy is demanded or high speed rotation, class 0 is used in most of general purpose application.

Table-8 Accuracy of inner ring

Unit: µm

d Nominal bearing bore diameter (mm)		Δ_{dmp} Deviation of mean bore diameter in a single plane								V_{dsp} Variation of bore diameter in a single plane				V_{dmp} Variation of mean bore diameter in a single plane				K_{ia} Radial runout of inner ring of assembled bearing				S_d Reference face runout with bore (Inner ring)		Δ_{Bs} Deviation of a single inner ring width				V_{Bs} Variation of inner rings width				d Nominal bearing bore diameter (mm)	
		0		6		5		4		0	6	5	4	0	6	5	4	0	6	5	4	5	4	0, 6		5, 4		0	6	5	4		
Over	Incl.	high	low	high	low	high	low	high	low	max.				max.				max.				max.		high	low	high	low	max.				Over	Incl.
2.5[1]	10	0	-8	0	-7	0	-5	0	-4	10	9	5	4	6	5	3	2	10	6	4	2.5	7	3	0	-120	0	-40	15	15	5	2.5	2.5[1]	10
10	18	0	-8	0	-7	0	-5	0	-4	10	9	5	4	6	5	3	2	10	7	4	2.5	7	3	0	-120	0	-80	20	20	5	2.5	10	18
18	30	0	-10	0	-8	0	-6	0	-5	13	10	6	5	8	6	3	2.5	13	8	4	3	8	4	0	-120	0	-120	20	20	5	2.5	18	30
30	50	0	-12	0	-10	0	-8	0	-6	15	13	8	6	9	8	4	3	15	10	5	4	8	4	0	-120	0	-120	20	20	5	3	30	50
50	80	0	-15	0	-12	0	-9	0	-7	19	15	9	7	11	9	5	3.5	20	10	5	4	8	5	0	-150	0	-150	25	25	6	4	50	80
80	120	0	-20	0	-15	0	-10	0	-8	25	19	10	8	15	11	5	4	25	13	6	5	9	5	0	-200	0	-200	25	25	7	4	80	120
120	150	0	-25	0	-18	0	-13	0	-10	31	23	13	10	19	14	7	5	30	18	8	6	10	6	0	-250	0	-250	30	30	8	5	120	150
150	180	0	-25	0	-18	0	-13	0	-10	31	23	13	10	19	14	7	5	30	18	8	6	10	6	0	-250	0	-250	30	30	8	5	150	180
180	250	0	-30	0	-22	0	-15	0	-12	38	28	15	12	23	17	8	6	40	20	10	8	11	7	0	-300	0	-300	30	30	10	6	180	250
250	315	0	-35	0	-25	0	-18	—	—	44	31	18	—	26	19	9	—	50	25	13	—	13	—	0	-350	0	-350	35	35	13	—	250	315

1) 2.5 mm is included in this dimension group

Table-9 Accuracy of outer ring

Unit: µm

D Nominal bearing outside diameter (mm)		Δ_{Dmp} Deviation of mean outside diameter in a single plane								V_{Dsp} Variation of outside diameter in a single plane				V_{Dmp} Variation of mean outside diameter in a single plane				K_{ea} Radial runout of outer ring of assembled bearing				S_D Variation of outside surface generatrix inclination with face (outer ring)		Δ_{Cs} Deviation of a single outer ring width		V_{Cs} Variation of outer ring width				D Nominal bearing outside diameter (mm)	
		0		6		5		4		0	6	5	4	0	6	5	4	0	6	5	4	5	4	0, 6, 5, 4		0	6	5	4		
Over	Incl.	high	low	high	low	high	low	high	low	max.				max.				max.				max.		high	low	max.				Over	Incl.
2.5[2]	6	0	-8	0	-7	0	-5	0	-4	10	9	5	4	6	5	3	2	15	8	5	3	8	4	Depending on tolerance of Δ_{Bs} for D of the same bearing.		Depending on tolerance of V_{Bs} for D of the same bearing.			5	2.5	2.5[2]	6
6	18	0	-8	0	-7	0	-5	0	-4	10	9	5	4	6	5	3	2	15	8	5	3	8	4						5	2.5	6	18
18	30	0	-9	0	-8	0	-6	0	-5	12	10	6	5	7	6	3	2.5	15	9	6	4	8	4						5	2.5	18	30
30	50	0	-11	0	-9	0	-7	0	-6	14	11	7	6	8	7	4	3	20	10	7	5	8	4						5	2.5	30	50
50	80	0	-13	0	-11	0	-9	0	-7	16	14	9	7	10	8	5	3.5	25	13	8	5	8	4						6	3	50	80
80	120	0	-15	0	-13	0	-10	0	-8	19	16	10	8	11	10	5	4	35	18	10	6	9	5						8	4	80	120
120	150	0	-18	0	-15	0	-11	0	-9	23	19	11	9	14	11	6	5	40	20	11	7	10	5						8	5	120	150
150	180	0	-25	0	-18	0	-13	0	-10	31	23	13	10	19	14	7	5	45	23	13	8	10	5						8	5	150	180
180	250	0	-30	0	-20	0	-15	0	-11	38	25	15	11	23	15	8	6	50	25	15	10	11	7						10	7	180	250
250	315	0	-35	0	-25	0	-18	0	-13	44	31	18	13	26	19	9	7	60	30	18	11	13	8						11	7	250	315

2) 2.5 mm is included in this dimension group

Table-10 Permissive tolerance of chamfer Unit: mm

*r*s min	d Nominal bearing bore diameter		Radial direction	Axial direction
	Over	Incl.	*r*s max	
0.15	—	—	0.3	0.6
0.2	—	—	0.5	0.8
0.3	— 40	40 —	0.6 0.8	1 1
0.6	— 40	40 —	1 1.3	2 2
1	— 50	50 —	1.5 1.9	3 3
1.1	— 120	120 —	2 2.5	3.5 4
1.5	— 120	120 —	2.3 3	4 5
2	— 80 220	80 220 —	3 3.5 3.8	4.5 5 6
2.1	— 280	280 —	4 4.5	6.5 7
2.5	— 100 280	100 280 —	3.8 4.5 5	6 6 7
3	— 280	280 —	5 5.5	8 8
4	—	—	6.5	9

* Remark Although no particular shape is specified for chamfer surface, its outline in axial plane must be within virtual arc of *r*s min radius that is tangent to slope of inner ring and inner diameter face of bearing, or tangent to side of outer ring and bearing outer diameter. (Reference diagram)

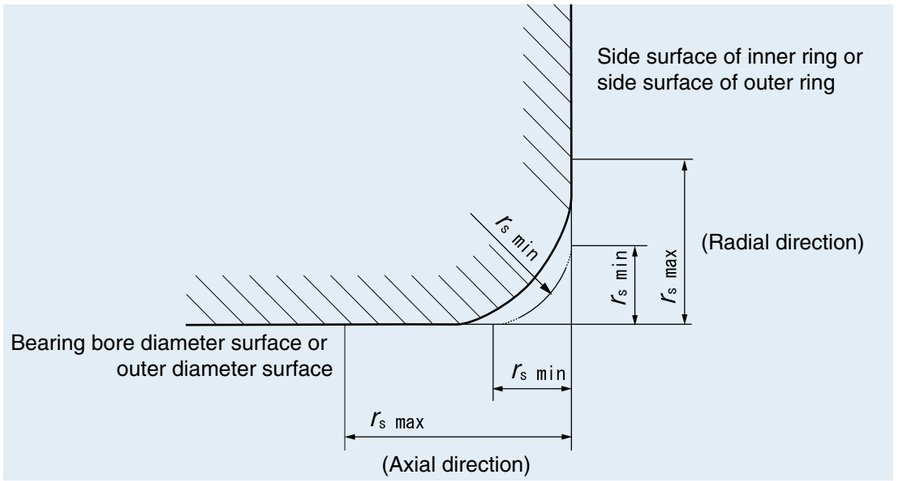


Table-11 Tolerance of minimum value of diameter of inscribed circle to roller Unit: μm

Fw (mm) Inscribed circle diameter		Dimension difference of Δ Fw min Variation of minimum value of diameter of inscribed circle to roller	
Over	Incl.	high	low
3	6	+18	+10
6	10	+22	+13
10	18	+27	+16
18	30	+33	+20
30	50	+41	+25
50	80	+49	+30
80	120	+58	+36
120	180	+68	+43
180	250	+79	+50
250	315	+88	+56

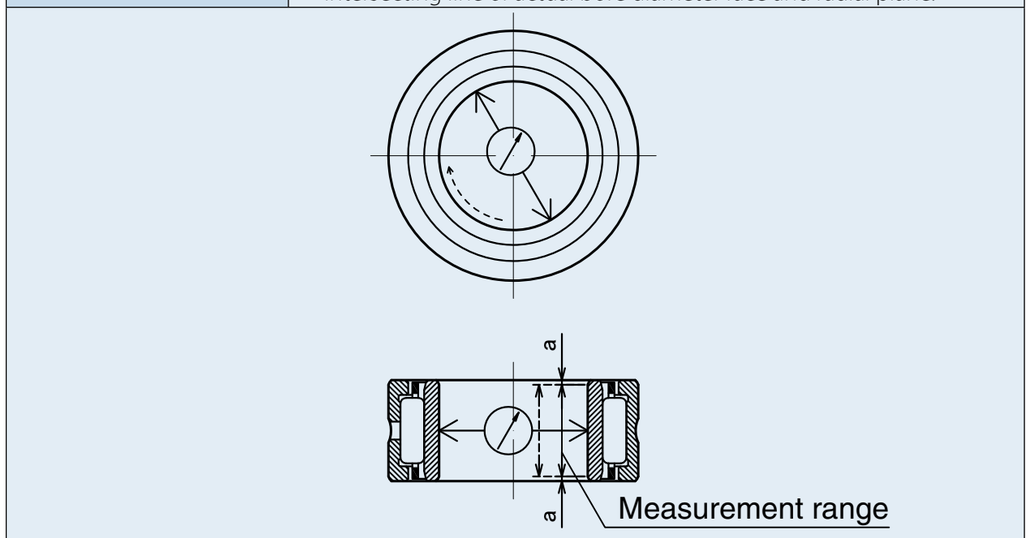
This means diameter of roller that achieves zero radial clearance in at least one radial direction in the case of using cylindrical roller instead of bearing inner ring.

3-2 Measurement method

Measurement of single bore diameter

Table-12 Bearing bore diameter

Type and definition of accuracy	
d_{mp} Mean bore diameter in a single plane	Arithmetic mean of maximum and minimum value of the single bore diameters in a single radial plane. $d_{mp}=\frac{d_{sp\,max}+d_{sp\,min}}{2}$ d_{sp}: Single inner diameter in a particular radial plane.
Δ_{dmp} Deviation of mean bore diameter in a single plane	Difference between the mean bore diameter and nominal more diameter. $\Delta_{dmp}=d_{dmp}-d$ d: Nominal bearing bore diameter.
V_{dsp} Variation of single bore diameter in a single plane	Difference between maximum and minimum value of single bore diameter in single radial plane. $V_{dsp}=d_{sp\,max}-d_{sp\,min}$
V_{dmp} Variation of mean bore diameter in a single plane	Difference between maximum and minimum value of the mean bore diameter in a single plane in individual track ring basically with cylindrical inner diameter face. $V_{dmp}=d_{mp\,max}-d_{mp\,min}$
Δ_{ds} deviation of single bore diameter	Difference between single bore diameter and nominal bore diameter. $\Delta_{ds}=d_s-d$ d_s: Distance between two parallel straight lines which are tangent to intersecting line of actual bore diameter face and radial plane.



Method of measurement of bearing bore diameter

Zero the gauge indicator to the appropriate size using gauge blocks or a master ring.

In several angular directions and in a single radial plane, measure and record the largest and the smallest single bore diameters, $d_{sp\,max}$ and $d_{sp\,min}$.

Repeat angular measurements and recordings in several radial planes to determine the largest and the smallest single bore diameter of an individual ring, $d_{s\,max}$ and $d_{s\,min}$.

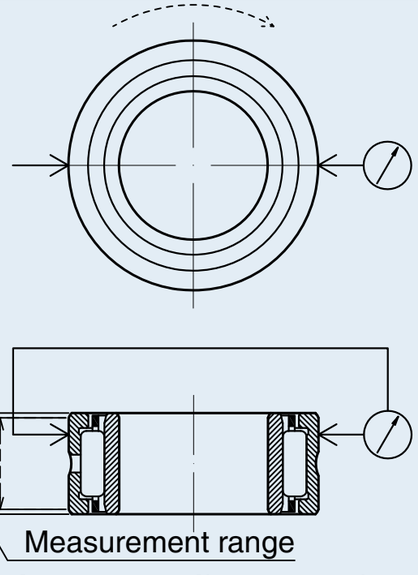
Table-13 Measurement area limit Unit: mm

r s min		a
Over	or less	
-	0.6	$r_{s\,max}+0.5$
0.6	-	$1.2\times r_{s\,max}$

Measurement of single outside diameter

Table-14 Bearing outer diameter

Type and definition of accuracy	
D_{mp} mean outside diameter in a single plane	Arithmetic mean of maximum and minimum value of the single outside diameters in a single radial plane. $D_{mp}=\frac{D_{sp\,max}+D_{sp\,min}}{2}$ D_{sp}: Single outside diameter in a particular radial plane
Δ_{Dmp} Deviation of mean outside diameter in a single plane	Difference between the mean outside diameter in a single plane of cylindrical outside diameter face and nominal outside diameter. $\Delta_{Dmp}=D_{mp}-D$ D: Nominal bearing outside diameter.
V_{Dsp} deviation of single outside diameter	Difference between maximum and minimum value of the mean outside diameter in a single radial plane. $V_{Dsp}=D_{sp\,max}-D_{sp\,min}$
V_{Dmp} Variation of mean outside diameter in a single plane	Difference between maximum and minimum value of the mean outside diameter in a single plane in individual track ring with basically cylindrical outer diameter face. $V_{Dmp}=D_{mp\,max}-D_{mp\,min}$
Δ_{Ds} deviation of single bore diameter	Difference between single outside diameter in basically cylindrical outside diameter face and nominal outside diameter. $\Delta_{Ds}=D_s-D$ D_s: Distance between two parallel straight lines which are tangent to intersecting line of actual outer diameter face and radial plane.



Method of measurement of bearing outer diameter

Zero the gauge indicator to the appropriate size using gauge blocks or a master.

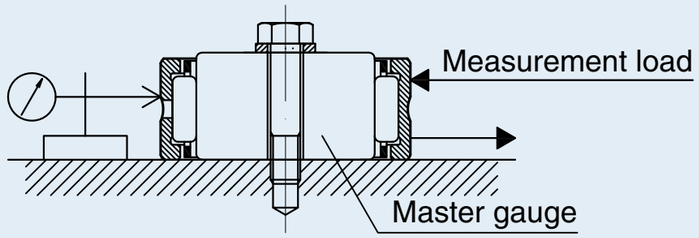
In several angular directions and in a single radial plane, measure and record the largest and the smallest single outside diameters, $D_{sp\,max}$ and $D_{sp\,min}$.

Repeat and record measurements in several radial planes to determine the largest and the smallest single outside diameter of an individual ring, $D_{s\,max}$ and $D_{s\,min}$.

Measurement of single bore diameter of rolling element complement

Table-15 Measurement of single bore diameter of rolling element complement

Type and definition of accuracy	
F_{ws} Nominal bore diameter of rolling element complement	Distance between two parallel straight lines which are tangent to intersecting line of inscribed circle of rolling element complement and radial plane in radial bearing without inner ring.
$F_{ws\ min}$ Minimum nominal bore diameter of rolling element complement	Minimum nominal bore diameter of rolling element complement in radial bearing without inner ring. Remark Minimum nominal bore diameter of rolling element complement is diameter of cylinder whose radial clearance becomes zero in at least one radial direction.



Measurement of single bore diameter of rolling element complement

Fasten the master gauge to a surface plate.

Position the bearing on the master gauge and apply the indicator in the radial direction to the approximate middle of the width on the ring outside surface.

Measure the amount of movement of the outer ring in the radial direction by applying sufficient load on the outer ring in the same radial direction as that of the indicator and in the opposite radial direction.

Record indicator readings at the extreme radial positions of the outer ring. Rotate the bearing and repeat the measurement in several different angular positions to determine the largest and the smallest readings, $F_{ws\ max}$ and $F_{ws\ min}$.

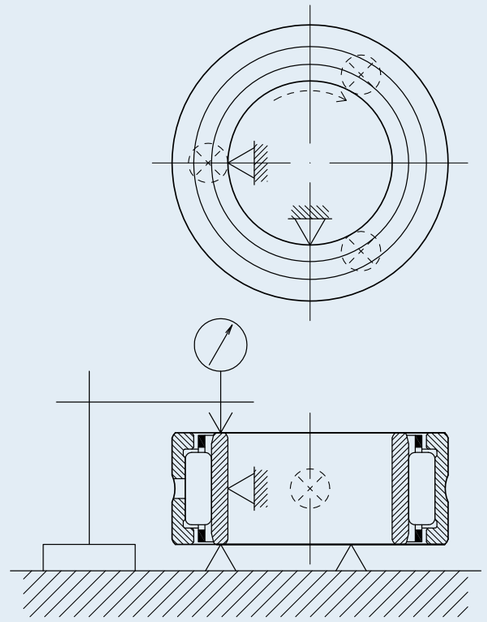
Table-16 Radial measurement load

F_w mm		Measurement load N
Over	Incl.	min.
—	30	50
30	50	60
50	80	70
80	—	80

Measurement of single inner ring width (or outer ring width)

Table-17 Measurement of single inner ring width (or outer ring width)

Type and definition of accuracy	
Δ_{Bs} Deviation of single inner ring width	Difference between single inner ring width and nominal inner ring width. $\Delta_{Bs}=B_s-B$
V_{Bs} Variation of inner ring width	Difference between maximum and minimum value of the single bore diameter width in each inner ring. $V_{Bs}=B_{smax}-B_{s\ min}$
Δ_{Cs} Deviation of single outer ring width	Difference between single outer ring width and norminal outer ring width $\Delta_{Cs}=C_s-C$
V_{Cs} Variation of outer ring width	Difference between maximum and minimum value of the single outer ring width in each outer ring. $V_{Cs}=C_{s\ max}-C_{s\ min}$



Measurement of single inner ring width (or outer ring width)

Zero the gauge indicator to the appropriate height from the reference surface using gauge blocks or a master.

Support one face of the ring on three equally spaced fixed supports of equal height and provide two suitable radial supports on the bore surface set at 90° to each other to center the ring.

Position the indicator against the other face of the ring opposite one fixed support.

Rotate the ring one revolution and measure and record the largest and the smallest single ring width, $B_{s\ max}$ and $B_{s\ min}$ ($C_{s\ max}$ and $C_{s\ min}$).

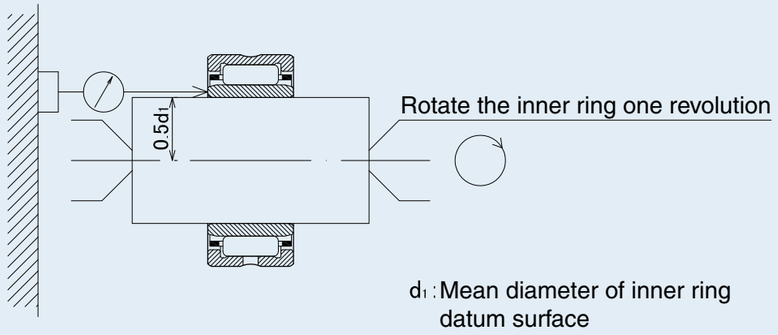
Measurement of perpendicularity of inner ring face with respect to the bore (S_d)

Use a precision arbor having a taper of approximately 1:5000 on diameter.

Mount the bearing assembly on the tapered arbor and place the arbor between two centres so that it can be accurately rotated.

Position the indicator against the reference face of the inner ring at a radial distance from the arbor axis of half the mean diameter of the face.

Take indicator readings while rotating the inner ring one revolution.



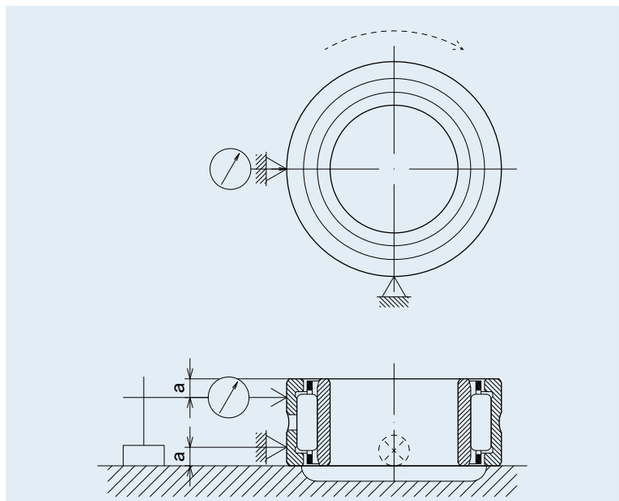
Measurement of perpendicularity of inner ring face with respect to the bore

Measurement of perpendicularity of outer ring outside surface with respect to the face (S_D)

Support the reference face of the outer ring on a surface plate leaving the inner ring, if an assembled bearing, free. Locate the outer ring cylindrical outside surface against two supports set at 90° to each other to centre the outer ring.

Position the indicator directly above one support. The indicator and the two supports are axially located at the extremes of the measurement zone.

Take indicator readings while rotating the outer ring one revolution.



Measurement of perpendicularity of outer ring outside surface with respect to the face

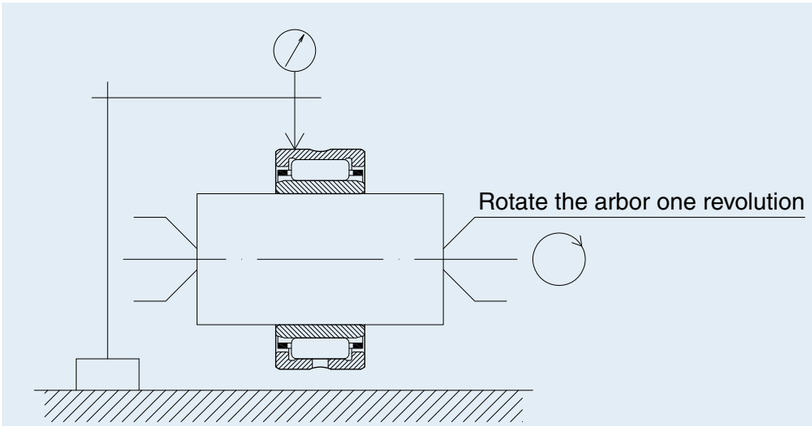
Measurement of radial runout of inner ring (K_{ia})

Use a precision arbor having a taper of approximately 1:5000 on diameter.

Mount the bearing assembly on the tapered arbor and place the arbor between two centres so that it can be accurately rotated.

Position the indicator against the outside surface of the outer ring as close as possible to the middle of the outer ring raceway.

Hold the outer ring to prevent rotation but ensure its weight is supported by the rolling elements. Take indicator readings while rotating the arbor one revolution.



Measurement of radial runout of inner ring

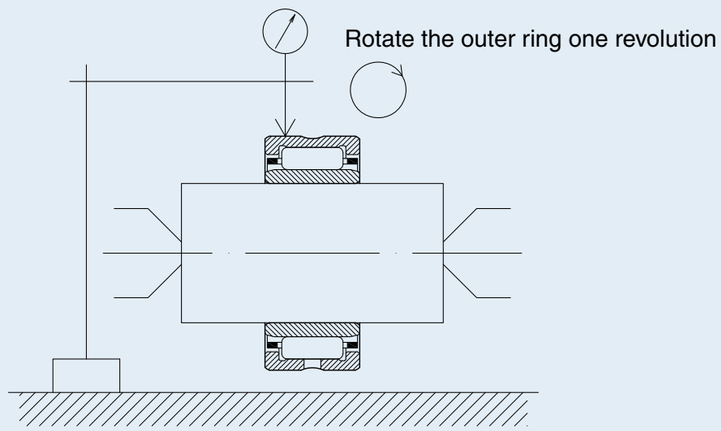
Measurement of radial runout of outer ring (K_{ea})

Use a precision arbor having a taper of approximately 1:5000 on diameter.

Mount the bearing assembly on the tapered arbor and place the arbor between two centres so that it can be accurately rotated.

Position the indicator against the outside surface of the outer ring as close as possible to the middle of the outer ring raceway.

Hold the inner ring stationary. Take indicator readings while rotating the outer ring one revolution.



Measurement of radial runout of outer ring

4 Internal clearance of bearing

4-1 Radial internal clearance of bearing

Radial internal clearance of bearing means a displacement of either inner ring or outer ring, which is free side, when the specified measurement load is applied to it alternatively in radial direction while locking the opposite component in the condition before mounting the bearing on shaft or housing. This measurement loads are quite small and they are specified in JIS B 1515:2006 (Rolling bearings - Tolerances). Radial internal clearance of needle bearing with inner ring is specified in JIS B 1520:1995 (radial internal clearance of bearing). Clearances shown in Table-18 are categorized in group C2, CN, C3, C4, C5 starting from smaller clearance and group CN is applied to general application.

■ Radial internal clearance of bearing

Table-18 Internal clearance of radial bearing

Category	Description
C2	Radial clearance smaller than standard clearance
CN clearance	Standard radial clearance
C3, C4, C5	Radial clearance larger than standard clearance

Table-19 Value of radial internal clearance of needle bearing Unit: μm

d Nominal bearing bore diameter (mm)		Clearance category									
		C2		CN		C3		C4		C5	
Over	Incl.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
-	10	0	25	20	45	35	60	50	75	-	-
10	24	0	25	20	45	35	60	50	75	65	90
24	30	0	25	20	45	35	60	50	75	70	95
30	40	5	30	25	50	45	70	60	85	80	105
40	50	5	35	30	60	50	80	70	100	95	125
50	65	10	40	40	70	60	90	80	110	110	140
65	80	10	45	40	75	65	100	90	125	130	165
80	100	15	50	50	85	75	110	105	140	155	190
100	120	15	55	50	90	85	125	125	165	180	220
120	140	15	60	60	105	100	145	145	190	200	245
140	160	20	70	70	120	115	165	165	215	225	275
160	180	25	75	75	125	120	170	170	220	250	300
180	200	35	90	90	145	140	195	195	250	275	330
200	225	45	105	105	165	160	220	220	280	305	365
225	250	45	110	110	175	170	235	235	300	330	395

Remark Nominal number C2,C3,C4 are displayed as part code suffix for these bearings (excluding CN clearance). Example) NA 4903 C2

4-2 Selection of radial internal clearance of bearing

Selection of clearance

Radial internal clearance of needle bearing in operation may generally becomes smaller than initial radial internal clearance. Temperature difference between inner and outer bearing during operation and fit cause this change. The radial internal clearance has a significant impact to life, vibration and heat generation of bearing.

Typically, larger radial internal clearance causes increase of vibration and smaller one results in heat generation or reduction of life due to excessive force between rolling element and track. Initial radial internal clearance may be selected as slightly larger than zero clearance in consideration for the internal clearance during operation. Bearing is designed to have suitable radial clearance by selecting CN clearance for general application.

Reduction of radial internal clearance due to fits

When bearing is installed to shaft or housing, radial internal clearance reduces due to expansion or shrinking of track with elastic deformation.

Reduction of radial clearance due to temperature difference between inner and outer ring

Friction heat generated by rotation of bearing will be released to outside through shaft and/or housing. In general application, radial internal clearance may be reduced as much as the difference of amount of thermal expansion between inner and outer ring since outer ring becomes cooler than inner ring due to larger heat release from housing than that from shaft.

5 Fits

5-1 Purpose of fits

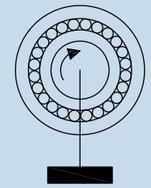
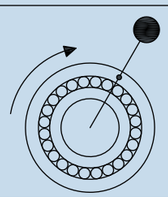
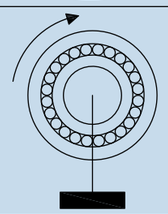
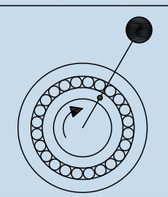
Purpose of "fits" for a bearing is to fixate a bearing with sufficient "interference" between inner ring and shaft or between outer ring and housing. Insufficient "fits" may cause harmful phenomena which result in damaging bearing or shortening its life such as abnormal wear in fitting surface, abnormal heat by abrasion powder, abnormal rotation and vibration due to slip of fitting surface. Therefore, it is imperative to select proper fits for application.

5-2 Selection of fits

Condition for selection of fits

Selection of bearing "fits" needs to consider following points. Properties and size of load in application, condition of temperature, accuracy of rotation, material, finish, wall thickness of shaft and housing and easiness of assembling/disassembling.
"Fits" as shown in Table-20 is generally determined based on properties of load and condition of rotation.

Table-20 Properties of radial load and fits

Properties of bearing load			Fits	
			Inner ring	Outer ring
Load with rotating inner ring Load with stationary outer ring		Inner ring: rotation Outer ring: stationary Loading direction: constant	Tight fit	Loose fit
		Inner ring: stationary Outer ring: rotation Loading direction: rotate together with outer ring		
Load with rotating outer ring Load with stationary inner ring		Inner ring: stationary Outer ring: rotation Loading direction: constant	Loose fit	Tight fit
		Inner ring: rotation Outer ring: stationary Loading direction: rotate together with inner ring		
Load in inconsistent direction	Direction of load is inconsistent due to varying load direction or including unbalanced load	Inner ring: rotation or stationary Outer ring: rotation or stationary Loading direction: inconsistent	Tight fit	Tight fit

Selection of fits

It is necessary to take condition of temperature and material of shaft and housing into consideration in addition to properties of load and rotation condition for selection of "fits" as mentioned above. Yet, it is common practice to determine "fits" based on reference to experience and past record because of difficulty for recognizing whole conditions. Table-21 and Table-22 show "fits" for general application and Table-23 shows "fits" for needle bearing without inner ring against shaft.

Table-21 Fits between needle bearing and housing hole

Conditions		Tolerance grade for housing
Load with stationary outer ring	Standard and heavy load	J7
	Split housing with standard load	H7
Load in inconsistent direction	Light load	J7
	Standard load	K7
	Heavy load and impact shock load	M7
Load with rotating outer ring	Light load	M7
	Standard load	N7
	Heavy load and impact shock load	P7
Light load and high rotation accuracy		K6

Table-22 Fits between needle bearing with inner ring and shaft

Conditions		Shaft diameter (mm)		Tolerance grade
		Over	Incl.	
Load with rotating inner ring or Load in inconsistent direction	Light load	—	50	j5
		50	100	k5
	Standard load	—	50	k5
		50	150	m5・m6
		150~		m6・n6
	Heavy load and impact shock load	~150		m6・n6
		150~		n6・p6
Load with stationary inner ring	Mid to low speed, light load	All dimension		g6
	Mid to low speed, standard load or heavy load			h6
	With precision rotation accuracy			h5

Remark Light load $P_r \leqq 0.06C_r$ Standard load $0.06C_r < P_r \leqq 0.12C_r$ Heavy load $P_r > 0.12C_r$
P_r: Dynamic equivalent radial load C_r: Basic dynamic load rating

Table-23 Fits between needle bearing without inner ring and shaft

Nominal diameter of inscribed circle Fw (mm)		Radial internal clearance		
		Clearance smaller than CN clearance	CN clearance	Clearance larger than CN clearance
Over	Incl.	Tolerance group grade for shaft		
-	65	k5	h5	g6
65	80	k5	h5	f6
80	160	k5	g5	f6
160	180	k5	g5	e6
180	200	j5	g5	e6
200	250	j5	f6	e6
250	315	h5	f6	e6

Remark Tight fit with housing hole smaller than k7 shall be modified with smaller shaft size in considering diameter shrink of inscribed circle of roller after assembly.

5-3 Table for shaft and housing fits

Table-24 Tolerances for shafts

Unit: µm

Nominal bearing bore diameter and nominal diameter of shaft d (mm)		Tolerance grade for shaft																															
		b12		c12		d6		e6		e7		f5		f6		g5		g6		h5		h6		h7		h8		h9		h10		h11	
Over	Incl.	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low
—	3	-140	-240	-60	-160	-20	-26	-14	-20	-14	-24	-6	-10	-6	-12	-2	-6	-2	-8	0	-4	0	-6	0	-10	0	-14	0	-25	0	-40	0	-60
3	6	-140	-260	-70	-190	-30	-38	-20	-28	-20	-32	-10	-15	-10	-18	-4	-9	-4	-12	0	-5	0	-8	0	-12	0	-18	0	-30	0	-48	0	-75
6	10	-150	-300	-80	-230	-40	-49	-25	-34	-25	-40	-13	-19	-13	-22	-5	-11	-5	-14	0	-6	0	-9	0	-15	0	-22	0	-36	0	-58	0	-90
10	18	-150	-330	-95	-275	-50	-61	-32	-43	-32	-50	-16	-24	-16	-27	-6	-14	-6	-17	0	-8	0	-11	0	-18	0	-27	0	-43	0	-70	0	-110
18	30	-160	-370	-110	-320	-65	-78	-40	-53	-40	-61	-20	-29	-20	-33	-7	-16	-7	-20	0	-9	0	-13	0	-21	0	-33	0	-52	0	-84	0	-130
30	40	-170	-420	-120	-370	-80	-96	-50	-66	-50	-75	-25	-36	-25	-41	-9	-20	-9	-25	0	-11	0	-16	0	-25	0	-39	0	-62	0	-100	0	-160
40	50	-180	-430	-130	-380																												
50	65	-190	-490	-140	-440	-100	-119	-60	-79	-60	-90	-30	-43	-30	-49	-10	-23	-10	-29	0	-13	0	-19	0	-30	0	-46	0	-74	0	-120	0	-190
65	80	-200	-500	-150	-450																												
80	100	-220	-570	-170	-520	-120	-142	-72	-94	-72	-107	-36	-51	-36	-58	-12	-27	-12	-34	0	-15	0	-22	0	-35	0	-54	0	-87	0	-140	0	-220
100	120	-240	-590	-180	-530																												
120	140	-260	-660	-200	-600	-145	-170	-85	-110	-85	-125	-43	-61	-43	-68	-14	-32	-14	-39	0	-18	0	-25	0	-40	0	-63	0	-100	0	-160	0	-250
140	160	-280	-680	-210	-610																												
160	180	-310	-710	-230	-630																												
180	200	-340	-800	-240	-700	-170	-199	-100	-129	-100	-146	-50	-70	-50	-79	-15	-35	-15	-44	0	-20	0	-29	0	-46	0	-72	0	-115	0	-185	0	-290
200	225	-380	-840	-260	-720																												
225	250	-420	-880	-280	-740																												
250	280	-480	-1000	-300	-820	-190	-222	-110	-142	-110	-162	-56	-79	-56	-88	-17	-40	-17	-49	0	-23	0	-32	0	-52	0	-81	0	-130	0	-210	0	-320
280	315	-540	-1060	-330	-850																												

Tolerance grade for shaft																										Nominal bearing bore diameter and nominal diameter of shaft d (mm)	
h12		js5		j5		js6		j6		j7		k5		k6		m5		m6		n5		n6		p6			
high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	Over	Incl.
0	-100	+2	-2	+2	-2	+3	-3	+4	-2	+6	-4	+4	0	+6	0	+6	+2	+8	+2	+8	+4	+10	+4	+12	+6	—	3
0	-120	+2.5	-2.5	+3	-2	+4	-4	+6	-2	+8	-4	+6	+1	+9	+1	+9	+4	+12	+4	+13	+8	+16	+8	+20	+12	3	6
0	-150	+3	-3	+4	-2	+4.5	-4.5	+7	-2	+10	-5	+7	+1	+10	+1	+12	+6	+15	+6	+16	+10	+19	+10	+24	+15	6	10
0	-180	+4	-4	+5	-3	+5.5	-5.5	+8	-3	+12	-6	+9	+1	+12	+1	+15	+7	+18	+7	+20	+12	+23	+12	+29	+18	10	18
0	-210	+4.5	-4.5	+5	-4	+6.5	-6.5	+9	-4	+13	-8	+11	+2	+15	+2	+17	+8	+21	+8	+24	+15	+28	+15	+35	+22	18	30
0	-250	+5.5	-5.5	+6	-5	+8	-8	+11	-5	+15	-10	+13	+2	+18	+2	+20	+9	+25	+9	+28	+17	+33	+17	+42	+26	30	40
																										40	50
0	-300	+6.5	-6.5	+6	-7	+9.5	-9.5	+12	-7	+18	-12	+15	+2	+21	+2	+24	+11	+30	+11	+33	+20	+39	+20	+51	+32	50	65
																										65	80
0	-350	+7.5	-7.5	+6	-9	+11	-11	+13	-9	+20	-15	+18	+3	+25	+3	+28	+13	+35	+13	+38	+23	+45	+23	+59	+37	80	100
																										100	120
0	-400	+9	-9	+7	-11	+12.5	-12.5	+14	-11	+22	-18	+21	+3	+28	+3	+33	+15	+40	+15	+45	+27	+52	+27	+68	+43	120	140
																										140	160
																										160	180
0	-460	+10	-10	+7	-13	+14.5	-14.5	+16	-13	+25	-21	+24	+4	+33	+4	+37	+17	+46	+17	+51	+31	+60	+31	+79	+50	180	200
																										200	225
																										225	250
0	-520	+11.5	-11.5	+7	-16	+16	-16	+16	-16	+26	-26	+27	+4	+36	+4	+43	+20	+52	+20	+57	+34	+66	+34	+88	+56	250	280
																										280	315

Table-25 Tolerances for holes

Unit: µm

Nominal bearing outer diameter and nominal diameter of hole D(mm)		Housing tolerances and resulting fits																									
		B12		E7		E8		E9		F6		F7		G6		G7		H6		H7		H8		H9		H10		H11	
Over	Incl.	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low
—	3	+240	+140	+24	+14	+28	+14	+39	+14	+12	+6	+16	+6	+8	+2	+12	+2	+6	0	+10	0	+14	0	+25	0	+40	0	+60	0
3	6	+260	+140	+32	+20	+38	+20	+50	+20	+18	+10	+22	+10	+12	+4	+16	+4	+8	0	+12	0	+18	0	+30	0	+48	0	+75	0
6	10	+300	+150	+40	+25	+47	+25	+61	+25	+22	+13	+28	+13	+14	+5	+20	+5	+9	0	+15	0	+22	0	+36	0	+58	0	+90	0
10	18	+330	+150	+50	+32	+59	+32	+75	+32	+27	+16	+34	+16	+17	+6	+24	+6	+11	0	+18	0	+27	0	+43	0	+70	0	+110	0
18	30	+370	+160	+61	+40	+73	+40	+92	+40	+33	+20	+41	+20	+20	+7	+28	+7	+13	0	+21	0	+33	0	+52	0	+84	0	+130	0
30	40	+420	+170	+75	+50	+89	+50	+112	+50	+41	+25	+50	+25	+25	+9	+34	+9	+16	0	+25	0	+39	0	+62	0	+100	0	+160	0
40	50	+430	+180																										
50	65	+490	+190	+90	+60	+106	+60	+134	+60	+49	+30	+60	+30	+29	+10	+40	+10	+19	0	+30	0	+46	0	+74	0	+120	0	+190	0
65	80	+500	+200																										
80	100	+570	+220	+107	+72	+126	+72	+159	+72	+58	+36	+71	+36	+34	+12	+47	+12	+22	0	+35	0	+54	0	+87	0	+140	0	+220	0
100	120	+590	+240																										
120	140	+660	+260	+125	+85	+148	+85	+185	+85	+68	+43	+83	+43	+39	+14	+54	+14	+25	0	+40	0	+63	0	+100	0	+160	0	+250	0
140	160	+680	+280																										
160	180	+710	+310																										
180	200	+800	+340	+146	+100	+172	+100	+215	+100	+79	+50	+96	+50	+44	+15	+61	+15	+29	0	+46	0	+72	0	+115	0	+185	0	+290	0
200	225	+840	+380																										
225	250	+880	+420																										
250	280	+1000	+480	+162	+110	+191	+110	+240	+110	+88	+56	+108	+56	+49	+17	+69	+17	+32	0	+52	0	+81	0	+130	0	+210	0	+320	0
280	315	+1060	+540																										

Housing tolerances and resulting fits																														Nominal bearing outer diameter and nominal diameter of hole d (mm)	
JS6		J6		JS7		J7		K5		K6		K7		M6		M7		N6		N7		P6		P7		R7		S7			
high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	high	low	Over	Incl.
+3	-3	+2	-4	+5	-5	+4	-6	0	-4	0	-6	0	-10	-2	-8	-2	-12	-4	-10	-4	-14	-6	-12	-6	-16	-10	-20	-14	-24	—	3
+4	-4	+5	-3	+6	-6	+6	-6	0	-5	+2	-6	+3	-9	-1	-9	0	-12	-5	-13	-4	-16	-9	-17	-8	-20	-11	-23	-15	-27	3	6
+4.5	-4.5	+5	-4	+7.5	-7.5	+8	-7	+1	-5	+2	-7	+5	-10	-3	-12	0	-15	-7	-16	-4	-19	-12	-21	-9	-24	-13	-28	-17	-32	6	10
+5.5	-5.5	+6	-5	+9	-9	+10	-8	+2	-6	+2	-9	+6	-12	-4	-15	0	-18	-9	-20	-5	-23	-15	-26	-11	-29	-16	-34	-21	-39	10	18
+6.5	-6.5	+8	-5	+10.5	-10.5	+12	-9	+1	-8	+2	-11	+6	-15	-4	-17	0	-21	-11	-24	-7	-28	-18	-31	-14	-35	-20	-41	-27	-48	18	30
+8	-8	+10	-6	+12.5	-12.5	+14	-11	+2	-9	+3	-13	+7	-18	-4	-20	0	-25	-12	-28	-8	-33	-21	-37	-17	-42	-25	-50	-34	-59	30	40
																														40	50
+9.5	-9.5	+13	-6	+15	-15	+18	-12	+3	-10	+4	-15	+9	-21	-5	-24	0	-30	-14	-33	-9	-39	-26	-45	-21	-51	-30	-60	-42	-72	50	65
																										-32	-62	-48	-78	65	80
+11	-11	+16	-6	+17.5	-17.5	+22	-13	+2	-13	+4	-18	+10	-25	-6	-28	0	-35	-16	-38	-10	-45	-30	-52	-24	-59	-38	-73	-58	-93	80	100
																										-41	-76	-66	-101	100	120
+12.5	-12.5	+18	-7	+20	-20	+26	-14	+3	-15	+4	-21	+12	-28	-8	-33	0	-40	-20	-45	-12	-52	-36	-61	-28	-68	-48	-88	-77	-117	120	140
																										-50	-90	-85	-125	140	160
																										-53	-93	-93	-133	160	180
+14.5	-14.5	+22	-7	+23	-23	+30	-16	+2	-18	+5	-24	+13	-33	-8	-37	0	-46	-22	-51	-14	-60	-41	-70	-33	-79	-60	-106	-105	-151	180	200
																										-63	-109	-113	-159	200	225
																										-67	-113	-123	-169	225	250
+16	-16	+25	-7	+26	-26	+36	-16	+3	-20	+5	-27	+16	-36	-9	-41	0	-52	-25	-57	-14	-66	-47	-79	-36	-88	-74	-126	-138	-190	250	280
																										-78	-130	-150	-202	280	315

6 Design of shaft and housing

6-1 Accuracy of fitting surface

Correct design and manufacturing of shaft or housing to which needle bearing is assembled are vital for adequate bearing performance since the needle bearing has thinner track ring compared to other types of rolling bearings. Table-26 shows dimension accuracy and geometric accuracy of "fitting" part of shaft and housing in standard application condition, surface roughness and tolerance of runout of shoulder against fitting surface.

Table-26 Accuracy of shaft and housing (recommended)

Item	Shaft	Housing
Roundness tolerance	IT3~IT4	IT4~IT5
Cylindricity tolerance	IT3~IT4	IT4~IT5
Shoulder runout tolerance	IT3	IT3~IT4
Roughness of fitting surface	0.8a	1.6a

6-2 Accuracy of track surface

Needle bearing can be directly attached to shaft or housing as track for compact bearing structure. In this case, accuracy and roughness of track surface must be equivalent to that of bearing track surface in order to ensure bearing life with high rotation accuracy. Since accuracy and roughness of shaft and housing may affect life and the cause of abnormality of the bearing.

Table-27 shows specification for accuracy and roughness of track surface.

Table-27 Accuracy of track surface (recommended)

Item	Shaft	Housing
Roundness tolerance	IT3	IT3
Cylindricity tolerance	IT3	IT3
Shoulder runout tolerance	IT3	IT3
Surface roughness	0.2a	

6-3 Material and heat treatment of track surface

Surface hardness of shaft and housing must be HRC58 to 64 in order to obtain sufficient loading capacity in the case of using them as direct track surface. Table-28 shows recommended heat treatment for their material.

Table-28 Material for track

Type of steel	Representative example	Related standards
High carbon-chromium bearing steel	SUJ2	JIS G 4805
Chronium molybdemum steel	SCM415~435	JIS G 4053
Carbon tool steel	SK85	JIS G 4401
Stainless steel	SUS440C	JIS G 4303

6-4 Skew of bearing

Skew between inner ring and outer ring generated by deflection of shaft due to external force or mounting error may result in reduction of life caused by abnormal wear or heat. While permissive amount of skew varies depending on type of bearing, load and bearing internal clearance, it is recommended to be 1/2000 or less for general application.

6-5 Mounting dimension for bearing

Dimension of shaft and housing for mounting needle bearing (Figure-8) is shown in dimension table for respective bearings.

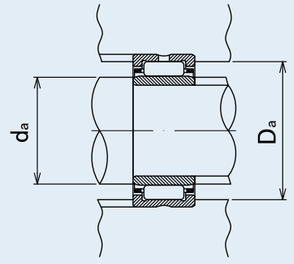


Figure-8 Mounting dimension

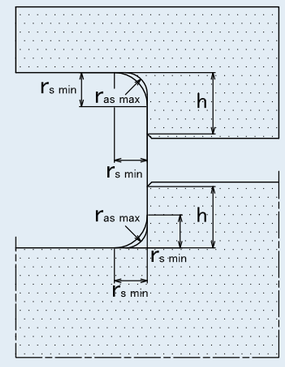
Fillet radius and height of shoulder for shaft and housing

Maximum permissive radius ($r_{as\ max}$) of fillet radius for shaft and housing to which needle bearings are assembled corresponds to minimum permissive chamfer dimension ($r_{s\ min}$) of the bearings.

Minimum value of shoulder diameter of the shaft (da) shall be nominal bore diameter (d) of bearing plus its shoulder height (h) multiplied by 2. Maximum value of shoulder diameter of the housing (Da) shall be outer diameter (D) of bearing minus height of its shoulder multiplied by 2.

Table-29 Maximum permissive actual radius of corner R of shaft and housing $r_{as\ max}$ Unit: mm

$r_{s\ min}$ Minimum permissive chamfer dimension	$r_{as\ max}$ Maximum permissive actual radius of corner R of shaft and housing
0.1 0.15 0.2	0.1 0.15 0.2
0.3 0.4 0.6	0.3 0.4 0.6
1 1.1 1.5	1 1 1.5
2 2.1 2.5	2 2 2
3 4 5	2.5 3 4



Height of shoulder and corner R

Table-30 Value of tolerance class IT for reference dimension Unit: μm

Reference dimension mm		Tolerance class					
Over	Incl.	IT2	IT3	IT4	IT5	IT6	IT7
3	6	1.5	2.5	4	5	8	12
6	10	1.5	2.5	4	6	9	15
10	18	2	3	5	8	11	18
18	30	2.5	4	6	9	13	21
30	50	2.5	4	7	11	16	25
50	80	3	5	8	13	19	30
80	120	4	6	10	15	22	35
120	180	5	8	12	18	25	40
180	250	7	10	14	20	29	46
250	315	8	12	16	23	32	52

7 Lubrication

7-1 Purpose of lubrication

Purpose of bearing lubrication is to prevent its heat-seizure by mitigating friction and abrasion of rolling surface and slipping surface. Followings are the detailed explanation.

(1) Mitigation of friction and abrasion
It prevents direct contact between track, rolling element and cage.
It also mitigates friction and abrasion as a result of slip on track surface.

(2) Removal of frictional heat
Lubricant removes abrasion heat inside of bearing or heat propagated from outside to prevent excessive heat-up of the bearing.

(3) Extension of bearing life
Separating rolling element and track by oil film results in extension of bearing life.

(4) Prevention of rust
Oil film of lubricant mitigates oxidation inside and surface of bearing to prevent corrosion.

(5) Prevention of dust
Packed grease in the case of grease lubrication prevent invasion of foreign matter.

Efficient performance of these effects requires using lubrication method suitable for the application as well as selection of proper lubricant, its adequate amount, prevention against invasion of external foreign matter and optimal sealing structure in order to avoid leakage of the lubricant.

7-2 Comparison of grease and oil lubrication

Lubrication method

Lubrication method of bearing consists of grease lubrication and oil lubrication.

Grease lubrication is so popular for broad type of bearing because of its cost efficiency due to its simple sealing structure and a long duration of operating period with single filling. However, its disadvantage is larger flow resistance than oil lubrication in light of efficiency to large cooling capability and high speed application.

Oil lubrication has advantage in large cooling capability and high speed application due to its good flow characteristics. However, it demands design with consideration to sealing structure and leakage prevention. The Table-31 compares the two lubrication methods as a guidance for lubrication method selection.

Table-31 Comparison of grease and oil lubrication

Item \ Lubrication method	Grease	Oil
Replacement of lubricant	△	○
Lubrication performance	○	◎
Cooling efficiency	×	○
Sealing structure	○	△
Power loss	△	○
Maintenance	○	△
High speed operation	×	○

7-3 Grease lubrication

Filling amount of grease

Grease shall be packed up to volume approximately one-third to one-half of internal space of bearing or housing. Excessive grease may cause degraded lubrication performance due to leakage of softened grease or oxidation as a result of increased temperature inside of bearing. This should be critical especially in high speed operation.

Figure-9 shows an example of grease replenishment plan from side way using a ring with grease hole. Arranging grease holes evenly on circumference of the ring allows simultaneous entry of replenished grease into bearing for replacing old grease with new one. However, this design also allows standing old grease in opposite side space, which needs to be removed periodically by removing the cover.

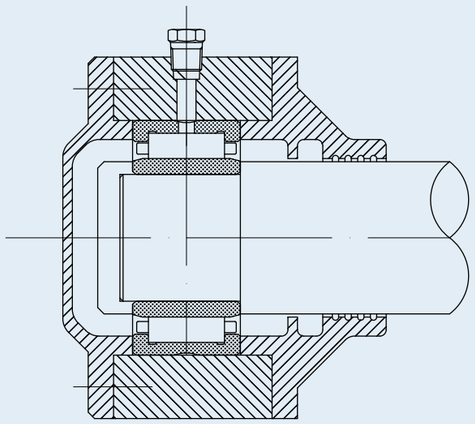


Figure-9 Grease lubrication

Lubrication grease

Grease is a semi-solid lubricant consisting of a base oil (liquid lubrication agent) and a thickener, which are combined on heating.

Table-32 Type and properties of grease (reference)

Name	Lithium grease			Sodium grease	Calcium base grease	Aluminum grease	Non-soap grease	
Thickener	Li soap			Na soap	Ca + Na soap Ca + Li soap	Al soap	Bentonite,urea,etc	
Base oil	Mineral oil	Diester oil	Silicon oil	Mineral oil	Mineral oil	Mineral oil	Mineral oil	Synthetic oil
Dropping point ℃	170~190	170~190	200~250	150~180	150~180	70~90	250 or more	250 or more
Working temperature ℃	-25~+120	-50~+120	-50~+160	-20~+120	-20~+120	-10~+80	-10~+130	-50~+200
Mechanical stability	Good	Fair	Fair	Good~Fair	Good~Fair	Fair~Poor	Fair	Fair
Pressure resistance	Fair	Fair	Poor	Fair	Good~Fair	Fair	Fair	Fair
Water resistance	Fair	Fair	Fair	Fair~Poor	Fair~Poor	Fair	Fair	Fair
Application	Most various Versatile rolling bearing grease	Superior in low temperature, friction properties	Suitable for high and low temperature Unsuitable for high load due to low oil film strength	Subject to emulsifying by mixing with water Relatively good propertis to high temperature	Superior in water resistance and mechanical stability Suitable for bearing being subjected to vibration	Superior in viscosity Suitable for bearing being subjected to vibration	Vast application from low to high temperature It includes types showing superior properties in resistance to high and low temperature, and to chemical by combination with base oil and thickener Versatile rolling bearing grease	

Remark Working temperature range is for general properties only and NOT for guarantee purpose.

1) Base oil

Mineral oil and mixed oil are used for base oil of grease.

Diester oil and silicone oil are used as mixed oil.

Lubrication performance depends on viscosity of the base oil, and generally, low viscosity base oil is suitable for low temperature environment and high speed application, and high viscosity is for high temperature and high load application.

2) Thickener

Thickener is a material to keep grease in semi-solid state. Type of thickener has impact to maximum working temperature, water resistance and mechanical stability.

Metal-soap base is popular for material of thickener. In addition, there are thickeners such as urea base thickener with high heat resistance, and natrium soap-base thickener with poor water resistance due to easiness to emulsifying by mixing with water.

3) Consistency

Consistency refers to the "softness" of grease and it is used as a guideline for showing flow characteristics. The larger the ASTM penetration No. is, the softer the grease is. Table-33 shows typical relationship between consistency of grease and its operating conditions.

Table-33 Consistency of grease and its operating conditions

NLGI Grade No.	ASTM Penetration (1/10mm)	Operating conditions
0	355~385	Centralized lubrication Oscillating application
1	310~340	
2	265~295	General application
3	220~250	General, high temperature application
4	175~205	Grease with sealed application

4) Additives

Additives are material to improve performance of grease, which include antioxidants and extreme pressure additives added as necessary. Condition to use grease for long period without any replenishment requires added antioxidants to prevent oxidation.

Also, grease in operating conditions with heavy load or impact shock shall be selected from those with extreme pressure additives added.

5) Mixing different type greases

In principle, different brands of grease must not be mixed. Mixing different type grease is subject to negative impact each other due to change of consistency and difference of additives.

Table-34 Brand of lubricant grease (reference)

Category	Brand	Manufacturer	Thickener or soap-base	Consistency	Dropping point ℃	Working temperature ℃	Remark
General purpose	Alvania Grease S1	Showa Shell Sekiyu	Lithium soap	323	180	-35~120	General purpose
	Alvania Grease S2	Showa Shell Sekiyu	Lithium soap	283	181	-25~120	General purpose
	Alvania Grease S3	Showa Shell Sekiyu	Lithium soap	242	182	-20~135	General purpose
Wide working temperature	Fomblin RT-15	Solvay Solexis	PTFE	NO.2	300 or more	-20~250	High temperature
	Fomblin Y-VAC1	Solvay Solexis	PTFE	NO.1	300 or more	-20~250	High vacuum (soft)
	Fomblin Y-VAC2	Solvay Solexis	PTFE	NO.2	300 or more	-20~250	High vacuum (normal)
	Fomblin Y-VAC3	Solvay Solexis	PTFE	NO.3	300 or more	-20~250	High vacuum (rigid)
Low temperature	Multemp PS No.2	KYODO YUSHI	Lithium soap	NO.2	190	-50~130	Low temperature
Other	LOR#101	OIL CENTER RESEARCH	PTFE	295	198	-40~188	Superior in abrasion resistance, load resistance, water resistance and chemical resistance
	HP300	Dow Corning	PTFE	280	-	-65~250	Load resistance, oil resistance, solvent resistance, chemical resistance
	BARRIERTA SUPER IS/V	NOK KLUBER	PTFE	No.2	-	-35~260	High vacuum
	BARRIERT IEL/V	NOK KLUBER	PTFE	No.2	-	-65~200	High vacuum
	ISO FLEX TOPAS NB 52	NOK KLUBER	Barium soap	No.2	240 or more	-50~150	Superior in heat resistance, load resistance, water resistance and high speed
	DEMNUM L-200	DAIKIN	PTFE	280	-	-60~300	High temperature stability
	DEMNUM L-65	DAIKIN	PTFE	280	-	-70~200	High temperature stability
	G1/3Grease	The Orelube Corporation	Non-soap grease	No.2	-	-23~180	High temperature, high load
	Shell Cassida Grease RLS2	Showa Shell Sekiyu	Aluminium complex	No.2	240 or more	-30~120	Superior in water resistance, oxidation stability and mechanical stability
	Super Lube item number 82329	Henkel	PTFE	No.2	-	-42~232	Extreme pressure, high temperature
	Castrol Micro-cote 296	Castrol	PTFE	No.2	256	-50~204	Heat stability, low volatility, shear stability, high vacuum

7-4 Oil lubrication

Oil lubrication is more suitable than grease for high speed rotation with superior cooling efficiency. It is suitable for application that requests emission of heat to outside that are generated in bearing or added to the bearing.

1) Oil bath lubrication

Oil bath lubrication is the most popular method used in medium to low speeds. Amount of oil needs to be properly controlled with oil gauge. Most proper oil amount may be with oil level at the center of the lowest needle roller of bearing. Housing design with less variation of oil level is preferable.

2) Oil drop lubrication

Oil drop lubrication is broadly used in application with high speed and medium load due to its better cooling efficiency than oil bath lubrication. Oil dripping through oiler in this method removes friction heat in a method to lubricate with oil fog filling inside of housing by hitting rotating objects such as shafts and nuts. While amount of oil varies depending on type of bearing and speed, general amount should be a couple of drops per minute.

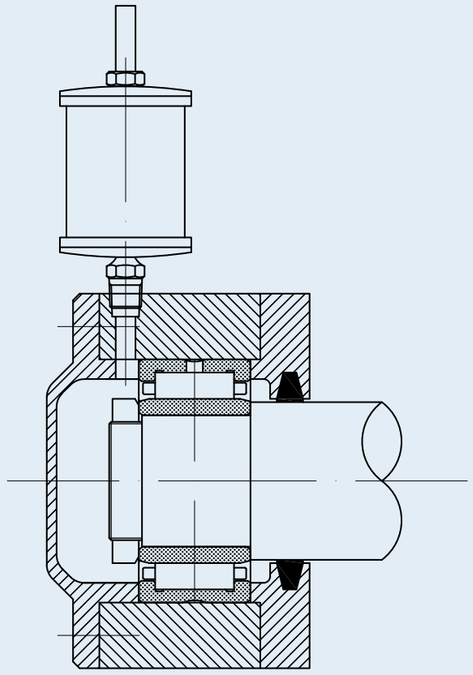


Figure-10 Oil drop lubrication

3) Oil splash lubrication

Oil splash lubrication is a method to splash oil with rotation of gear or disc. Unlike oil bath lubrication, it is applicable for relatively higher speed without having bearing in direct soak in oil.

4) Oil circulating lubrication

Oil circulating lubrication is widely used in application whose purpose is in cost efficiency for automatic lubrication with large number of lubrication spots, or is in cooling bearing. This lubrication method enables cooling or maintaining cleanness of lubricant with oil cooler and filters installed in oil circulation system. As shown in Figure-11, to make sure that lubrication oil is drained off certainly, it is important to have as much large outlet port as practical or forced outlet, setting inlet and outlet port of lubrication oil to opposite side each other to bearing.

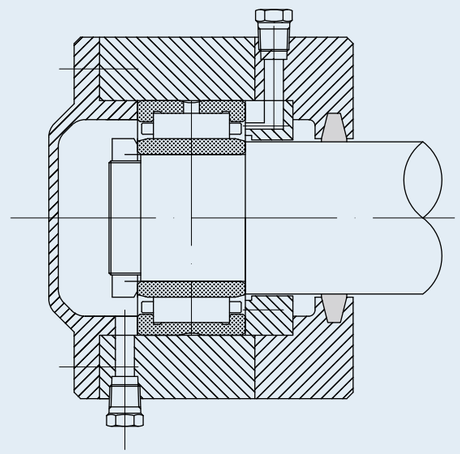


Figure-11 Circulating lubrication

Lubrication oil

Highly refined mineral oil such as spindle oil, machine oil or turbine oil, or mixed oil are used as lubrication oil for bearing. Additives such as antioxidants, extreme pressure additives or depurant are selectively used as necessary in accordance with application.

It is important to select oil with proper viscosity for operation temperature. Too low viscosity causes insufficient formation of oil film which results in abrasion or heat-seizure. Too high viscosity causes heat generation or loss of power due to viscosity resistance. In general, oil with higher viscosity is used for higher load and lower viscosity for higher speeds.

8 Bearing handling

8-1 Precaution

Bearings are an extremely precision mechanical components. Exercise great care for its handling. Followings are precautions for the handling.

1) Keep bearings and surroundings clean

Foreign matters invaded inside of bearings such as dust and dirt have harmful effect in rotation or operation life on the bearings. Take extra precaution to maintain cleanness of bearing, surrounding components, work tools, lubricants, lubrications oil and working environment.

2) Handle bearings carefully

Shocks such as caused by falling bearing may result in damage or impressions on track or rolling elements. They can be a cause of failure so that handle bearings carefully.

3) Use proper tools

Make it sure to use work tools properly for bearing type for assembling and disassembling.

4) Pay attention to rust

Although bearings are applied with anti-rust oil, handling with bare hands may cause generation of rust with perspiration from hands. Exercise care and use rubber gloves or apply mineral oil to hands when handling with bare hands.

8-2 Mounting

Preparation

Bearings should be mounted in clean and dry circumstance. Dirt on mounting tools should be removed prior to mounting work, then verify that dimension accuracy, shaft and housing roughness and geometric accuracy are within designed tolerance.

Packing of bearings should be opened just before start mounting. Fill lubrication grease without washing bearing in the case of grease lubrication. Washing is generally not required for oil lubrication as well. Still it is recommended to thoroughly wash out oil and grease when application demands high accuracy or lubricating performance is degraded by mixing lubricant and anti-rust agents.

Mounting method

1) Press fitting

In mounting bearings from small to medium sizes which don't need large forces , press fittings in room temperature are conducted widely. In this case, use pressing fixture as shown in Figure-12 to apply force evenly at side of bearing and press it in carefully. Applying high viscosity oil on fitting surface during work may reduce friction on the surface.

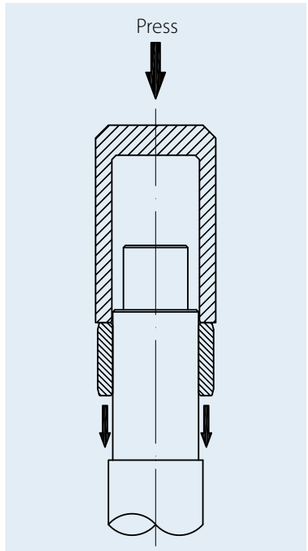


Figure-12 Press fitting of Inner ring

2) Shrink fitting

Shrink fitting is broadly used for tighter interference or mounting large size bearing. How to fit is heating housing for outer ring and inner ring for shaft respectively with pure mineral oil with less corrosivity in order to expand their inner diameter for mounting onto the shaft. Heating temperature must not exceed 120° C. During mounting, inner ring could expand toward shaft direction so that it needs to be pressed against shoulder until completion of cool down to avoid gap between the inner ring and the shoulder.

8-3 Operation inspection

Operation inspection needs to be performed in order to confirm that bearings is properly mounted. Power operation at given speed without operation inspection may result in damage of bearings or heat-seizure due to lubrication failure in the case that mounting is insufficient. Shaft or housing should be rotated by hand after bearing mounting to confirm if there is no abnormality followed by check (or inspection) in stepping increase of speed from no load, low speed operation with power up to loaded operation.

Followings are typical abnormal items and major causes that can be checked in the operation inspection.

1) Check item in operation by hand

- Fluctuation in rotation torque, Insufficient mounting
- Sticks and abnormal noise, Impression, damage, invasion of dirt or foreign matters in track surface
- Excessive torque, Insufficiently small clearance

2) Check item in operation by power

- Abnormal noise, vibration ···· Impression, invasion of dirt or foreign matters in track surface, excessive clearance
- Abnormal temperature ····· Insufficient lubrication, insufficient mounting, insufficiently small clearance

8-4 Removing

Bearing may be removed for periodical machine maintenance or repair for trouble. Bearing and other components should be carefully disassembled in the same manner as the mounting in the case of re-using disassembled bearing or researching trouble condition.

Bearings should be carried out in an appropriate manner in accordance with type of bearing and condition of fits. Structure design should take disassembling work into consideration at planning stage of construction around the bearing since it would be difficult to disassemble especially the tight fit bearing.

Removing outer ring

Installing bolts for disassembling outer ring at several locations in circumference of housing will allow removing outer ring assembled with tight fits easily by tightening-up the screws evenly as shown in Figure-13.

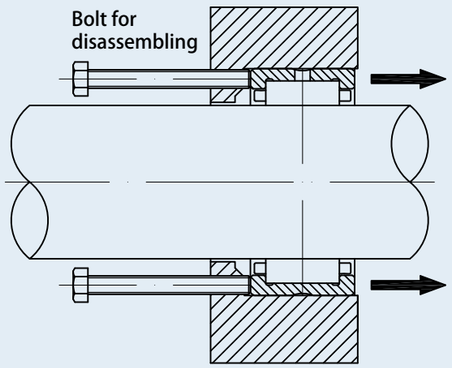


Figure-13 Disassembling outer ring

Disassembling inner ring

Inner rings can be carried out most easily by pulling out by press (Figure-14). Dedicated removal tool (Figure-15) designed in accordance with dimension of the bearing is in use as well.

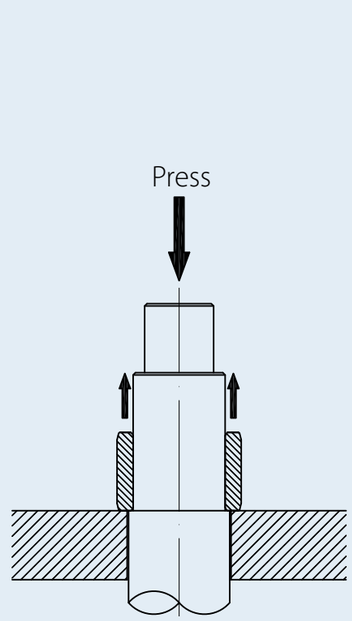


Figure-14 Disassembling inner ring 1

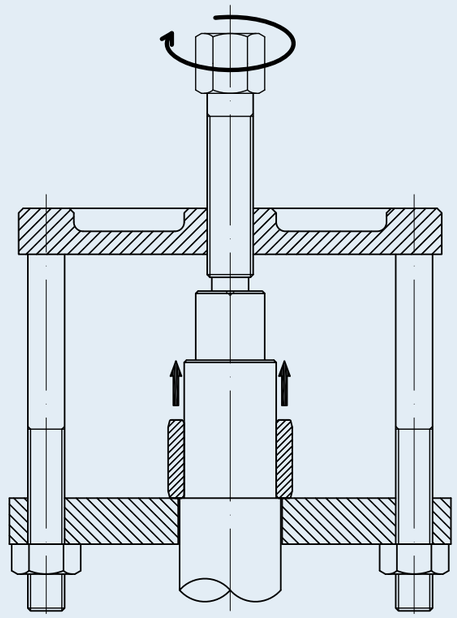
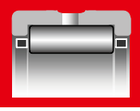


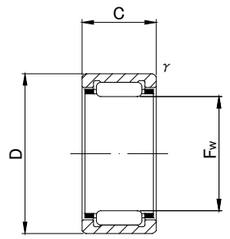
Figure-15 Disassembling inner ring 2

8-5 Maintenance and inspection

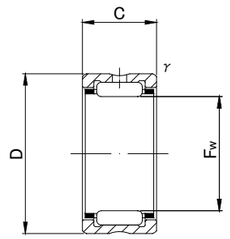
Periodical maintenance and inspection are essential for maximizing performance and prolonged usage of bearing as well as early discovery of abnormality of the bearings. Inspection items of bearings under operation include temperature, operation sound, vibration of bearings and condition of lubricant, whose observation enables judging timing of lubricant replenishment and replacement of components.

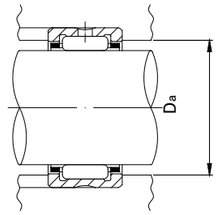
MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING





NK(Fw ≦ 10)





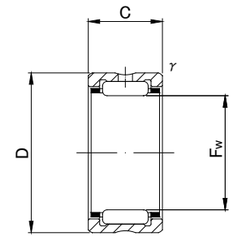
RNA49,RNA59,RNA69(Fw ≦ 35),NK

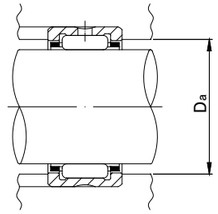
RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
5	—	—	—	—	NK5/10	5 +0.018	10	10	0.15	6.5	2 420	1 950	40 000	3.4	—	—
	—	—	—	—	NK5/12	5 +0.010	10	12	0.15	6.5	3 080	2 660	40 000	4.2	—	—
6	—	—	—	—	NK6/10	6 +0.018	12	10	0.015	7.5	2 700	2 320	37 000	5.3	—	—
	—	—	—	—	NK6/12	6 +0.010	12	12	0.15	7.5	3 440	3 170	37 000	6.4	—	—
7	RNA 495	—	—	—	—	7	13	10	0.15	8.5	2 960	2 690	34 000	5.9	IR5710	NA495
	—	—	—	—	NK7/10	7 +0.022	14	10	0.3	8.5	3 600	2 960	34 000	6.9	—	—
	—	—	—	—	NK7/12	7 +0.013	14	12	0.3	8.5	4 610	4 050	34 000	8.3	—	—
8	RNA 496	—	—	—	—	8	15	10	0.15	13.8	3 900	3 400	32 000	7.3	IR6810	NA496
	—	—	—	—	NK8/12	8 +0.022	15	12	0.3	13	5 100	4 700	32 000	9	IR5812	NKI 5/12
	—	—	—	—	NK8/16	8 +0.013	15	16	0.3	13	7 100	7 300	32 000	13	IR5816	NKI 5/16
9	—	—	—	—	NK9/12	9	16	12	0.3	14	5 500	5 300	30 000	10	IR6912	NKI 6/12
	—	—	—	—	NK9/16	9 +0.022	16	16	0.3	14	7 600	8 200	30 000	13.2	IR6916	NKI 6/16
	RNA 497	—	—	—	—	9 +0.013	17	10	0.15	15.8	4 500	3 600	30 000	9.3	IR7910	NA497
10	—	—	—	—	NK10/12	10	17	12	0.3	15	5 900	6 000	28 000	10.7	IR71012	NKI 7/12
	—	—	—	—	NK10/16	10 +0.022	17	16	0.3	15	8 200	9 200	28 000	14.3	IR71016	NKI 7/16
	RNA 498	—	—	—	—	10 +0.013	19	11	0.2	17.4	6 200	5 000	28 000	12.6	IR81011	NA498
12	—	—	—	—	NK12/12	12	19	12	0.3	17	6 600	7 300	26 000	12.2	IR91212	NKI 9/12
	—	—	—	—	NK12/16	12 +0.027	19	16	0.3	17	9 200	11 200	26 000	16.3	IR91216	NKI 9/16
	RNA 499	—	—	—	—	12 +0.016	20	11	0.3	18	6 600	6 300	26 000	13.6	IR91211	NA499

* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING





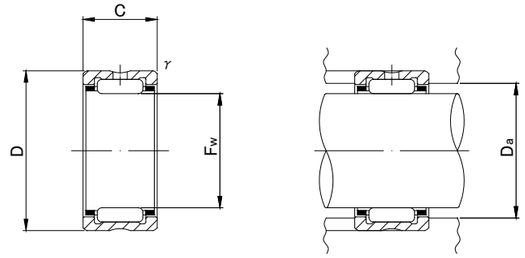
RNA49,RNA59,RNA69(Fw ≦ 35),NK

RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
14	RNA 4900	—	—	—	—	14 +0.027 +0.016	22	13	0.3	20	9 200	10 100	24 000	16.5	IR101413	NA4900
	—	—	—	—	NK14/16	14 +0.027 +0.016	22	16	0.3	20	11 800	13 700	24 000	21	IR101416	NKI 10/16
	—	—	—	—	NK14/20	14 +0.027 +0.016	22	20	0.3	20	14 800	18 500	24 000	26.5	IR101420	NKI 10/20
15	—	—	—	—	NK15/16	15 +0.027 +0.016	23	16	0.3	21	12 400	14 900	23 000	22.5	—	—
	—	—	—	—	NK15/20	15 +0.027 +0.016	23	20	0.3	21	15 600	20 200	23 000	28	—	—
16	RNA 4901	—	—	—	—	16	24	13	0.3	22	9 700	11 100	23 000	18.1	IR121613	NA4901
	—	—	—	—	NK16/16	16 +0.027 +0.016	24	16	0.3	22	12 300	15 100	23 000	23	IR121616	NKI 12/16
	—	—	—	—	NK16/20	16 +0.027 +0.016	24	20	0.3	22	15 600	20 400	23 000	29	IR121620	NKI 12/20
	—	—	RNA 6901	—	—	16	24	22	0.3	22	17 100	23 000	23 000	30	IR121622	NA6901
17	—	—	—	—	NK17/16	17 +0.027 +0.016	25	16	0.3	23	12 800	16 300	22 000	24.5	—	—
	—	—	—	—	NK17/20	17 +0.027 +0.016	25	20	0.3	23	16 300	22 100	22 000	30.5	—	—
18	—	—	—	—	NK18/16	18 +0.027 +0.016	26	16	0.3	24	13 400	17 500	21 000	25.5	—	—
	—	—	—	—	NK18/20	18 +0.027 +0.016	26	20	0.3	24	17 000	23 600	21 000	32	—	—
19	—	—	—	—	NK19/16	19 +0.033 +0.020	27	16	0.3	25	14 000	18 700	21 000	27	IR151916	NKI 15/16
	—	—	—	—	NK19/20	19 +0.033 +0.020	27	20	0.3	25	17 700	25 300	21 000	34	IR151920	NKI 15/20
20	RNA 4902	—	—	—	—	20	28	13	0.3	26	10 900	13 800	20 000	21.5	IR152013	NA4902
	—	—	—	—	NK20/16	20	28	16	0.3	26	13 900	18 700	20 000	27.5	—	—
	—	RNA 5902	—	—	—	20 +0.033 +0.020	28	18	0.3	26	15 700	22 100	20 000	33	IR152018	NA5902
	—	—	—	—	NK20/20	20	28	20	0.3	26	17 600	25 400	20 000	35.5	—	—
	—	—	RNA 6902	—	—	20	28	23	0.3	26	19 300	28 700	20 000	37	IR152023	NA6902

* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



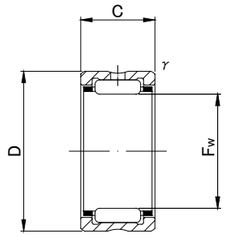
RNA49,RNA59,RNA69(Fw ≦ 35),NK

RNA49,RNA59,RNA69,RNA48,NK TYPE

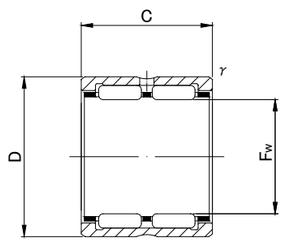
Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
21	—	—	—	—	NK21/16	21 +0.033 +0.020	29	16	0.3	27	14 400	20 000	19 000	29	IR172116	NKI 17/16
	—	—	—	—	NK21/20		29	20	0.3	27	18 200	27 100	19 000	36	IR172120	NKI 17/20
22	RNA 4903	—	—	—	—	22 +0.033 +0.020	30	13	0.3	28	11 800	15 600	18 000	23.5	IR172213	NA4903
	—	—	—	—	NK22/16		30	16	0.3	28	14 900	21 200	18 000	30	—	—
	—	RNA 5903	—	—	—		30	18	0.3	28	16 900	24 900	18 000	35	IR172218	NA5903
	—	—	—	—	NK22/20		30	20	0.3	28	18 900	28 700	18 000	37.5	—	—
	—	—	RNA 6903	—	—		30	23	0.3	28	20 800	32 500	18 000	40.5	IR172223	NA6903
24	—	—	—	—	NK24/16	24 +0.033 +0.020	32	16	0.3	30	15 300	22 600	17 000	32	IR202416	NKI 20/16
	—	—	—	—	NK24/20		32	20	0.3	30	19 400	30 500	17 000	40.5	IR202420	NKI 20/20
25	—	—	—	—	NK25/16	25 +0.033 +0.020	33	16	0.3	31	15 800	23 700	16 000	33.5	—	—
	—	—	—	—	NK25/20		33	20	0.3	31	20 000	32 200	16 000	42	—	—
	RNA 4904	—	—	—	—		37	17	0.3	35	21 000	25 000	16 000	55.5	IR202517	NA4904
	—	RNA 5904	—	—	—		37	23	0.3	35	29 400	38 600	16 000	84	IR202523	NA5904
	—	—	RNA 6904	—	—		37	30	0.3	35	35 400	48 800	16 000	95.5	IR202530	NA6904
26	—	—	—	—	NK26/16	26 +0.033 +0.020	34	16	0.3	32	16 300	24 900	15 000	34.5	IR222616	NKI 22/16
	—	—	—	—	NK26/20		34	20	0.3	32	20 600	33 700	15 000	43.5	IR222620	NKI 22/20
28	—	—	—	—	NK28/20	28 +0.033 +0.020	37	20	0.3	35	21 700	37 100	14 000	51.5	—	—
	—	—	—	—	NK28/30		37	30	0.3	35	31 100	58 900	14 000	83.5	—	—
	RNA 49/22	—	—	—	—		39	17	0.3	37	21 400	28 800	14 000	56.5	IR222817	NA49/22
	—	RNA 59/22	—	—	—		39	23	0.3	37	29 800	44 400	14 000	92	IR222823	NA59/22
	—	—	RNA 69/22	—	—		39	30	0.3	37	36 300	56 900	14 000	97.5	IR222830	NA69/22
29	—	—	—	—	NK29/20	29 +0.033 +0.020	38	20	0.3	36	21 600	37 200	14 000	57	IR252920	NKI 25/20
	—	—	—	—	NK29/30		38	30	0.3	36	30 900	59 000	14 000	85	IR252930	NKI 25/30

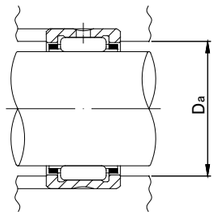
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNA49,RNA59,RNA69(Fw ≦ 35),NK





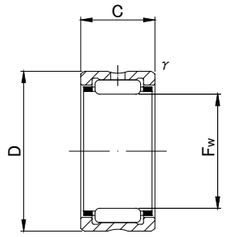
RNA69

RNA49,RNA59,RNA69,RNA48,NK TYPE

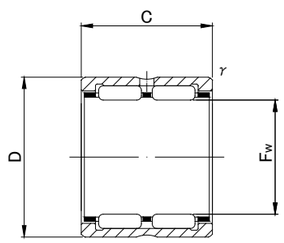
Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
30	—	—	—	—	**NK30/20**	30	40	20	0.3	38	25 100	40 100	13 000	64.5	—	—
	—	—	—	—	**NK30/30**	30	40	30	0.3	38	36 000	63 800	13 000	97.5	—	—
	RNA 4905	—	—	—	—	30 +0.033 +0.020	42	17	0.3	40	23 700	30 700	13 000	64	IR253017	NA4905
	—	**RNA 5905**	—	—	—	30	42	23	0.3	40	33 200	47 500	13 000	101	IR253023	NA5905
	—	—	**RNA 6905**	—	—	30	42	30	0.3	40	42 100	64 200	13 000	111	IR253030	NA6905
32	—	—	—	—	**NK32/20**	32	42	20	0.3	40	25 700	42 200	13 000	68	IR283220	NKI 28/20
	—	—	—	—	**NK32/30**	32	42	30	0.3	40	36 900	67 100	13 000	102	IR283230	NKI 28/30
	RNA 49/28	—	—	—	—	32 +0.041 +0.025	45	17	0.3	43	24 500	32 700	13 000	76.5	IR283217	NA49/28
	—	**RNA 59/28**	—	—	—	32	45	23	0.3	43	34 300	50 500	13 000	108	IR283223	NA59/28
	—	—	**RNA 69/28**	—	—	32	45	30	0.3	43	41 800	64 700	13 000	133	IR283230	NA69/28
35	—	—	—	—	**NK35/20**	35	45	20	0.3	43	27 000	46 200	11 000	73.5	IR303520	NKI 30/20
	—	—	—	—	**NK35/30**	35	45	30	0.3	43	38 600	73 500	11 000	112	IR303530	NKI 30/30
	RNA 4906	—	—	—	—	35 +0.041 +0.025	47	17	0.3	45	25 200	34 700	11 000	72.5	IR303517	NA4906
	—	**RNA 5906**	—	—	—	35	47	23	0.3	45	35 200	53 700	11 000	108	IR303523	NA5906
	—	—	**RNA 6906**	—	—	35	47	30	0.3	45	43 100	69 000	11 000	125	IR303530	NA6906
37	—	—	—	—	**NK37/20**	37 +0.041 +0.025	47	20	0.3	45	28 200	50 100	11 000	77.5	IR323720	NKI 32/20
	—	—	—	—	**NK37/30**	37	47	30	0.3	45	40 500	79 800	11 000	117	IR323730	NKI 32/30
38	—	—	—	—	**NK38/20**	38 +0.041 +0.025	48	20	0.3	46	28 100	50 200	11 000	79	—	—
	—	—	—	—	**NK38/30**	38	48	30	0.3	46	40 300	80 000	11 000	119	—	—
40	—	—	—	—	**NK40/20**	40	50	20	0.3	48	29 400	54 100	10 000	83	IR354020	NKI 35/20
	—	—	—	—	**NK40/30**	40	50	30	0.3	48	42 300	86 100	10 000	125	IR354030	NKI 35/30
	RNA 49/32	—	—	—	—	40 +0.041 +0.025	52	20	0.6	48	31 300	47 900	10 000	96	IR324020	NA49/32
	—	**RNA 59/32**	—	—	—	40	52	27	0.6	48	41 900	69 900	10 000	149	IR324027	NA59/32
	—	—	**RNA 69/32**	—	—	40	52	36	0.6	48	53 500	95 700	10 000	172	IR324036	NA69/32
42	—	—	—	—	**NK42/20**	42	52	20	0.3	50	29 900	56 200	9 500	86.5	—	—
	—	—	—	—	**NK42/30**	42	52	30	0.3	50	43 000	89 500	9 500	130	—	—
	RNA 4907	—	—	—	—	42 +0.041 +0.025	55	20	0.6	51	32 000	50 200	9 500	113	IR354220	NA4907
	—	**RNA 5907**	—	—	—	42	55	27	0.6	51	42 900	73 200	9 500	176	IR354227	NA5907
	—	—	**RNA 6907**	—	—	42	55	36	0.6	51	54 800	100 000	9 500	200	IR354236	NA6907

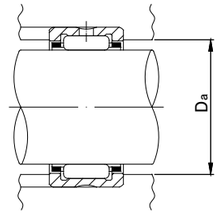
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNA49,RNA59,RNA48,NK





RNA69

RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
43	—	—	—	—	**NK43/20**	43 +0.041	53	20	0.3	51	30 500	58 100	9 500	88.5	IR384320	NKI 38/20
	—	—	—	—	**NK43/30**	43 +0.025	53	30	0.3	51	43 700	92 500	9 500	133	IR384330	NKI 38/30
45	—	—	—	—	**NK45/20**	45 +0.041	55	20	0.3	53	31 100	60 100	9 000	92	IR404520	NKI 40/20
	—	—	—	—	**NK45/30**	45 +0.025	55	30	0.3	53	44 500	95 700	9 000	138	IR404530	NKI 40/30
47	—	—	—	—	**NK47/20**	47 +0.041	57	20	0.3	55	31 500	62 300	8 500	95	IR424720	NKI 42/20
	—	—	—	—	**NK47/30**	47 +0.025	57	30	0.3	55	45 200	99 000	8 500	144	IR424730	NKI 42/30
48	**RNA 4908**	—	—	—	—	48	62	22	0.6	58	41 600	67 400	8 500	152	IR404822	NA4908
	—	**RNA 5908**	—	—	—	48 +0.041 +0.025	62	30	0.6	58	58 000	103 000	8 500	225	IR404830	NA5908
	—	—	**RNA 6908**	—	—	48	62	40	0.6	58	71 300	134 400	8 500	275	IR404840	NA6908
50	—	—	—	—	**NK50/25**	50 +0.041	62	25	0.6	58	43 000	85 200	8 000	159	IR455025	NKI 45/25
	—	—	—	—	**NK50/35**	50 +0.025	62	35	0.6	58	58 100	125 500	8 000	225	IR455035	NKI 45/35
52	**RNA 4909**	—	—	—	—	52	68	22	0.6	64	43 500	73 400	7 500	197	IR455222	NA4909
	—	**RNA 5909**	—	—	—	52 +0.049 +0.030	68	30	0.6	64	60 700	112 000	7 500	232	IR455230	NA5909
	—	—	**RNA 6909**	—	—	52	68	40	0.6	64	74 600	147 100	7 500	355	IR455240	NA6909
55	—	—	—	—	**NK55/25**	55 +0.049	68	25	0.6	64	45 400	94 100	7 500	193	IR505525	NKI 50/25
	—	—	—	—	**NK55/35**	55 +0.030	68	35	0.6	64	61 300	138 300	7 500	255	IR505535	NKI 50/35

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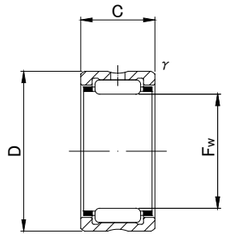
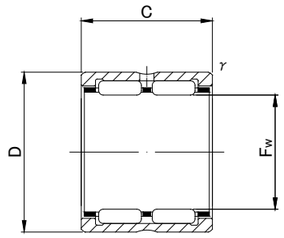
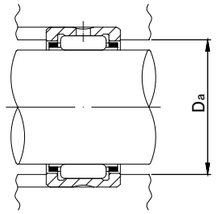
MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNA49,RNA59,RNA48,NK





RNA69

RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
58	**RNA 4910**	—	—	—	—	58 +0.049 +0.030	72	22	0.6	68	46 200	82 100	7 000	179	IR505822	NA4910
	—	**RNA 5910**	—	—	—	58	72	30	0.6	68	64 400	126 000	7 000	289	IR505830	NA5910
	—	—	**RNA 6910**	—	—	58	72	40	0.6	68	79 100	163 800	7 000	320	IR505840	NA6910
60	—	—	—	—	**NK60/25**	60 +0.049 +0.030	72	25	0.6	68	47 500	103 000	6 500	187	IR556025	NKI 55/25
	—	—	—	—	**NK60/35**	60	72	35	0.6	68	64 100	151 000	6 500	260	IR556035	NKI 55/35
63	**RNA 4911**	—	—	—	—	63 +0.049 +0.030	80	25	1	75	57 600	97 300	6 500	265	IR556325	NA4911
	—	**RNA 5911**	—	—	—	63	80	34	1	75	82 600	154 000	6 500	367	IR556334	NA5911
	—	—	**RNA 6911**	—	—	63	80	45	1	75	99 000	194 200	6 500	475	IR556345	NA6911
65	—	—	—	—	**NK65/25**	65 +0.049 +0.030	78	25	0.6	74	49 600	111 800	6 000	225	—	—
	—	—	—	—	**NK65/35**	65	78	35	0.6	74	67 000	164 800	6 000	315	—	—
68	—	—	—	—	**NK68/25**	68	82	25	0.6	78	54 800	116 700	6 000	250	IR606825	NKI 60/25
	—	—	—	—	**NK68/35**	68	82	35	0.6	78	72 100	165 700	6 000	350	IR606835	NKI 60/35
	RNA 4912	—	—	—	—	68 +0.049 +0.030	85	25	1	80	60 100	104 900	6 000	285	IR606825	NA4912
	—	**RNA 5912**	—	—	—	68	85	34	1	80	86 100	167 000	6 000	408	IR606834	NA5912
	—	—	**RNA 6912**	—	—	68	85	45	1	80	103 000	210 800	6 000	510	IR606845	NA6912
70	—	—	—	—	**NK70/25**	70 +0.049 +0.030	85	25	0.6	81	55 500	120 600	5 500	280	—	—
	—	—	—	—	**NK70/35**	70	85	35	0.6	81	73 000	170 600	5 500	395	—	—
72	**RNA 4913**	—	—	—	—	72 +0.049 +0.030	90	25	1	85	62 800	113 800	5 500	325	IR657225	NA4913
	—	**RNA 5913**	—	—	—	72	90	34	1	85	89 900	180 000	5 500	462	IR657234	NA5913
	—	—	**RNA 6913**	—	—	72	90	45	1	85	107 900	226 500	5 500	585	IR657245	NA6913

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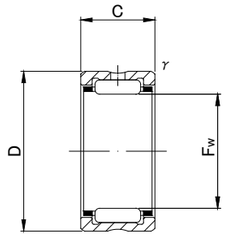
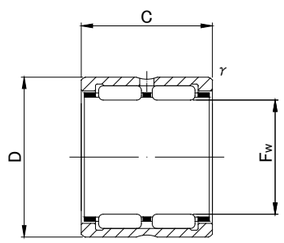
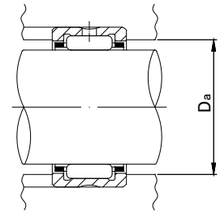
MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNA49,RNA59,RNA48,NK





RNA69

RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
73	—	—	—	—	**NK73/25**	73 +0.049 +0.030	90	25	0.6	86	61 100	126 500	5 500	335	—	—
	—	—	—	—	**NK73/35**	73	90	35	0.6	86	80 400	180 400	5 500	475	IR657335	NKI 65/35
75	—	—	—	—	**NK75/25**	75 +0.049 +0.030	92	25	0.6	88	62 200	130 400	5 500	345	—	—
	—	—	—	—	**NK75/35**	75	92	35	0.6	88	82 700	186 300	5 500	485	—	—
80	—	—	—	—	**NK80/25**	80 +0.049 +0.030	95	25	1	90	59 400	137 300	5 000	315	IR708025	NKI 70/25
	—	—	—	—	**NK80/35**	80	95	35	1	90	78 100	194 200	5 000	445	IR708035	NKI 70/35
	RNA 4914	—	—	—	—	80	100	30	1	95	83 200	157 900	5 000	495	IR708030	NA4914
	—	RNA 5914	—	—	—	80	100	40	1	95	112 000	232 000	5 000	706	IR708040	NA5914
	—	—	RNA 6914	—	—	80	100	54	1	95	133 400	310 900	5 000	910	IR708054	NA6914
85	—	—	—	—	**NK85/25**	85 +0.058 +0.036	105	25	1	100	76 400	145 100	4 500	435	IR758525	NKI 75/25
	RNA 4915	—	—	—	—	85	105	30	1	100	86 200	169 700	4 500	525	IR758530	NA4915
	—	—	—	—	**NK85/35**	85	105	35	1	100	102 000	209 900	4 500	610	IR758535	NKI 75/35
	—	RNA 5915	—	—	—	85	105	40	1	100	116 000	249 000	4 500	745	IR758540	NA5915
	—	—	RNA 6915	—	—	85	105	54	1	100	138 300	330 500	4 500	960	IR758554	NA6915
90	—	—	—	—	**NK90/25**	90 +0.058 +0.036	110	25	1	105	77 400	150 000	4 500	456	IR809025	NKI 80/25
	RNA 4916	—	—	—	—	90	110	30	1	105	87 400	174 600	4 500	550	IR809030	NA4916
	—	—	—	—	**NK90/35**	90	110	35	1	105	103 000	216 700	4 500	640	IR809035	NKI 80/35
	—	RNA 5916	—	—	—	90	110	40	1	105	117 000	257 000	4 500	787	IR809040	NA5916
	—	—	RNA 6916	—	—	90	110	54	1	105	143 200	350 100	4 500	1 010	IR809054	NA6916
95	—	—	—	—	**NK95/26**	95 +0.058 +0.036	115	26	1	110	79 700	158 900	4 200	495	IR859526	NKI 85/26
	—	—	—	—	**NK95/36**	95	115	36	1	110	106 900	230 500	4 200	690	IR859536	NKI 85/36
100	—	—	—	—	**NK100/26**	100 +0.058 +0.036	120	26	1	115	82 500	168 700	4 000	525	IR9010026	NKI 90/26
	RNA 4917	—	—	—	—	100	120	35	1.1	113.5	109 800	244 200	4 000	705	IR8510035	NA4917
	—	—	—	—	**NK100/36**	100	120	36	1	115	109 800	244 200	4 000	725	IR9010036	NKI 90/36
	—	RNA 5917	—	—	—	100	120	46	1.1	113.5	144 000	346 000	4 000	1 000	IR8510046	NA5917
	—	—	RNA 6917	—	—	100	120	63	1.1	113.5	172 600	466 800	4 000	1 300	IR8510063	NA6917

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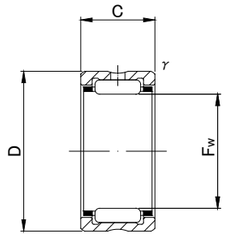
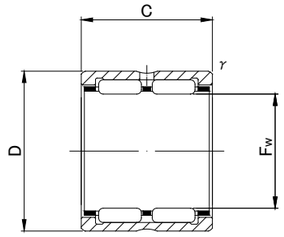
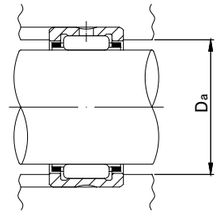
MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNA49,RNA59,RNA48,NK





RNA69

RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
105	—	—	—	—	NK105/26	105	125	26	1	120	84 700	177 500	3 800	545	IR9510526	NKI 95/26
	RNA 4918	—	—	—	—	105 +0.058 +0.036	125	35	1.1	118.5	112 800	257 900	3 800	740	IR9010535	NA4918
	—	—	—	—	NK105/36	105	125	36	1	120	112 800	257 900	3 800	760	IR9510536	NKI 95/36
	—	RNA 5918	—	—	—	105	125	46	1.1	118.5	148 000	365 000	3 800	1 040	IR9010546	NA5918
	—	—	RNA 6918	—	—	105	125	63	1.1	118.5	177 500	490 300	3 800	1 360	IR9010563	NA6918
110	—	—	—	—	NK110/30	110	130	30	1.1	123.5	105 900	239 300	3 600	660	IR10011030	NKI 100/30
	RNA 4919	—	—	—	—	110 +0.058 +0.036	130	35	1.1	123.5	116 700	270 700	3 600	770	IR9511035	NA4919
	—	—	—	—	NK110/40	110	130	40	1.1	123.5	133 400	323 600	3 600	880	IR10011040	NKI 100/40
	—	RNA 5919	—	—	—	110	130	46	1.1	123.5	152 000	384 000	3 600	1 130	IR9511046	NA5919
	—	—	RNA 6919	—	—	110	130	63	1.1	1 123.5	182 400	514 800	3 600	1 420	IR9511063	NA6919
115	RNA 4920	—	—	—	—	115 +0.058 +0.036	140	40	1.1	133.5	145 000	329 000	3 500	1 190	IR10011540	NA4920
120	—	—	—	RNA 4822	—	120 +0.058 +0.036	140	30	1	135	93 000	239 000	3 500	790	IR11012030	NA4822
125	RNA 4922	—	—	—	—	125 +0.068 +0.043	150	40	1.1	143.5	152 000	357 000	3 000	1 280	IR11012540	NA4922
130	—	—	—	RNA 4824	—	130 +0.068 +0.043	150	30	1	145	97 000	259 000	3 000	850	IR12013030	NA4824
135	RNA 4924	—	—	—	—	135 +0.068 +0.043	165	45	1.1	158.5	187 000	435 000	3 000	1 930	IR12013545	NA4924

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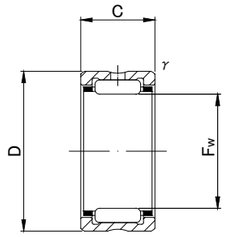
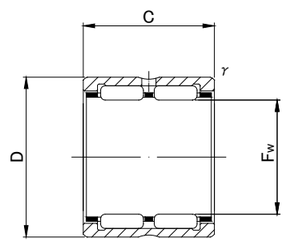
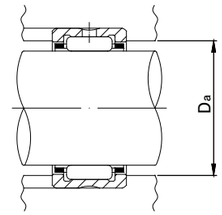
MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNA49,RNA59,RNA48,NK





RNA69

RNA49,RNA59,RNA69,RNA48,NK TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA 49	RNA 59	RNA 69	RNA 48	NK	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
145	—	—	—	**RNA 4826**	—	145 +0.068 +0.043	165	35	1.1	158.5	117 000	340 000	3 000	1 100	IR13014535	NA4826
150	**RNA 4926**	—	—	—	—	150 +0.068 +0.043	180	50	1.5	172	216 000	540 000	2 500	2 360	IR13015050	NA4926
155	—	—	—	**RNA 4828**	—	155 +0.068 +0.043	175	35	1.1	168.5	121 000	363 000	2 500	1 170	IR14015535	NA4828
160	**RNA 4928**	—	—	—	—	160 +0.068 +0.043	190	50	1.5	182	224 000	580 000	2 500	2 500	IR14016050	NA4928
165	—	—	—	**RNA 4830**	—	165 +0.068 +0.043	190	40	1.1	183.5	168 000	446 000	2 500	1 750	IR15016540	NA4830
175	—	—	—	**RNA 4832**	—	175 +0.068 +0.043	200	40	1.1	193.5	173 000	474 000	2 500	1 850	IR16017540	NA4832

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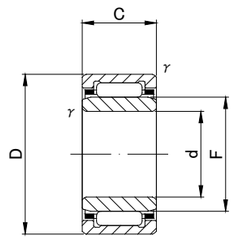
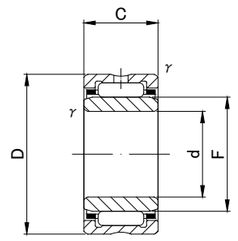
RNA, NK

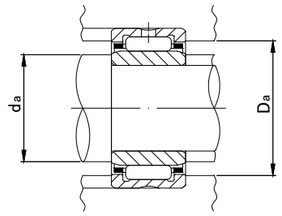
MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING



NKI(d ≦ 8)



NA49,NA59,NA69(d ≦ 30),NKI

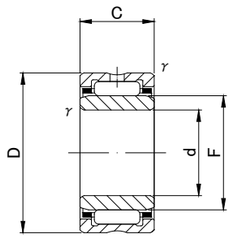


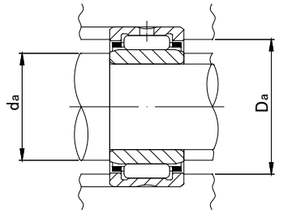
NA49,NA59,NA69,NA48,NKI TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)					Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NA 49	NA 59	NA 69	NA48	NKI	d	D	C	r's min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
5	NA495	—	—	—	—	5 0 -0.008	13	10	0.15	7	6.2	6.7	11.8	2 960	2 690	34 000	7.3	RNA495	IR5710
	—	—	—	—	NKI 5/12	5 0 -0.008	15	12	0.3	8	7	7.7	13	5 100	4 700	32 000	11.9	NK8/12	IR5812
	—	—	—	—	NKI 5/16	5 0 -0.008	15	16	0.3	8	7	7.7	13	7 100	7 300	32 000	16.7	NK8/16	IR5816
6	NA 496	—	—	—	—	6 0 -0.008	15	10	0.15	8	7.2	7.7	13.8	3 900	3 400	32 000	9.1	RNA496	IR6810
	—	—	—	—	NKI 6/12	6 0 -0.008	16	12	0.3	9	8	8.7	14	5 500	5 300	30 000	13	NK9/12	IR6912
	—	—	—	—	NKI 6/16	6 0 -0.008	16	16	0.3	9	8	8.7	14	7 600	8 200	30 000	17.5	NK9/16	IR6916
7	NA 497	—	—	—	—	7 0 -0.008	17	10	0.15	9	8.2	8.7	15.8	4 500	3 600	30 000	11.2	RNA497	IR7910
	—	—	—	—	NKI 7/12	7 0 -0.008	17	12	0.3	10	9	9.7	15	5 900	6 000	28 000	14.3	NK10/12	IR71012
	—	—	—	—	NKI 7/16	7 0 -0.008	17	16	0.3	10	9	9.7	15	8 200	9 200	28 000	19.2	NK10/16	IR71016
8	NA 498	—	—	—	—	8 0 -0.008	19	11	0.2	10	9.2	9.7	17.4	6 200	5 000	28 000	15	RNA498	IR81011
9	—	—	—	—	NKI 9/12	9 0 -0.008	19	12	0.3	12	11	11.5	17	6 600	7 300	26 000	16.7	NK12/12	IR91212
	—	—	—	—	NKI 9/16	9 0 -0.008	19	16	0.3	12	11	11.5	17	9 200	11 200	26 000	22.5	NK12/16	IR91216
	NA 499	—	—	—	—	9 0 -0.008	20	11	0.3	12	11	11.5	18	6 600	6 300	26 000	16.7	RNA499	IR91211
10	NA 4900	—	—	—	—	10 0 -0.008	22	13	0.3	14	12	13	20	9 200	10 100	24 000	24	RNA4900	IR101413
	—	—	—	—	NKI 10/16	10 0 -0.008	22	16	0.3	14	12	13	20	11 800	13 700	24 000	30	NK14/16	IR101416
	—	—	—	—	NKI 10/20	10 0 -0.008	22	20	0.3	14	12	13	20	14 800	18 500	24 000	38	NK14/20	IR101420
12	NA 4901	—	—	—	—	12 0 -0.008	24	13	0.3	16	14	15	22	9 700	11 100	23 000	26.5	RNA4901	IR121613
	—	—	—	—	NKI 12/16	12 0 -0.008	24	16	0.3	16	14	15	22	12 300	15 100	23 000	33.5	NK16/16	IR121616
	—	—	—	—	NKI 12/20	12 0 -0.008	24	20	0.3	16	14	15	22	15 600	20 400	23 000	42.5	NK16/20	IR121620
	—	—	NA 6901	—	—	12 0 -0.008	24	22	0.3	16	14	15	22	17 100	23 000	23 000	44.5	RNA6901	IR121622

* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING





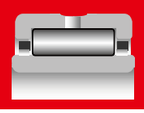
NA49,NA59,NA69(d ≦ 30),NKI

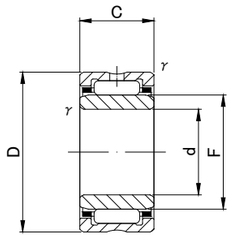
NA49,NA59,NA69,NA48,NKI TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)					Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NA 49	NA 59	NA 69	NA48	NKI	d	D	C	r's min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
15	—	—	—	—	NKI 15/16	15	27	16	0.3	19	17	18	25	14 000	18 700	21 000	39.5	NK19/16	IR151916
	—	—	—	—	NKI 15/20	15	27	20	0.3	19	17	18	25	17 700	25 300	21 000	50	NK19/20	IR151920
	NA 4902	—	—	—	—	15 0 -0.008	28	13	0.3	20	17	19	26	10 900	13 800	20 000	35	RNA4902	IR152013
	—	NA 5902	—	—	—	15	28	18	0.3	20	17	19	26	15 700	22 100	20 000	52	RNA5902	IR152018
	—	—	NA 6902	—	—	15	28	23	0.3	20	17	19	26	19 300	28 700	20 000	61	RNA6902	IR152023
17	—	—	—	—	NKI 17/16	17	29	16	0.3	21	19	20	27	14 400	20 000	19 000	43.5	NK21/16	IR172116
	—	—	—	—	NKI 17/20	17	29	20	0.3	21	19	20	27	18 200	27 100	19 000	54	NK21/20	IR172120
	NA 4903	—	—	—	—	17 0 -0.008	30	13	0.3	22	19	21	28	11 800	15 600	18 000	39	RNA4903	IR172213
	—	NA 5903	—	—	—	17	30	18	0.3	22	19	21	28	16 900	24 900	18 000	56	RNA5903	IR172218
	—	—	NA 6903	—	—	17	30	23	0.3	22	19	21	28	20 800	32 500	18 000	67	RNA6903	IR172223
20	—	—	—	—	NKI 20/16	20	32	16	0.3	24	22	23	30	15 300	22 600	17 000	48.5	NK24/16	IR202416
	—	—	—	—	NKI 20/20	20	32	20	0.3	24	22	23	30	19 400	30 500	17 000	61	NK24/20	IR202420
	NA 4904	—	—	—	—	20 0 -0.010	37	17	0.3	25	22	24	35	21 000	25 000	16 000	78.5	RNA4904	IR202517
	—	NA 5904	—	—	—	20	37	23	0.3	25	22	24	35	29 400	38 600	16 000	115	RNA5904	IR202523
	—	—	NA 6904	—	—	20	37	30	0.3	25	22	24	35	35 400	48 800	16 000	136	RNA6904	IR202530
22	—	—	—	—	NKI 22/16	22	34	16	0.3	26	24	25	32	16 300	24 900	15 000	52	NK26/16	IR222616
	—	—	—	—	NKI 22/20	22	34	20	0.3	26	24	25	32	20 600	33 700	15 000	67.5	NK26/20	IR222620
	NA 49/22	—	—	—	—	22 0 -0.010	39	17	0.3	28	24	27	37	21 400	28 800	14 000	87	RNA49/22	IR222817
	—	NA 59/22	—	—	—	22	39	23	0.3	28	24	27	37	29 800	44 400	14 000	134	RNA59/22	IR222823
	—	—	NA 69/22	—	—	22	39	30	0.3	28	24	27	37	36 300	56 900	14 000	152	RNA69/22	IR222830
25	—	—	—	—	NKI 25/20	25	38	20	0.3	29	27	28	36	21 600	37 200	14 000	82	NK29/20	IR252920
	—	—	—	—	NKI 25/30	25	38	30	0.3	29	27	28	36	30 900	59 000	14 000	123	NK29/30	IR252930
	NA 4905	—	—	—	—	25 0 -0.010	42	17	0.3	30	27	29	40	23 700	30 700	13 000	92.5	RNA4905	IR253017
	—	NA 5905	—	—	—	25	42	23	0.3	30	27	29	40	33 200	47 500	13 000	139	RNA5905	IR253023
	—	—	NA 6905	—	—	25	42	30	0.3	30	27	29	40	42 100	64 200	13 000	160	RNA6905	IR253030
28	—	—	—	—	NKI 28/20	28	42	20	0.3	32	30	31	40	25 700	42 200	13 000	96.5	NK32/20	IR283220
	—	—	—	—	NKI 28/30	28	42	30	0.3	32	30	31	40	36 900	67 100	13 000	145	NK32/30	IR283230
	NA 49/28	—	—	—	—	28 0 -0.010	45	17	0.3	32	30	31	43	24 500	32 700	13 000	101	RNA49/28	IR283217
	—	NA 59/28	—	—	—	28	45	23	0.3	32	30	31	43	34 300	50 500	13 000	142	RNA59/28	IR283223
	—	—	NA 69/28	—	—	28	45	30	0.3	32	30	31	43	41 800	64 700	13 000	176	RNA69/28	IR283230
30	—	—	—	—	NKI 30/20	30	45	20	0.3	35	32	34	43	27 000	46 200	11 000	112	NK35/20	IR303520
	—	—	—	—	NKI 30/30	30	45	30	0.3	35	32	34	43	38 600	73 500	11 000	171	NK35/30	IR303530
	NA 4906	—	—	—	—	30 0 -0.010	47	17	0.3	35	32	34	45	25 200	34 700	11 000	106	RNA4906	IR303517
	—	NA 5906	—	—	—	30	47	23	0.3	35	32	34	45	35 200	53 700	11 000	152	RNA5906	IR303523
	—	—	NA 6906	—	—	30	47	30	0.3	35	32	34	45	43 100	69 000	11 000	184	RNA6906	IR303530

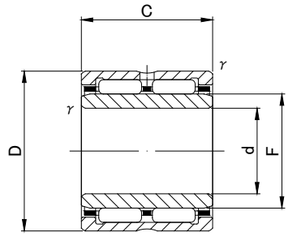
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

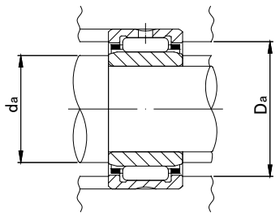
MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING





NA49,NA59,NA69(d ≦ 30),NKI





NA69

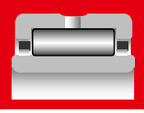
NA49,NA59,NA69,NA48,NKI TYPE

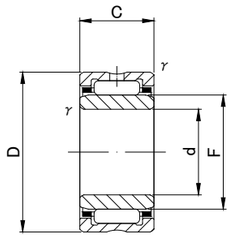
Shaft Diameter (mm)	Designation					Dimensions (mm)					Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NA 49	NA 59	NA 69	NA48	NKI	d	D	C	r's min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
32	—	—	—	—	NKI 32/20	32	47	20	0.3	37	34	36	45	28 200	50 100	11 000	121	NK37/20	IR323720
	—	—	—	—	NKI 32/30	32	47	30	0.3	37	34	36	45	40 500	79 800	11 000	180	NK37/30	IR323730
	NA 49/32	—	—	—	—	32	52	20	0.6	40	36	39	48	31 300	47 900	10 000	165	RNA49/32	IR324020
	—	NA 59/32	—	—	—	32	52	27	0.6	40	36	39	48	41 900	69 900	10 000	241	RNA59/32	IR324027
	—	—	NA 69/32	—	—	32	52	36	0.6	40	36	39	48	53 500	95 700	10 000	295	RNA69/32	IR324036
35	—	—	—	—	NKI 35/20	35	50	20	0.3	40	37	39	48	29 400	54 100	10 000	129	NK40/20	IR354020
	—	—	—	—	NKI 35/30	35	50	30	0.3	40	37	39	48	42 300	86 100	10 000	192	NK40/30	IR354030
	NA 4907	—	—	—	—	35	55	20	0.6	42	39	41	51	32 000	50 200	9 500	178	RNA4907	IR354220
	—	NA 5907	—	—	—	35	55	27	0.6	42	39	41	51	42 900	73 200	9 500	256	RNA5907	IR354227
	—	—	NA 6907	—	—	35	55	36	0.6	42	39	41	51	54 800	100 000	9 500	320	RNA6907	IR354236
38	—	—	—	—	NKI 38/20	38	53	20	0.3	43	40	42	51	30 500	58 100	9 500	136	NK43/20	IR384320
	—	—	—	—	NKI 38/30	38	53	30	0.3	43	40	42	51	43 700	92 500	9 500	205	NK43/30	IR384330
40	—	—	—	—	NKI 40/20	40	55	20	0.3	45	42	44	53	31 100	60 100	9 000	143	NK45/20	IR404520
	—	—	—	—	NKI 40/30	40	55	30	0.3	45	42	44	53	44 500	95 700	9 000	215	NK45/30	IR404530
	NA 4908	—	—	—	—	40	62	22	0.6	48	44	47	58	41 600	67 400	8 500	245	RNA4908	IR404822
	—	NA 5908	—	—	—	40	62	30	0.6	48	44	47	58	58 000	103 000	8 500	348	RNA5908	IR404830
	—	—	NA 6908	—	—	40	62	40	0.6	48	44	47	58	71 300	134 400	8 500	440	RNA6908	IR404840
42	—	—	—	—	NKI 42/20	42	57	20	0.3	47	44	46	55	31 500	62 300	8 500	149	NK47/20	IR424720
	—	—	—	—	NKI 42/30	42	57	30	0.3	47	44	46	55	45 200	99 000	8 500	225	NK47/30	IR424730
45	—	—	—	—	NKI 45/25	45	62	25	0.6	50	49	49.5	58	43 000	85 200	8 000	230	NK50/25	IR455025
	—	—	—	—	NKI 45/35	45	62	35	0.6	50	49	49.5	58	58 100	125 500	8 000	320	NK50/35	IR455035
	NA 4909	—	—	—	—	45	68	22	0.6	52	49	51	64	43 500	73 400	7 500	285	RNA4909	IR455222
	—	NA 5909	—	—	—	45	68	30	0.6	52	49	51	64	60 700	112 000	7 500	396	RNA5909	IR455230
	—	—	NA 6909	—	—	45	68	40	0.6	52	49	51	64	74 600	147 100	7 500	520	RNA6909	IR455240
50	—	—	—	—	NKI 50/25	50	68	25	0.6	55	54	54.5	64	45 400	94 100	7 500	270	NK55/25	IR505525
	—	—	—	—	NKI 50/35	50	68	35	0.6	55	54	54.5	64	61 300	138 300	7 500	365	NK55/35	IR505535
	NA 4910	—	—	—	—	50	72	22	0.6	58	54	57	68	46 200	82 100	7 000	295	RNA4910	IR505822
	—	NA 5910	—	—	—	50	72	30	0.6	58	54	57	68	64 400	126 000	7 000	498	RNA5910	IR505830
	—	—	NA 6910	—	—	50	72	40	0.6	58	54	57	68	79 100	163 800	7 000	530	RNA6910	IR505840

Dimensions (mm) d: 0 -0.012

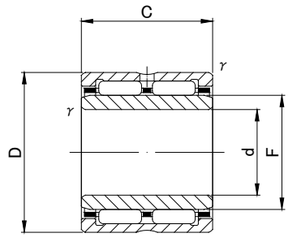
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

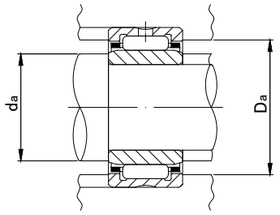
MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING





NA49,NA59,NKI





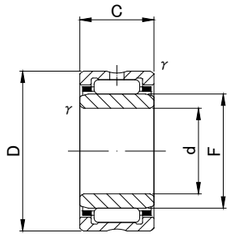
NA69

NA49,NA59,NA69,NA48,NKI TYPE

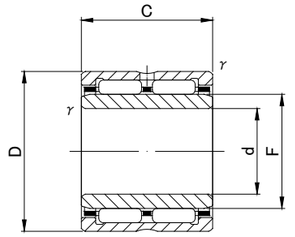
Shaft Diameter (mm)	Designation					Dimensions (mm)					Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NA 49	NA 59	NA 69	NA48	NKI	d	D	C	r's min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
55	—	—	—	—	NKI 55/25	55 0 -0.015	72	25	0.6	60	59	59.5	68	47 500	103 000	6 500	275	NK60/25	IR556025
	—	—	—	—	NKI 55/35	55	72	35	0.6	60	59	59.5	68	64 100	151 000	6 500	380	NK60/35	IR556035
	NA 4911	—	—	—	—	55	80	25	1	63	60	61	75	57 600	97 300	6 500	410	RNA4911	IR556325
	—	NA 5911	—	—	—	55	80	34	1	63	60	61	75	82 600	154 000	6 500	559	RNA5911	IR556334
	—	—	NA 6911	—	—	55	80	45	1	63	60	61	75	99 000	194 200	6 500	730	RNA6911	IR556345
60	—	—	—	—	NKI 60/25	60 0 -0.015	82	25	0.6	68	64	66	78	54 800	116 700	6 000	395	NK68/25	IR606825
	—	—	—	—	NKI 60/35	60	82	35	0.6	68	64	66	78	72 100	165 700	6 000	560	NK68/35	IR606835
	NA 4912	—	—	—	—	60	85	25	1	68	64	66	80	60 100	104 900	6 000	440	RNA4912	IR606825
	—	NA 5912	—	—	—	60	85	34	1	68	65	66	80	86 100	167 000	6 000	614	RNA5912	IR606834
	—	—	NA 6912	—	—	60	85	45	1	68	65	66	80	103 000	210 800	6 000	785	RNA6912	IR606845
65	NA 4913	—	—	—	—	65 0 -0.015	90	25	1	72	70	70.5	85	62 800	113 800	5 500	470	RNA4913	IR657225
	—	NA 5913	—	—	—	65	90	34	1	72	70	70.5	85	89 900	180 000	5 500	655	RNA5913	IR657234
	—	—	—	—	NKI 65/35	65	90	35	0.6	73	69	71	86	80 400	180 400	5 500	710	NK73/35	IR657335
	—	—	NA 6913	—	—	65	90	45	1	72	70	70.5	85	107 900	226 500	5 500	840	RNA6913	IR657245
70	—	—	—	—	NKI 70/25	70 0 -0.015	95	25	1	80	75	78	90	59 400	137 300	5 000	540	NK80/25	IR708025
	—	—	—	—	NKI 70/35	70	95	35	1	80	75	78	90	78 100	194 200	5 000	755	NK80/35	IR708035
	NA 4914	—	—	—	—	70	100	30	1	80	75	78	95	83 200	157 900	5 000	765	RNA4914	IR708030
	—	NA 5914	—	—	—	70	100	40	1	80	75	78	95	112 000	232 000	5 000	1 060	RNA5914	IR708040
	—	—	NA 6914	—	—	70	100	54	1	80	75	78	95	133 400	310 900	5 000	1 400	RNA6914	IR708054
75	—	—	—	—	NKI 75/25	75 0 -0.015	105	25	1	85	80	83	100	76 400	145 100	4 500	675	NK85/25	IR758525
	NA 4915	—	—	—	—	75	105	30	1	85	80	83	100	86 200	169 700	4 500	810	RNA4915	IR758530
	—	—	—	—	NKI 75/35	75	105	35	1	85	80	83	100	102 000	209 900	4 500	945	NK85/35	IR758535
	—	NA 5915	—	—	—	75	105	40	1	85	80	83	100	116 000	249 000	4 500	1 130	RNA5915	IR758540
	—	—	NA 6915	—	—	75	105	54	1	85	80	83	100	138 300	330 500	4 500	1 480	RNA6915	IR758554
80	—	—	—	—	NKI 80/25	80 0 -0.015	110	25	1	90	85	88	105	77 400	150 000	4 500	710	NK90/25	IR809025
	NA 4916	—	—	—	—	80	110	30	1	90	85	88	105	87 400	174 600	4 500	855	RNA4916	IR809030
	—	—	—	—	NKI 80/35	80	110	35	1	90	85	88	105	103 000	216 700	4 500	995	NK90/35	IR809035
	—	NA 5916	—	—	—	80	110	40	1	90	85	88	105	117 000	257 000	4 500	1 150	RNA5916	IR809040
	—	—	NA 6916	—	—	80	110	54	1	90	85	88	105	143 200	350 100	4 500	1 560	RNA6916	IR809054
85	—	—	—	—	NKI 85/26	85 0 -0.020	115	26	1	95	90	93	110	79 700	158 900	4 200	775	NK95/26	IR859526
	—	—	—	—	NKI 85/36	85	115	36	1	95	90	93	110	106 900	230 500	4 200	1 080	NK95/36	IR859536
	NA 4917	—	—	—	—	85	120	35	1.1	100	91.5	98	133.5	109 800	244 200	4 000	1 280	RNA4917	IR8510035
	—	NA 5917	—	—	—	85	120	46	1.1	100	91.5	98	133.5	144 000	346 000	4 000	1 760	RNA5917	IR8510046
	—	—	NA 6917	—	—	85	120	63	1.1	100	91.5	98	133.5	172 600	466 800	4 000	2 340	RNA6917	IR8510063

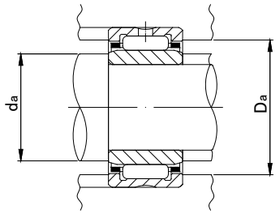
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING



NA49,NA59,NA48,NKI





NA69

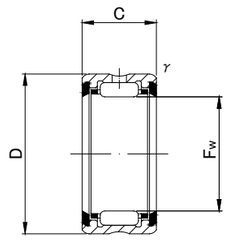
NA49,NA59,NA69,NA48,NKI TYPE

Shaft Diameter (mm)	Designation					Dimensions (mm)					Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NA 49	NA 59	NA 69	NA48	NKI	d	D	C	r's min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
90	—	—	—	—	NKI 90/26	90 0 -0.020	120	26	1	100	95	98	135	82 500	168 700	4 000	820	NK100/26	IR9010026
	—	—	—	—	NKI 90/36	90	120	36	1	100	95	98	135	109 800	244 200	4 000	1 140	NK100/36	IR9010036
	NA 4918	—	—	—	—	90	125	35	1.1	105	96.5	103	118.5	112 800	257 900	3 800	1 350	RNA4918	IR9010535
	—	NA 5918	—	—	—	90	125	46	1.1	105	96.5	103	118.5	148 000	365 000	3 800	1 840	RNA5918	IR9010546
	—	—	NA 6918	—	—	90	125	63	1.1	105	96.5	103	118.5	177 500	490 300	3 800	2 460	RNA6918	IR9010563
95	—	—	—	—	NKI 95/26	95 0 -0.020	125	26	1	105	100	103	120	84 700	177 500	3 800	860	NK105/26	IR9510526
	—	—	—	—	NKI 95/36	95	125	36	1	105	100	103	120	112 800	257 900	3 800	1 190	NK105/36	IR9510536
	NA 4919	—	—	—	—	95	130	35	1.1	110	101.5	108	123.5	116 700	270 700	3 600	1 420	RNA4919	IR9511035
	—	NA 5919	—	—	—	95	130	46	1.1	110	101.5	108	123.5	152 000	384 000	3 600	1 980	RNA5919	IR9511046
	—	—	NA 6919	—	—	95	130	63	1.1	110	101.5	108	123.5	182 400	514 800	3 600	2 580	RNA6919	IR9511063
100	—	—	—	—	NKI 100/30	100 0 -0.020	130	30	1.1	110	106.5	108	123.5	105 900	239 300	3 600	1 040	NK110/30	IR10011030
	—	—	—	—	NKI 100/40	100	130	40	1.1	110	106.5	108	123.5	133 400	323 600	3 600	1 380	NK110/40	IR10011040
	NA 4920	—	—	—	—	100	140	40	1.1	115	106.5	113	133.5	145 000	329 000	3 500	1 960	RNA4920	IR10011540
110	—	—	—	NA 4822	—	110 0 -0.020	140	30	1	120	115	118	135	93 000	239 000	3 500	1 200	RNA4822	IR11012030
	NA 4922	—	—	—	—	110	150	40	1.1	125	116.5	123	143.5	152 000	357 000	3 000	2 120	RNA4922	IR11012540
120	—	—	—	NA 4824	—	120 0 -0.020	150	30	1	130	125	128	145	97 000	259 000	3 000	1 300	RNA4824	IR12013030
	NA 4924	—	—	—	—	120	165	45	1.1	135	126.5	133	158.5	187 000	435 000	3 000	2 960	RNA4924	IR12013545
130	—	—	—	NA 4826	—	130 0 -0.025	165	35	1.1	145	136.5	143	158.5	117 000	340 000	3 000	1 960	RNA4826	IR13014535
	NA 4926	—	—	—	—	130	180	50	1.5	150	138	148	172	216 000	540 000	2 500	4 030	RNA4926	IR13015050
140	—	—	—	NA 4828	—	140 0 -0.025	175	35	1.1	155	146.5	153	168.5	121 000	363 000	2 500	2 100	RNA4828	IR14015535
	NA 4928	—	—	—	—	140	190	50	1.5	160	148	158	182	224 000	580 000	2 500	4 290	RNA4928	IR14016050
150	—	—	—	NA 4830	—	150 0 -0.025	190	40	1.1	165	156.5	163	183.5	168 000	446 000	2 500	2 880	RNA4830	IR15016540
160	—	—	—	NA 4832	—	160 0 -0.025	200	40	1.1	175	166.5	173	193.5	173 000	474 000	2 500	3 050	RNA4832	IR16017540

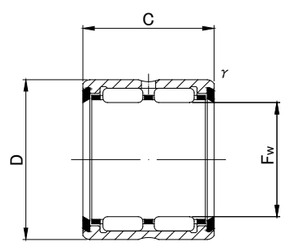
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

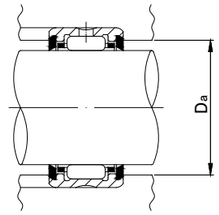
MACHINED RING NEEDLE ROLLER BEARINGS

SEALED, WITHOUT INNER RING



RNA49UU,RNA69UU（Fw ≦ 35）





RNA69UU

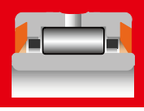
RNA49UU,RNA69UU,SEALED TYPE

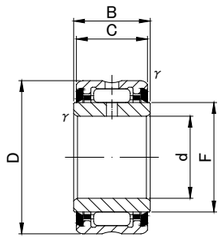
Prepacked Grease

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed (GREASE)	Mass	Usable bearing designation	
	RNA 49UU	RNA 69UU	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
14	RNA 4900UU	—	14 +0.027 +0.016	22	13	0.3	20	8 000	8 500	14 000	16	IRZ101414	NA4900UU
16	RNA 4901UU	—	16 +0.027	24	13	0.3	22	8 400	9 300	12 000	18	IRZ121614	NA4901UU
	—	RNA 6901UU	16 +0.016	24	22	0.3	22	15 600	20 400	12 000	30	IRZ121623	NA6901UU
20	RNA 4902UU	—	20 +0.033	28	13	0.3	26	9 600	11 700	9 500	22	IRZ152014	NA4902UU
	—	RNA 6902UU	20 +0.020	28	23	0.3	26	18 400	27 100	9 500	38	IRZ152024	NA6902UU
22	RNA 4903UU	—	22 +0.033	30	13	0.3	28	10 300	13 100	8 500	23	IRZ172214	NA4903UU
	—	RNA 6903UU	22 +0.020	30	23	0.3	28	19 800	30 600	8 500	40	IRZ172224	NA6903UU
25	RNA 4904UU	—	25 +0.033	37	17	0.3	35	17 900	20 500	7 500	55	IRZ202518	NA4904UU
	—	RNA 6904UU	25 +0.020	37	30	0.3	35	33 000	44 500	7 500	96	IRZ202531	NA6904UU
30	RNA 4905UU	—	30 +0.033	42	17	0.3	40	20 300	25 100	6 500	63	IRZ253018	NA4905UU
	—	RNA 6905UU	30 +0.020	42	30	0.3	40	39 200	58 600	6 500	110	IRZ253031	NA6905UU
35	RNA 4906UU	—	35 +0.041	47	17	0.3	45	21 600	28 400	5 500	71	IRZ303518	NA4906UU
	—	RNA 6906UU	35 +0.025	47	30	0.3	45	40 100	63 100	5 500	130	IRZ303531	NA6906UU
42	RNA 4907UU	—	42 +0.041	55	20	0.6	51	30 100	46 300	4 500	110	IRZ354221	NA4907UU
	—	RNA 6907UU	42 +0.025	55	36	0.6	51	51 600	92 600	4 500	200	IRZ354237	NA6907UU
48	RNA 4908UU	—	48 +0.041	62	22	0.6	58	37 200	58 300	4 000	150	IRZ404823	NA4908UU
	—	RNA 6908UU	48 +0.025	62	40	0.6	58	63 700	116 700	4 000	270	IRZ404841	NA6908UU
52	RNA 4909UU	—	52 +0.049	68	22	0.6	64	38 800	63 400	3 500	190	IRZ455223	NA4909UU
	—	RNA 6909UU	52 +0.030	68	40	0.6	64	66 700	126 500	3 500	355	IRZ455241	NA6909UU
58	RNA 4910UU	—	58 +0.049	72	22	0.6	68	41 300	71 100	3 500	180	IRZ505823	NA4910UU
	—	RNA 6910UU	58 +0.030	72	40	0.6	68	70 800	142 200	3 500	320	IRZ505841	NA6910UU

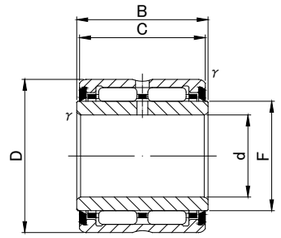
MACHINED RING NEEDLE ROLLER BEARINGS

SEALED, WITH INNER RING

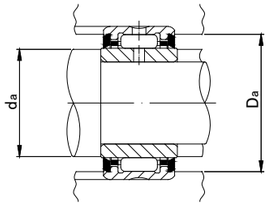




NA49UU,NA69UU(d ≦ 30)



NA69UU

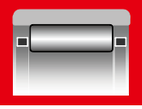


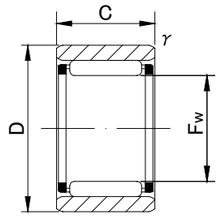
NA49UU,NA69UU,SEALED TYPE

Prepacked Grease

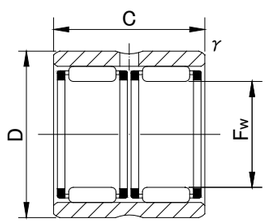
Shaft Diameter (mm)	Designation		Dimensions (mm)						Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed (GREASE)	Mass	Usable bearing designation	
	NA 49UU	NA 69UU	d	D	C	B	*r*s min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
10	**NA 4900UU**	—	10 0 -0.008	22	13	14	0.3	14	12	13	20	8 000	8 500	14 000	25	RNA4900UU	IRZ101414
12	**NA 4901UU**	—	12 0 -0.008	24	13	14	0.3	16	14	15	22	8 400	9 300	12 000	28	RNA4901UU	IRZ121614
	—	**NA 6901UU**	12	24	22	23	0.3	16	14	15	22	15 600	20 400	12 000	46	RNA6901UU	IRZ121623
15	**NA 4902UU**	—	15 0 -0.008	28	13	14	0.3	20	17	19	26	9 600	11 700	9 500	36	RNA4902UU	IRZ152014
	—	**NA 6902UU**	15	28	23	24	0.3	20	17	19	26	18 400	27 100	9 500	63	RNA6902UU	IRZ152024
17	**NA 4903UU**	—	17 0 -0.008	30	13	14	0.3	22	19	21	28	10 300	13 100	8 500	40	RNA4903UU	IRZ172214
	—	**NA 6903UU**	17	30	23	24	0.3	22	19	21	28	19 800	30 600	8 500	69	RNA6903UU	IRZ172224
20	**NA 4904UU**	—	20 0 -0.010	37	17	18	0.3	25	22	24	35	17 900	20 500	7 500	78	RNA4904UU	IRZ202518
	—	**NA 6904UU**	20	37	30	31	0.3	25	22	24	35	33 000	44 500	7 500	140	RNA6904UU	IRZ202531
25	**NA 4905UU**	—	25 0 -0.010	42	17	18	0.3	30	27	29	40	20 300	25 100	6 500	93	RNA4905UU	IRZ253018
	—	**NA 6905UU**	25	42	30	31	0.3	30	27	29	40	39 200	58 600	6 500	162	RNA6905UU	IRZ253031
30	**NA 4906UU**	—	30 0 -0.010	47	17	18	0.3	35	32	34	45	21 600	28 400	5 500	106	RNA4906UU	IRZ303518
	—	**NA 6906UU**	30	47	30	31	0.3	35	32	34	45	40 100	63 100	5 500	185	RNA6906UU	IRZ303531
35	**NA 4907UU**	—	35 0 -0.012	55	20	21	0.6	42	39	41	51	30 100	46 300	4 500	179	RNA4907UU	IRZ354221
	—	**NA 6907UU**	35	55	36	37	0.6	42	39	41	51	51 600	92 600	4 500	320	RNA6907UU	IRZ354237
40	**NA 4908UU**	—	40 0 -0.012	62	22	23	0.6	48	44	47	58	37 200	58 300	4 000	245	RNA4908UU	IRZ404823
	—	**NA 6908UU**	40	62	40	41	0.6	48	44	47	58	63 700	116 700	4 000	440	RNA6908UU	IRZ404841
45	**NA 4909UU**	—	45 0 -0.012	68	22	23	0.6	52	49	51	64	38 800	63 400	3 500	290	RNA4909UU	IRZ455223
	—	**NA 6909UU**	45	68	40	41	0.6	52	49	51	64	66 700	126 500	3 500	510	RNA6909UU	IRZ455241
50	**NA 4910UU**	—	50 0 -0.012	72	22	23	0.6	58	54	57	68	41 300	71 100	3 500	300	RNA4910UU	IRZ505823
	—	**NA 6910UU**	50	72	40	41	0.6	58	54	57	68	70 800	142 200	3 500	530	RNA6910UU	IRZ505841

MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING

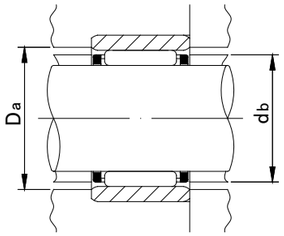


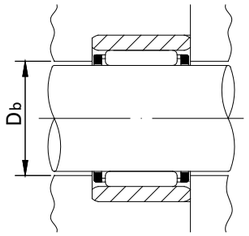


RNAF



RNAFW



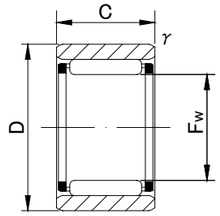


RNAF(W) TYPE

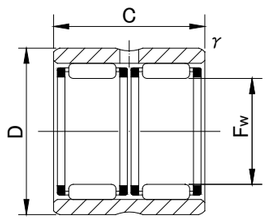
Shaft Diameter (mm)	Designation	Dimensions (mm)				Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	RNAF(W)	Fw	D	C	*r*s min	db	Da MAX	Db	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
5	**RNAF5108**	5 +0.018 +0.010	10	8	0.2	6.7	8.4	5.4	2 500	2 000	40 000	3	—	—
6	**RNAF6138**	6 +0.018 +0.010	13	8	0.3	8.4	11	6.4	2 500	2 100	37 000	5.5	—	—
7	**RNAF7148**	7 +0.022 +0.013	14	8	0.3	9.4	12	7.4	2 900	2 600	34 000	6	—	—
8	**RNAF81510** **RNAFW81620**	8 +0.022 +0.013 8	15 16	10 20	0.3 0.3	10.4 10.8	13 14	8.4 8.4	3 600 6 200	3 600 7 200	32 000 32 000	8 20	— —	— —
10	**RNAF101710** **RNAF102012**	10 +0.022 +0.013 10	17 20	10 12	0.3 0.3	12.4 13.5	15 18	10.4 10.4	4 100 6 000	4 500 6 000	28 000 28 000	10 19	IR61010 IR71012	NAF61710 NAF72012
12	**RNAF122212**	12 +0.027 +0.016	22	12	0.3	17.5	20	12.4	9 000	8 400	26 000	19	IR91212	NAF92212
14	**RNAF142213** **RNAFW142220** **RNAF142612**	14 +0.027 +0.016 14 14	22 22 26	13 20 12	0.3 0.3 0.3	17.6 17.6 19.4	20 20 24	14.6 14.6 14.6	7 800 10 800 9 800	9 400 14 200 9 700	24 000 24 000 24 000	18 28 29	IR101413 IR101420 IR101412	NAF102213 NAFW102220 NAF102612
15	**RNAF152313** **RNAFW152320**	15 +0.027 +0.016 15	23 23	13 20	0.3 0.3	18.6 18.6	21 21	15.6 15.6	8 200 11 400	10 200 15 400	23 000 23 000	20 31	— —	— —
16	**RNAF162413** **RNAFW162420** **RNAF162812**	16 +0.027 +0.016 16 16	24 24 28	13 20 12	0.3 0.3 0.3	19.6 19.6 21.4	22 22 26	16.6 16.6 16.6	8 600 11 900 10 500	11 000 16 700 10 900	23 000 23 000 23 000	21 32 32	IR121613 IR121620 IR121612	NAF122413 NAFW122420 NAF122812
17	**RNAF172513** **RNAFW172520**	17 +0.027 +0.016 17	25 25	13 20	0.3 0.3	20.6 20.6	23 23	17.6 17.6	9 000 12 400	11 900 17 900	22 000 22 000	22 33	— —	— —
18	**RNAF182613** **RNAFW182620** **RNAF183012** **RNAFW183024**	18 +0.027 +0.016 18 18 18	26 26 30 30	13 20 12 24	0.3 0.3 0.3 0.3	21.6 21.6 23.4 23.4	24 24 28 28	18.6 18.6 18.6 18.6	9 300 12 800 11 800 20 200	12 700 19 100 13 000 26 200	21 000 21 000 21 000 21 000	23 35 35 70	— — — —	— — — —

* Suitable for oil lubrication. In case of grease lubrication, down to 50% of this value.

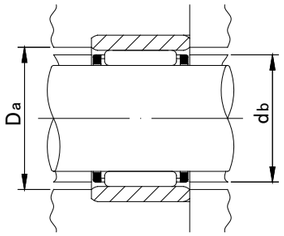
MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING

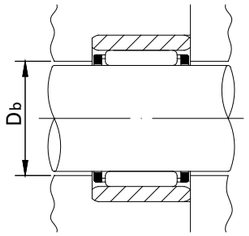


RNAF



RNAFW



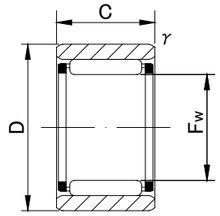


RNAF(W) TYPE

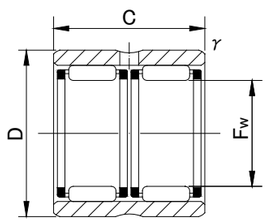
Shaft Diameter (mm)	Designation	Dimensions (mm)				Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	RNAF(W)	Fw	D	C	r s min	db	Da MAX	Db	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
20	RNAF202813	20	28	13	0.3	23.6	26	20.6	9 600	13 500	20 000	25	IR152013	NAF152813
	RNAFW202826	20 +0.033 +0.020	28	26	0.3	23.6	26	20.6	16 500	27 100	20 000	50	IR152026	NAFW152826
	RNAF203212	20	32	12	0.3	25.4	30	20.6	12 400	14 300	20 000	37	IR152012	NAF153212
	RNAFW203224	20	32	24	0.3	25.4	30	20.6	21 200	28 600	20 000	75	—	—
22	RNAF223013	22	30	13	0.3	25.6	28	22.6	10 200	15 200	18 000	27	IR172213	NAF173013
	RNAFW223026	22 +0.033 +0.020	30	26	0.3	25.6	28	22.6	17 600	30 300	18 000	54	IR172226	NAFW173026
	RNAF223516	22	35	16	0.3	27.8	33	22.6	17 600	20 900	18 000	59	IR172216	NAF173516
	RNAFW223532	22	35	32	0.3	27.8	33	22.6	30 200	41 900	18 000	117	IR172232	NAFW173532
25	RNAF253517	25	35	17	0.3	29.5	33	25.6	17 300	26 600	16 000	51	IR202517	NAF203517
	RNAFW253526	25 +0.033 +0.020	35	26	0.3	29.5	33	25.6	22 500	37 200	16 000	78	IR202526	NAFW203526
	RNAF253716	25	37	16	0.3	30.4	35	25.6	19 400	24 500	16 000	57	IR202516	NAF203716
	RNAFW253732	25	37	32	0.3	30.4	35	25.6	33 200	49 000	16 000	114	IR202532	NAFW203732
28	RNAF284016	28 +0.033 +0.020	40	16	0.3	33.4	38	28.6	20 100	26 500	14 000	63	—	—
	RNAFW284032	28	40	32	0.3	33.4	38	28.6	34 400	53 000	14 000	125	—	—
30	RNAF304017	30	40	17	0.3	34.5	38	30.6	18 600	31 100	13 000	59	IR253017	NAF254017
	RNAFW304026	30 +0.033 +0.020	40	26	0.3	34.5	38	30.6	24 200	43 400	13 000	91	IR253026	NAFW254026
	RNAF304216	30	42	16	0.3	35.4	40	30.6	20 800	28 300	13 000	66	IR253016	NAF254216
	RNAFW304232	30	42	32	0.3	35.4	40	30.6	35 700	56 800	13 000	132	IR253032	NAFW254232
35	RNAF354517	35	45	17	0.3	39.5	43	35.6	20 500	36 900	11 000	68	IR303517	NAF304517
	RNAFW354526	35 +0.041 +0.025	45	26	0.3	39.5	43	35.6	26 600	51 600	11 000	103	IR303526	NAFW304526
	RNAF354716	35	47	16	0.3	40.4	45	35.6	23 000	33 800	11 000	76	IR303516	NAF304716
	RNAFW354732	35	47	32	0.3	40.4	45	35.6	39 500	67 800	11 000	151	IR303532	NAFW304732
40	RNAF405017	40	50	17	0.3	43.5	48	40.8	22 200	42 700	10 000	75	IR354017	NAF355017
	RNAFW405034	40 +0.041 +0.025	50	34	0.3	43.5	48	40.8	38 000	85 300	10 000	152	IR354034	NAFW355034
	RNAF405520	40	55	20	0.3	45.2	53	40.8	31 500	48 000	10 000	142	IR354020	NAF355520
	RNAFW405540	40	55	40	0.3	45.2	53	40.8	53 900	96 000	10 000	280	IR354040	NAFW355540
45	RNAF455517	45	55	17	0.3	48.5	53	45.8	23 200	47 200	10 000	84	IR404517	NAF405517
	RNAFW455534	45 +0.041 +0.025	55	34	0.3	48.5	53	45.8	39 900	94 200	10 000	167	IR404534	NAFW405534
	RNAF456220	45	62	20	0.3	50.9	60	45.8	33 200	53 300	9 000	185	IR404520	NAF406220
	RNAFW456240	45	62	40	0.3	50.9	60	45.8	57 000	106 900	9 000	370	IR404540	NAFW406240
50	RNAF506220	50	62	20	0.3	54.2	60	50.8	27 100	59 300	8 000	139	IR455020	NAF456220
	RNAFW506240	50 +0.041 +0.025	62	40	0.3	54.2	60	50.8	46 400	118 700	8 000	276	IR455040	NAFW456240
	RNAF506520	50	65	20	0.3	55.2	63	50.8	35 900	61 100	8 000	170	—	—
	RNAFW506540	50	65	40	0.6	55.2	61	50.8	61 500	122 600	8 000	345	—	—

* Suitable for oil lubrication. In case of grease lubrication, down to 50% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITHOUT INNER RING



RNAF



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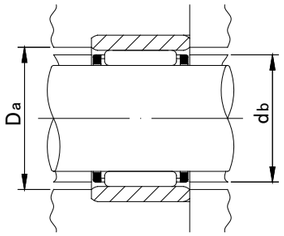
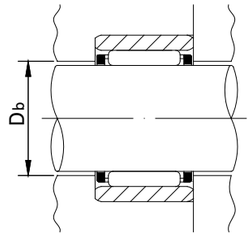


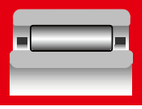


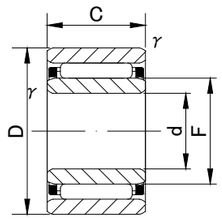
RNAF(W) TYPE

Shaft Diameter (mm)	Designation	Dimensions (mm)				Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	RNAF(W)	Fw	D	C	r s min	db	Da MAX	Db	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
55	RNAF556820	55	68	20	0.6	59.5	64	55.8	28 500	66 000	7 500	167	IR505520	NAF506820
	RNAFW556840	55 +0.049 +0.030	68	40	0.6	59.5	64	55.8	48 900	132 400	7 500	330	IR505540	NAFW506840
	RNAF557220	55	72	20	0.6	60.9	68	55.8	37 400	66 400	7 500	215	IR455520	NAF457220
	RNAFW557240	55	72	40	0.6	60.9	68	55.8	64 100	132 400	7 500	435	IR455540	NAFW457240
60	RNAF607820	60 +0.049	78	20	1	66.3	73	60.8	38 900	71 700	6 500	255	IR506020	NAF507820
	RNAFW607840	60 +0.030	78	40	1	66.3	73	60.8	66 700	143 200	6 500	510	IR506040	NAFW507840
65	RNAF658530	65 +0.049	85	30	1	72	80	66	59 300	127 500	6 000	465	IR556530	NAF558530
	RNAFW658560	65 +0.030	85	60	1	72	80	66	102 000	254 000	6 000	950	IR556560	NAFW558560
70	RNAF709030	70 +0.049	90	30	1	77	85	71	61 200	135 300	5 500	500	IR607030	NAF609030
	RNAFW709060	70 +0.030	90	60	1	77	85	71	104 900	271 600	5 500	1 000	IR607060	NAFW609060
75	RNAF759530	75 +0.049	95	30	1	82	90	76	63 200	144 200	5 500	530	IR657530	NAF659530
	RNAFW759560	75 +0.030	95	60	1	82	90	76	108 900	289 300	5 500	1 050	IR657560	NAFW659560
80	RNAF8010030	80 +0.049	100	30	1	87	95	81	64 900	153 000	5 000	560	IR708030	NAF7010030
	RNAFW8010060	80 +0.030	100	60	1	87	95	81	111 800	306 000	5 000	1 120	IR708060	NAFW7010060
85	RNAF8510530	85 +0.058 +0.036	105	30	1	92	100	86	66 600	160 800	4 800	590	IR758530	NAF7510530
90	RNAF9011030	90 +0.058 +0.036	110	30	1	97	105	91	69 500	173 600	4 500	620	IR809030	NAF8011030
95	RNAF9511530	95 +0.058 +0.036	115	30	1	102	110	96	70 900	182 400	4 200	650	IR859530	NAF8511530
100	RNAF10012030	100 +0.058 +0.036	120	30	1	107	115	101	72 600	191 200	4 000	690	IR9010030	NAF9012030

* Suitable for oil lubrication. In case of grease lubrication, down to 50% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING





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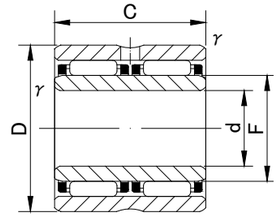

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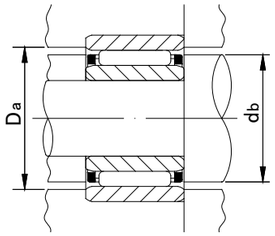
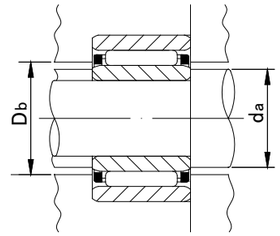


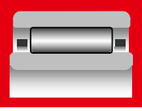


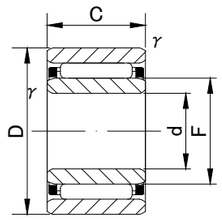
NAF(W) TYPE

Shaft Diameter (mm)	Designation	Dimensions (mm)					Standard mounting dimensions (mm)					Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NAF(W)	d	D	C	r s min	F	db	Da MAX	da MIN	da MAX	Db	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
6	NAF 61710	6 0 -0.008	17	10	0.3	10	12.4	15	8	9.7	10.4	4 100	4 500	28 000	14	RNAF101710	IR61010
7	NAF 72012	7 0 -0.008	20	12	0.3	10	13.5	18	9	9.7	10.4	6 000	6 000	28 000	23	RNAF102012	IR71012
9	NAF 92212	9 0 -0.008	22	12	0.3	12	17.5	20	11	11.5	12.4	9 000	8 400	26 000	24	RNAF122212	IR91212
10	NAF 102213	10 0 -0.008	22	13	0.3	14	17.6	20	12	13	14.6	7 800	9 400	24 000	26	RNAF142213	IR101413
	NAFW 102220	10	22	20	0.3	14	17.6	20	12	13	14.6	10 800	14 200	24 000	40	RNAFW142220	IR101420
	NAF 102612	10	26	12	0.3	14	19.4	24	12	13	14.6	9 800	9 700	24 000	36	RNAF142612	IR101412
12	NAF 122413	12 0 -0.008	24	13	0.3	16	19.6	22	14	15	16.6	8 600	11 000	23 000	30	RNAF162413	IR121613
	NAFW 122420	12	24	20	0.3	16	19.6	22	14	15	16.6	11 900	16 700	23 000	45	RNAFW162420	IR121620
	NAF 122812	12	28	12	0.3	16	21.4	26	14	15	16.6	10 500	10 900	23 000	40	RNAF162812	IR121612
15	NAF 152813	15 0 -0.008	28	13	0.3	20	23.6	26	17	19	20.6	9 600	13 500	20 000	37	RNAF202813	IR152013
	NAFW 152826	15	28	26	0.3	20	23.6	26	17	19	20.6	16 500	27 100	20 000	76	RNAFW202826	IR152026
	NAF 153212	15	32	12	0.3	20	25.4	30	17	19	20.6	12 400	14 300	20 000	51	RNAF203212	IR152012
17	NAF 173013	17 0 -0.008	30	13	0.3	22	25.6	28	19	21	22.6	10 200	15 200	18 000	43	RNAF223013	IR172213
	NAFW 173026	17	30	26	0.3	22	25.6	28	19	21	22.6	17 600	30 300	18 000	85	RNAFW223026	IR172226
	NAF 173516	17	35	16	0.3	22	27.8	33	19	21	22.6	17 600	20 900	18 000	77	RNAF223516	IR172216
	NAFW 173532	17	35	32	0.3	22	27.8	33	19	21	22.6	30 200	41 900	18 000	155	RNAFW223532	IR172232
20	NAF 203517	20 0 -0.010	35	17	0.3	25	29.5	33	22	24	25.6	17 300	26 600	16 000	75	RNAF253517	IR202517
	NAFW 203526	20	35	26	0.3	25	29.5	33	22	24	25.6	22 500	37 200	16 000	114	RNAFW253526	IR202526
	NAF 203716	20	37	16	0.3	25	30.4	35	22	24	25.6	19 400	24 500	16 000	80	RNAF253716	IR202516
	NAFW 203732	20	37	32	0.3	25	30.4	35	22	24	25.6	33 200	49 000	16 000	158	RNAFW253732	IR202532
25	NAF 254017	25 0 -0.010	40	17	0.3	30	34.5	38	27	29	30.6	18 600	31 100	13 000	88	RNAF304017	IR253017
	NAFW 254026	25	40	26	0.3	30	34.5	38	27	29	30.6	24 200	43 400	13 000	136	RNAFW304026	IR253026
	NAF 254216	25	42	16	0.3	30	35.4	40	27	29	30.6	20 800	28 300	13 000	94	RNAF304216	IR253016
	NAFW 254232	25	42	32	0.3	30	35.4	40	27	29	30.6	35 700	56 800	13 000	187	RNAFW304232	IR253032
30	NAF 304517	30 0 -0.010	45	17	0.3	35	39.5	43	32	34	35.6	20 500	36 900	11 000	100	RNAF354517	IR303517
	NAFW 304526	30	45	26	0.3	35	39.5	43	32	34	35.6	26 600	51 600	11 000	155	RNAFW354526	IR303526
	NAF 304716	30	47	16	0.3	35	40.4	45	32	34	35.6	23 000	33 800	11 000	108	RNAF354716	IR303516
	NAFW 304732	30	47	32	0.3	35	40.4	45	32	34	35.6	39 500	67 800	11 000	215	RNAFW354732	IR303532

* Suitable for oil lubrication. In case of grease lubrication, down to 50% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING





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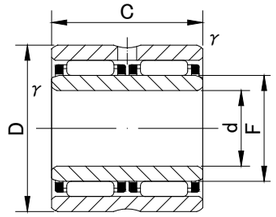
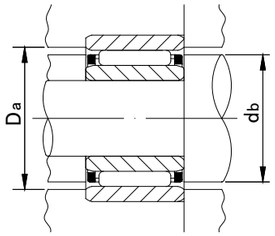
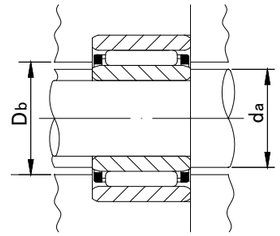


NAFW





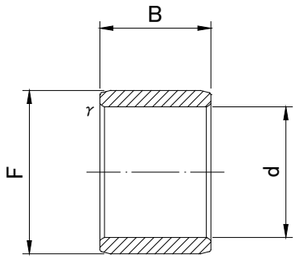
NAF(W)

NAF(W) TYPE

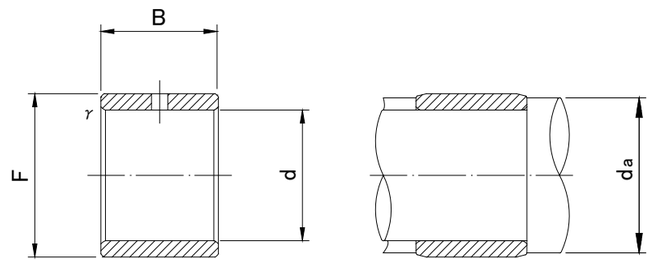
Shaft Diameter (mm)	Designation	Dimensions (mm)					Standard mounting dimensions (mm)					Basic dynamic load rating	Basic static load rating	Limiting speed*	Mass	Usable bearing designation	
	NAF(W)	d	D	C	r's min	F	db	Da MAX	da MIN	da MAX	Db	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
35	NAF 355017	35	50	17	0.3	40	43.5	48	37	39	40.8	22 200	42 700	10 000	115	RNAF405017	IR354017
	NAFW 355034	35 0 -0.012	50	34	0.3	40	43.5	48	37	39	40.8	38 000	85 300	10 000	230	RNAFW405034	IR354034
	NAF 355520	35	55	20	0.3	40	45.2	53	37	39	40.8	31 500	48 000	10 000	188	RNAF405520	IR354020
	NAFW 355540	35	55	40	0.3	40	45.2	53	37	39	40.8	53 900	96 000	10 000	375	RNAFW405540	IR354040
40	NAF 405517	40	55	17	0.3	45	48.5	53	42	44	45.8	23 200	47 200	10 000	129	RNAF455517	IR404517
	NAFW 405534	40 0 -0.012	55	34	0.3	45	48.5	53	42	44	45.8	39 900	94 200	10 000	255	RNAFW455534	IR404534
	NAF 406220	40	62	20	0.3	45	50.9	60	42	44	45.8	33 200	53 300	9 000	236	RNAF456220	IR404520
	NAFW 406240	40	62	40	0.3	45	50.9	60	42	44	45.8	57 000	106 900	9 000	475	RNAFW456240	IR404540
45	NAF 456220	45	62	20	0.3	50	54.2	60	47	49	50.8	27 100	59 300	8 000	197	RNAF506220	IR455020
	NAFW 456240	45 0 -0.012	62	40	0.3	50	54.2	60	49	49.5	50.8	46 400	118 700	8 000	389	RNAFW506240	IR455040
	NAF 457220	45	72	20	0.6	55	60.9	68	49	54	55.8	37 400	66 400	7 500	340	RNAF557220	IR455520
	NAFW 457240	45	72	40	0.6	55	60.9	68	49	54	55.8	64 100	132 400	7 500	685	RNAFW557240	IR455540
50	NAF 506820	50	68	20	0.6	55	59.5	64	54	54.5	55.8	28 500	66 000	7 500	230	RNAF556820	IR505520
	NAFW 506840	50 0 -0.012	68	40	0.6	55	59.5	64	54	54.5	55.8	48 900	132 400	7 500	465	RNAFW556840	IR505540
	NAF 507820	50	78	20	1	60	66.3	73	55	59	60.8	38 900	71 700	6 500	390	RNAF607820	IR506020
	NAFW 507840	50	78	40	1	60	66.3	73	55	59	60.8	66 700	143 200	6 500	775	RNAFW607840	IR506040
55	NAF 558530	55 0 -0.015	85	30	1	65	72	80	60	63	66	59 300	127 500	6 000	680	RNAF658530	IR556530
	NAFW 558560	55	85	60	1	65	72	80	60	63	66	102 000	254 000	6 000	1 380	RNAFW658560	IR556560
60	NAF 609030	60 0 -0.015	90	30	1	70	77	85	65	68	71	61 200	135 300	5 500	740	RNAF709030	IR607030
	NAFW 609060	60	90	60	1	70	77	85	65	68	71	104 900	271 600	5 500	1 470	RNAFW709060	IR607060
65	NAF 659530	65 0 -0.015	95	30	1	75	82	90	70	73	76	63 200	144 200	5 500	800	RNAF759530	IR657530
	NAFW 659560	65	95	60	1	75	82	90	70	73	76	108 900	289 300	5 500	1 570	RNAFW759560	IR657560
70	NAF 7010030	70 0 -0.015	100	30	1	80	87	95	75	78	81	64 900	153 000	5 000	840	RNAF801003	IR708030
	NAFW 7010060	70	100	60	1	80	87	95	75	78	81	111 800	306 000	5 000	1 670	RNAFW8010060	IR708060
75	NAF 7510530	75 0 -0.015	105	30	1	85	92	100	80	83	86	66 600	160 800	4 800	890	RNAF8510530	IR758530
80	NAF 8011030	80 0 -0.015	110	30	1	90	97	105	85	88	91	69 500	173 600	4 500	930	RNAF9011030	IR809030
85	NAF 8511530	85 0 -0.020	115	30	1	95	102	110	90	93	96	70 900	182 400	4 200	970	RNAF9511530	IR859530
90	NAF 9012030	90 0 -0.020	120	30	1	100	107	115	95	98	101	72 600	191 200	4 000	1 040	RNAF10012030	IR9010030

* Suitable for oil lubrication. In case of grease lubrication, down to 50% of this value.

INNER RINGS



IR

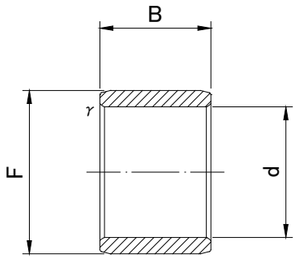


IRZ

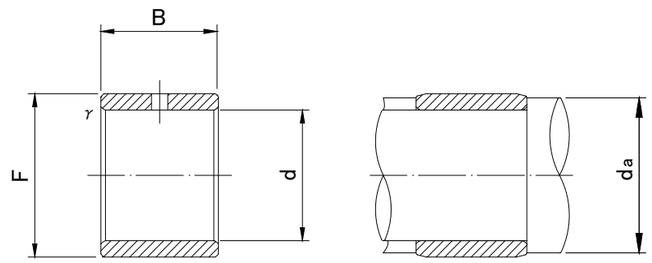
IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
5	**IR 5812**	—	5 0	8	12	0.3	7	7.7	3	—	—	—	—	NK 8/12	—
	IR 5816	—	5 -0.008	8	16	0.3	7	7.7	4	—	—	—	—	NK 8/16	—
6	**IR 6810**	—	6	8	10	0.15	7.2	7.7	1.7	RNA 496	—	—	—	—	—
	IR 6912	—	6 0	9	12	0.3	8	8.7	3.2	—	—	—	—	NK 9/12	—
	IR 6916	—	6 -0.008	9	16	0.3	8	8.7	4.3	—	—	—	—	NK 9/16	—
	IR 61010	—	6	10	10	0.3	8	9.7	4	—	—	—	—	—	RNAF 101710
7	**IR 7910**	—	7	9	10	0.15	8.2	8.7	1.9	RNA 497	—	—	—	—	—
	IR 71010.5	—	7	10	10.5	0.3	9	9.7	3.2	—	—	—	—	—	—
	IR 71012	—	7 0	10	12	0.3	9	9.7	3.6	—	—	—	—	NK 10/12	RNAF 102012
	IR 71012.5	—	7 -0.008	10	12.5	0.3	9	9.7	3.9	—	—	—	—	—	—
	IR 71015.5	—	7	10	15.5	0.3	9	9.7	4.8	—	—	—	—	—	—
	IR 71016	—	7	10	16	0.3	9	9.7	5	—	—	—	—	NK 10/16	—
8	**IR 81011**	—	8	10	11	0.15	9.2	9.7	2.4	RNA 498	—	—	—	—	—
	IR 81210	—	8	12	10	0.3	10	11	4.8	—	—	—	—	—	—
	IR 81210.5	—	8 0	12	10.5	0.3	10	11	5.1	—	—	—	—	—	—
	IR 81212.5	—	8 -0.008	12	12.5	0.3	10	11	6	—	—	—	—	—	—
	IR 81215.5	—	8	12	15.5	0.3	10	11	7.5	—	—	—	—	—	—
9	**IR 91211**	—	9	12	11	0.3	11	11.5	3.1	RNA 499	—	—	—	—	—
	IR 91212	—	9 0	12	12	0.3	11	11.5	4.5	—	—	—	—	NK 12/12	RNAF 122212
	IR 91216	—	9 -0.008	12	16	0.3	11	11.5	6	—	—	—	—	NK 12/16	—
10	**IR 101312.5**	—	10	13	12.5	0.3	12	12	5.2	—	—	—	—	—	—
	IR 101412	—	10	14	12	0.3	12	13	7	—	—	—	—	—	RNAF 142612
	IR 101412.5	—	10	14	12.5	0.3	12	13	7.2	—	—	—	—	—	—
	IR 101413	—	10	14	13	0.3	12	13	7.5	RNA 4900	—	—	—	—	RNAF 142213
	—	**IRZ 101414**	10	14	14	0.3	12	13	8	RNA 4900UU	—	—	—	—	—
	IR 101416	—	10	14	16	0.3	12	13	9	—	—	—	—	NK 14/16	—
	IR 101416.5	—	10 0	14	16.5	0.3	12	13	9.6	—	—	—	—	—	—
	IR 101420	—	10 -0.008	14	20	0.3	12	13	11.5	—	—	—	—	NK 14/20	RNAFW 142220
	IR 101420.5	—	10	14	20.5	0.3	12	13	11.9	—	—	—	—	—	—
	IR 101510.5	—	10	15	10.5	0.3	12	14	7.9	—	—	—	—	—	—
	IR 101515.5	—	10	15	15.5	0.3	12	14	11.7	—	—	—	—	—	—
	IR 101520.5	—	10	15	20.5	0.3	12	14	15.5	—	—	—	—	—	—
	IR 101525.5	—	10	15	25.5	0.3	12	14	19.3	—	—	—	—	—	—

INNER RINGS



IR

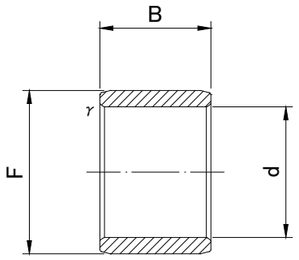


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	r s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
12	IR 121512.5	—	12 0 -0.008	15	12.5	0.3	14	14	6.1	—	—	—	—	—	—
	IR 121516	—		15	16	0.3	14	14	7.8	—	—	—	—	—	—
	IR 121516.5	—		15	16.5	0.3	14	14	8.1	—	—	—	—	—	—
	IR 121522.5	—		15	22.5	0.3	14	14	11	—	—	—	—	—	—
	IR 121612	—		16	12	0.3	14	15	8	—	—	—	—	—	RNAF 162812
	IR 121612.5	—		16	12.5	0.3	14	15	8.5	—	—	—	—	—	—
	IR 121613	—		16	13	0.3	14	15	8.5	RNA 4901	—	—	—	—	RNAF 162413
	—	IRZ 121614		16	14	0.3	14	15	9.6	RNA 4901UU	—	—	—	—	—
	IR 121616	—		16	16	0.3	14	15	10.5	—	—	—	—	NK 16/16	—
	IR 121616.5	—		16	16.5	0.3	14	15	11.2	—	—	—	—	—	—
	IR 121620	—		16	20	0.3	14	15	13.5	—	—	—	—	NK 16/20	RNAFW 162420
	IR 121620.5	—		16	20.5	0.3	14	15	13.9	—	—	—	—	—	—
	IR 121622	—		16	22	0.3	14	15	14.5	—	—	RNA 6901	—	—	—
	IR 121622.5	—		16	22.5	0.3	14	15	15.2	—	—	—	—	—	—
	—	IRZ 121623		16	23	0.3	14	15	15.5	—	—	RNA 6901UU	—	—	—
	IR 121715.5	—		17	15.5	0.3	14	16	13.6	—	—	—	—	—	—
	IR 121720.5	—		17	20.5	0.3	14	16	18	—	—	—	—	—	—
14	IR 141717	—	14 0 -0.008	17	17	0.3	16	16	9.5	—	—	—	—	—	—
15	IR 151812.5	—	15 0 -0.008	18	12.5	0.3	17	17	7.5	—	—	—	—	—	—
	IR 151815.5	—		18	15.5	0.3	17	17	9.3	—	—	—	—	—	—
	IR 151816.5	—		18	16.5	0.3	17	17	9.9	—	—	—	—	—	—
	IR 151820.5	—		18	20.5	0.3	17	17	12.3	—	—	—	—	—	—
	IR 151825.5	—		18	25.5	0.3	17	17	15.2	—	—	—	—	—	—
	IR 151916	—		19	16	0.3	17	18	12.5	—	—	—	—	NK 19/16	—
	IR 151916.5	—		19	16.5	0.3	17	18	13.6	—	—	—	—	—	—
	IR 151920	—		19	20	0.3	17	18	16	—	—	—	—	NK 19/20	—
	IR 151920.5	—		19	20.5	0.3	17	18	12.3	—	—	—	—	—	—
	IR 152012	—		20	12	0.3	17	19	12	—	—	—	—	—	RNAF 203212
	IR 152013	—		20	13	0.3	17	19	13.5	RNA 4902	—	—	—	—	RNAF 202813
	—	IRZ 152014		20	14	0.3	17	19	14.5	RNA 4902UU	—	—	—	—	—
	IR 152015.5	—		20	15.5	0.3	17	19	16.4	—	—	—	—	—	—
	IR 152018	—		20	18	0.3	17	19	19	—	RNA 5902	—	—	—	—
	IR 152020.5	—		20	20.5	0.3	17	19	21.5	—	—	—	—	—	—
	IR 152023	—		20	23	0.3	17	19	24	—	—	RNA 6902	—	—	—
	—	IRZ 152024		20	24	0.3	17	19	25	—	—	RNA 6902UU	—	—	—
	IR 152026	—		20	26	0.3	17	19	28	—	—	—	—	—	RNAFW 202826

INNER RINGS



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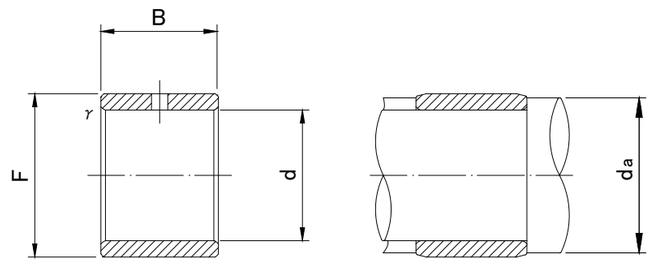
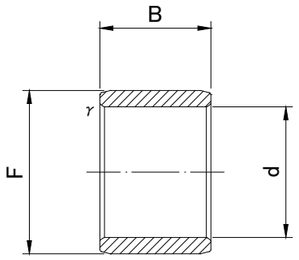


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
17	IR 172016.5	—	17 0 -0.008	20	16.5	0.3	19	19	11.1	—	—	—	—	—	—
	IR 172020	—		20	20	0.3	19	19	14	—	—	—	—	—	—
	IR 172020.5	—		20	20.5	0.3	19	19	13.7	—	—	—	—	—	—
	IR 172030.5	—		20	30.5	0.3	19	19	20.5	—	—	—	—	—	—
	IR 172116	—		21	16	0.3	19	20	14.5	—	—	—	—	NK 21/16	—
	IR 172120	—		21	20	0.3	19	20	18	—	—	—	—	NK 21/20	—
	IR 172213	—		22	13	0.3	19	21	15.5	RNA 4903	—	—	—	—	RNAF 223013
	—	IRZ 172214		22	14	0.3	19	21	16.5	RNA 4903UU	—	—	—	—	—
	IR 172215.5	—		22	15.5	0.3	19	21	18.3	—	—	—	—	—	—
	IR 172216	—		22	16	0.3	19	21	19	—	—	—	—	—	RNAF 223516
	IR 172216.5	—		22	16.5	0.3	19	21	19.4	—	—	—	—	—	—
	IR 172218	—		22	18	0.3	19	21	21	—	RNA 5903	—	—	—	—
	IR 172223	—		22	23	0.3	19	21	26.5	—	—	RNA 6903	—	—	—
	—	IRZ 172224		22	24	0.3	19	21	28	—	—	RNA 6903UU	—	—	—
	IR 172225.5	—		22	25.5	0.3	19	21	30	—	—	—	—	—	—
	IR 172226	—		22	26	0.3	19	21	31	—	—	—	—	—	RNAFW 223026
	IR 172232	—		22	32	0.3	19	21	38	—	—	—	—	—	RNAFW 223532
20	IR 202416	—	20 0 -0.010	24	16	0.3	22	23	16.5	—	—	—	—	NK 24/16	—
	IR 202416.5	—		24	16.5	0.3	22	23	17.5	—	—	—	—	—	—
	IR 202420	—		24	20	0.3	22	23	20.5	—	—	—	—	NK 24/20	—
	IR 202420.5	—		24	20.5	0.3	22	23	22	—	—	—	—	—	—
	IR 202510.5	—		25	10.5	0.3	22	24	14.3	—	—	—	—	—	—
	IR 202515.5	—		25	15.5	0.3	22	24	21	—	—	—	—	—	—
	IR 202516	—		25	16	0.3	22	24	22	—	—	—	—	—	RNAF 253716
	IR 202517	—		25	17	0.3	22	24	23	RNA 4904	—	—	—	—	RNAF 253517
	—	IRZ 202518		25	18	0.3	22	24	24	RNA 4904UU	—	—	—	—	—
	IR 202520	—		25	20	0.3	22	24	27	—	—	—	—	—	—
	IR 202520.5	—		25	20.5	0.3	22	24	28	—	—	—	—	—	—
	IR 202523	—		25	23	0.3	22	24	31	—	RNA 5904	—	—	—	—
	IR 202525.5	—		25	25.5	0.3	22	24	34.5	—	—	—	—	—	—
	IR 202526	—		25	26	0.3	22	24	36	—	—	—	—	—	RNAFW 253526
	IR 202526.5	—		25	26.5	0.3	22	24	36	—	—	—	—	—	—
	IR 202530	—		25	30	0.3	22	24	40.5	—	—	RNA 6904	—	—	—
	—	IRZ 202531		25	31	0.3	22	24	41.5	—	—	RNA 6904UU	—	—	—
	IR 202532	—		25	32	0.3	22	24	44	—	—	—	—	—	RNAFW 253732

INNER RINGS



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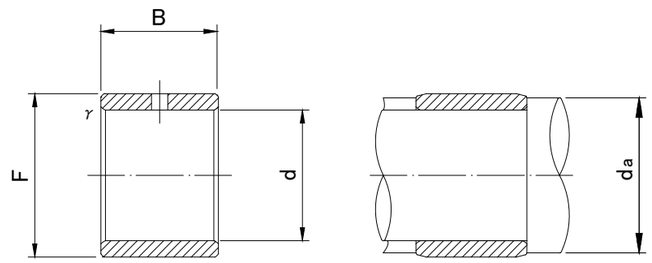
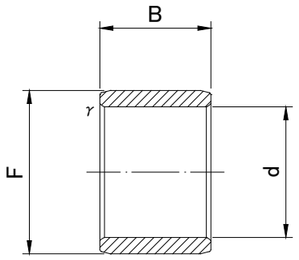


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
22	**IR 222616**	—	22	26	16	0.3	24	25	17.5	—	—	—	—	NK 26/16	—
	IR 222620	—	22	26	20	0.3	24	25	24	—	—	—	—	NK 26/20	—
	IR 222817	—	22 0	28	17	0.3	24	27	30.5	RNA 49/22	—	—	—	—	—
	IR 222820.5	—	22 -0.010	28	20.5	0.3	24	27	37	—	—	—	—	—	—
	IR 222823	—	22	28	23	0.3	24	27	42	—	RNA 59/22	—	—	—	—
	IR 222830	—	22	28	30	0.3	24	27	55	—	—	RNA 69/22	—	—	—
25	**IR 252920**	—	25	29	20	0.3	27	28	25	—	—	—	—	NK 29/20	—
	IR 252930	—	25	29	30	0.3	27	28	38	—	—	—	—	NK 29/30	—
	IR 253015	—	25	30	15	0.3	24	29	24.5	—	—	—	—	—	—
	IR 253015.5	—	25	30	15.5	0.3	24	29	25.5	—	—	—	—	—	—
	IR 253016	—	25	30	16	0.3	27	29	28	—	—	—	—	—	RNAF 304216
	IR 253017	—	25	30	17	0.3	27	29	28.5	RNA 4905	—	—	—	—	RNAF 304017
	—	**IRZ 253018**	25	30	18	0.3	27	29	29.5	RNA 4905UU	—	—	—	—	—
	IR 253020	—	25	30	20	0.3	24	29	33	—	—	—	—	—	—
	IR 253020.5	—	25 0	30	20.5	0.3	24	29	34	—	—	—	—	—	—
	IR 253023	—	25 -0.010	30	23	0.3	27	29	38	—	RNA 5905	—	—	—	—
	IR 253025.5	—	25	30	25.5	0.3	24	29	42.5	—	—	—	—	—	—
	IR 253026	—	25	30	26	0.3	27	29	44.5	—	—	—	—	—	RNAFW 304026
	IR 253026.5	—	25	30	26.5	0.3	24	29	44	—	—	—	—	—	—
	IR 253030	—	25	30	30	0.3	27	29	49	—	—	RNA 6905	—	—	—
	IR 253030.5	—	25	30	30.5	0.3	24	29	50.5	—	—	—	—	—	—
	—	**IRZ 253031**	25	30	31	0.3	27	29	51	—	—	RNA 6905UU	—	—	—
	IR 253032	—	25	30	32	0.3	27	29	54	—	—	—	—	—	RNAFW 304232
	IR 253038.5	—	25	30	38.5	0.3	24	29	64	—	—	—	—	—	—
28	**IR 283217**	—	28	32	17	0.3	30	31	24.5	RNA 49/28	—	—	—	—	—
	IR 283220	—	28	32	20	0.3	30	31	28.5	—	—	—	—	NK 32/20	—
	IR 283220.5	—	28 0	32	20.5	0.3	30	31	29.5	—	—	—	—	—	—
	IR 283223	—	28 -0.010	32	23	0.3	30	31	34	—	RNA 59/28	—	—	—	—
	IR 283230	—	28	32	30	0.3	30	31	43	—	—	RNA 69/28	—	NK 32/30	—
	IR 283230.5	—	28	32	30.5	0.3	30	31	44	—	—	—	—	—	—

INNER RINGS



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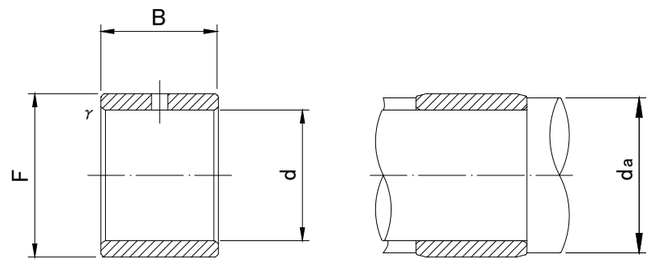
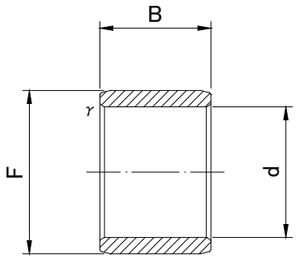


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	r s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
30	IR 303516	—	30	35	16	0.3	32	34	31.5	—	—	—	—	—	RNAF 354716
	IR 303517	—	30	35	17	0.3	32	34	33.5	RNA 4906	—	—	—	—	RNAF 354517
	—	IRZ 303518	30	35	18	0.3	32	34	35	RNA 4906UU	—	—	—	—	—
	IR 303520	—	30	35	20	0.3	32	34	38.5	—	—	—	—	NK 35/20	—
	IR 303520.5	—	30	35	20.5	0.3	34	34	40	—	—	—	—	—	—
	IR 303523	—	30	35	23	0.3	32	34	44	—	RNA 5906	—	—	—	—
	IR 303525.5	—	30 0 -0.010	35	25.5	0.3	34	34	51	—	—	—	—	—	—
	IR 303526	—	30	35	26	0.3	32	34	52	—	—	—	—	—	RNAFW 354526
	IR 303530	—	30	35	30	0.3	32	34	59	—	—	RNA 6906	—	NK 35/30	—
	IR 303530.5	—	30	35	30.5	0.3	34	34	60	—	—	—	—	—	—
	—	IRZ 303531	30	35	31	0.3	32	34	61	—	—	RNA 6906UU	—	—	—
	IR 303532	—	30	35	32	0.3	32	34	64	—	—	—	—	—	RNAFW 354732
	IR 303820	—	30	38	20	0.6	34	37	65	—	—	—	—	—	—
32	IR 323720	—	32	37	20	0.3	34	36	43.5	—	—	—	—	NK 37/20	—
	IR 323730	—	32	37	30	0.3	34	36	63	—	—	—	—	NK 37/30	—
	IR 324020	—	32 0 -0.012	40	20	0.6	36	39	69	RNA 49/32	—	—	—	—	—
	IR 324027	—	32	40	27	0.6	36	39	92	—	RNA 59/32	—	—	—	—
	IR 324036	—	32	40	36	0.6	36	39	123	—	—	RNA 69/32	—	—	—
35	IR 354017	—	35	40	17	0.3	37	39	39	—	—	—	—	—	RNAF 405017
	IR 354020	—	35	40	20	0.3	37	39	46	—	—	—	—	NK 40/20	RNAF 405520
	IR 354020.5	—	35	40	20.5	0.3	39	39	46.5	—	—	—	—	—	—
	IR 354025.5	—	35	40	25.5	0.3	39	39	46	—	—	—	—	—	—
	IR 354030	—	35	40	30	0.3	37	39	67	—	—	—	—	NK 40/30	—
	IR 354034	—	35 0	40	34	0.3	37	39	78	—	—	—	—	—	RNAFW 405034
	IR 354040	—	35 -0.012	40	40	0.3	37	39	95	—	—	—	—	—	RNAFW 405540
	IR 354220	—	35	42	20	0.6	39	41	65	RNA 4907	—	—	—	—	—
	—	IRZ 354221	35	42	21	0.6	39	41	67	RNA 4907UU	—	—	—	—	—
	IR 354227	—	35	42	27	0.6	39	41	80	—	RNA 5907	—	—	—	—
	IR 354236	—	35	42	36	0.6	39	41	120	—	—	RNA 6907	—	—	—
	—	IRZ 354237	35	42	37	0.6	39	41	120	—	—	RNA 6907UU	—	—	—
38	IR 384320	—	38 0	43	20	0.3	40	42	49.5	—	—	—	—	NK 43/20	—
	IR 384330	—	38 -0.012	43	30	0.3	40	42	72	—	—	—	—	NK 43/30	—

INNER RINGS



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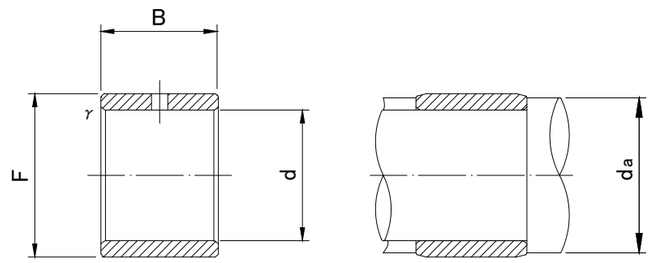


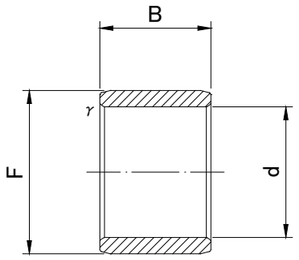
IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
40	IR 404517	—	40	45	17	0.3	42	44	44.5	—	—	—	—	—	RNAF 455517
	IR 404520	—	40	45	20	0.3	42	44	51	—	—	—	—	NK 45/20	RNAF 456220
	IR 404520.5	—	40	45	20.5	0.6	44	44	52.5	—	—	—	—	—	—
	IR 404525.5	—	40	45	25.5	0.6	44	44	65.5	—	—	—	—	—	—
	IR 404530	—	40	45	30	0.3	42	44	77	—	—	—	—	NK 45/30	—
	IR 404530.5	—	40	45	30.5	0.6	44	44	78.5	—	—	—	—	—	—
	IR 404534	—	40 0 -0.012	45	34	0.3	42	44	88	—	—	—	—	—	RNAFW 455534
	IR 404540	—	40	45	40	0.3	42	44	105	—	—	—	—	—	RNAFW 456240
	IR 404540.5	—	40	45	40.5	0.6	44	44	104	—	—	—	—	—	—
	IR 404822	—	40	48	22	0.6	44	47	93	RNA 4908	—	—	—	—	—
	—	IRZ 404823	40	48	23	0.6	44	47	95	RNA 4908UU	—	—	—	—	—
	IR 404830	—	40	48	30	0.6	44	47	123	—	RNA 5908	—	—	—	—
	IR 404840	—	40	48	40	0.6	44	47	165	—	—	RNA 6908	—	—	—
	—	IRZ 404841	40	48	41	0.6	44	47	170	—	—	RNA 6908UU	—	—	—
42	IR 424720	—	42 0 -0.012	47	20	0.3	44	46	54	—	—	—	—	NK 47/20	—
	IR 424730	—	42	47	30	0.3	44	46	81	—	—	—	—	NK 47/30	—
45	IR 455020	—	45	50	20	0.3	47	49	58	—	—	—	—	—	RNAF 506220
	IR 455025	—	45	50	25	0.6	49	49.5	71	—	—	—	—	NK 50/25	—
	IR 455025.5	—	45	50	25.5	0.6	44	49	73	—	—	—	—	—	—
	IR 455030.5	—	45	50	30.5	0.6	44	49	87.5	—	—	—	—	—	—
	IR 455035	—	45	50	35	0.6	49	49.5	95	—	—	—	—	NK 50/35	—
	IR 455040	—	45	50	40	0.3	49	49.5	115	—	—	—	—	—	RNAFW 506240
	IR 455222	—	45 0	52	22	0.6	49	51	88	RNA 4909	—	—	—	—	—
	—	IRZ 455223	45 -0.012	52	23	0.6	49	51	93	RNA 4909UU	—	—	—	—	—
	IR 455230	—	45	52	30	0.6	49	51	123	—	RNA 5909	—	—	—	—
	IR 455240	—	45	52	40	0.6	49	51	165	—	—	RNA 6909	—	—	—
	—	IRZ 455241	45	52	41	0.6	49	51	170	—	—	RNA 6909UU	—	—	—
	IR 455520	—	45	55	20	0.6	49	54	120	—	—	—	—	—	RNAF 557220
	IR 455522	—	45	55	22	1	50	54	130	—	—	—	—	—	
	IR 455540	—	45	55	40	0.6	49	54	245	—	—	—	—	—	RNAFW 557240

IR,IRZ

INNER RINGS



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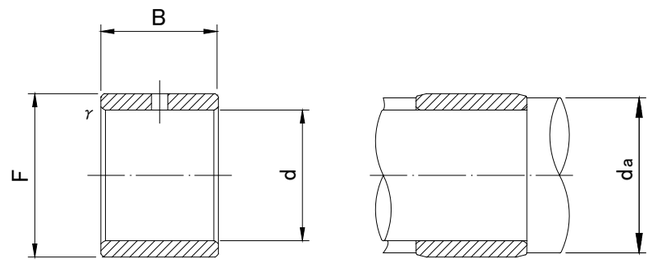
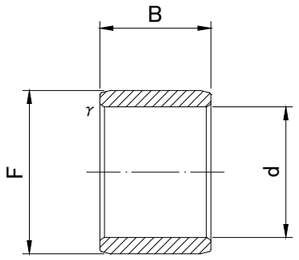


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	r s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
50	IR 505520	—	50	55	20	0.6	54	54.5	63	—	—	—	—	—	RNAF 556820
	IR 505525	—	50	55	25	0.6	54	54.5	77	—	—	—	—	NK 55/25	—
	IR 505535	—	50	55	35	0.6	54	54.5	110	—	—	—	—	NK 55/35	—
	IR 505540	—	50	55	40	0.6	54	54.5	130	—	—	—	—	—	RNAFW 556840
	IR 505822	—	50	58	22	0.6	54	57	116	RNA 4910	—	—	—	—	—
	—	IRZ 505823	50 0 -0.012	58	23	0.6	54	57	118	RNA 4910UU	—	—	—	—	—
	IR 505830	—	50	58	30	0.6	54	57	159	—	RNA 5910	—	—	—	—
	IR 505840	—	50	58	40	0.6	54	57	210	—	—	RNA 6910	—	—	—
	—	IRZ 505841	50	58	41	0.6	54	57	215	—	—	RNA 6910UU	—	—	—
	IR 506020	—	50	60	20	1	55	59	135	—	—	—	—	—	RNAF 607820
	IR 506025	—	50	60	25	1	55	59	163	—	—	—	—	—	—
	IR 506040	—	50	60	40	1	55	59	265	—	—	—	—	—	RNAFW 607840
55	IR 556025	—	55	60	25	0.6	59	59.5	88	—	—	—	—	NK 60/25	—
	IR 556035	—	55	60	35	0.6	59	59.5	120	—	—	—	—	NK 60/35	—
	IR 556325	—	55	63	25	1	60	61	145	RNA 4911	—	—	—	—	—
	IR 556334	—	55 0 -0.015	63	34	1	60	61	192	—	RNA 5911	—	—	—	—
	IR 556345	—	55	63	45	1	60	61	255	—	—	RNA 6911	—	—	—
	IR 556530	—	55	65	30	1	60	63	220	—	—	—	—	—	RNAF 658530
	IR 556560	—	55	65	60	1	60	63	435	—	—	—	—	—	RNAFW 658560
60	IR 606825	—	60	68	25	0.6	64	66	150	RNA 4912	—	—	—	NK 68/25	—
	IR 606834	—	60	68	34	1	65	66	206	—	RNA 5912	—	—	—	—
	IR 606835	—	60	68	35	0.6	64	66	210	—	—	—	—	NK 68/35	—
	IR 606845	—	60 0 -0.015	68	45	1	65	66	275	—	—	RNA 6912	—	—	—
	IR 607025	—	60	70	25	1	65	68	195	—	—	—	—	—	—
	IR 607030	—	60	70	30	1	65	68	240	—	—	—	—	—	RNAF 709030
	IR 607060	—	60	70	60	1	65	68	480	—	—	—	—	—	RNAFW 709060
65	IR 657225	—	65	72	25	1	70	70.5	145	RNA 4913	—	—	—	—	—
	IR 657234	—	65	72	34	1	70	70.5	193	—	RNA 5913	—	—	—	—
	IR 657245	—	65 0 -0.015	72	45	1	70	70.5	255	—	—	RNA 6913	—	—	—
	IR 657335	—	65	73	35	0.6	69	71	235	—	—	—	—	NK 73/35	—
	IR 657530	—	65	75	30	1	70	73	260	—	—	—	—	—	RNAF 759530
	IR 657560	—	65	75	60	1	70	73	520	—	—	—	—	—	RNAFW 759560

INNER RINGS



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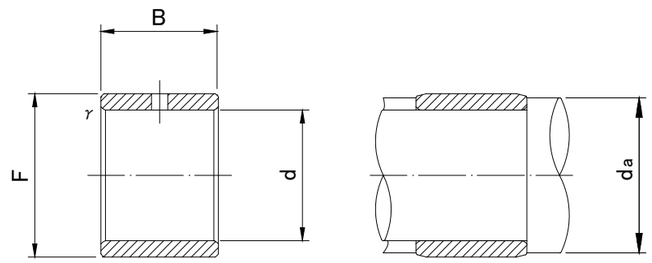
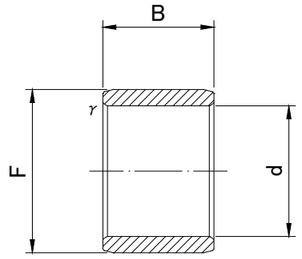


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
70	IR 708025	—	70 0 -0.015	80	25	1	75	78	225	—	—	—	—	NK 80/25	—
	IR 708030	—		80	30	1	75	78	275	RNA 4914	—	—	—	—	RNAF 8010030
	IR 708035	—		80	35	1	75	78	310	—	—	—	—	NK 80/35	—
	IR 708040	—		80	40	1	75	78	358	—	RNA 5914	—	—	—	—
	IR 708054	—		80	54	1	75	78	490	—	—	RNA 6914	—	—	—
	IR 708060	—		80	60	1	75	78	560	—	—	—	—	—	RNAFW 8010060
75	IR 758525	—	75 0 -0.015	85	25	1	80	83	240	—	—	—	—	NK 85/25	—
	IR 758530	—		85	30	1	80	83	290	RNA 4915	—	—	—	—	RNAF 8510530
	IR 758535	—		85	35	1	80	83	335	—	—	—	—	NK 85/35	—
	IR 758540	—		85	40	1	80	83	385	—	RNA 5915	—	—	—	—
	IR 758554	—		85	54	1	80	83	520	—	—	RNA 6915	—	—	—
80	IR 809025	—	80 0 -0.015	90	25	1	85	88	255	—	—	—	—	NK 90/25	—
	IR 809030	—		90	30	1	85	88	310	RNA 4916	—	—	—	—	RNAF 9011030
	IR 809035	—		90	35	1	85	88	355	—	—	—	—	NK 90/35	—
	IR 809040	—		90	40	1	85	88	408	—	RNA 5916	—	—	—	—
	IR 809054	—		90	54	1	85	88	550	—	—	RNA 6916	—	—	—
85	IR 859526	—	85 0 -0.020	95	26	1	90	93	280	—	—	—	—	NK 95/26	—
	IR 859530	—		95	30	1	90	93	330	—	—	—	—	—	RNAF 9511530
	IR 859536	—		95	36	1	90	93	390	—	—	—	—	NK 95/36	—
	IR 8510035	—		100	35	1.1	91.5	98	575	RNA 4917	—	—	—	—	—
	IR 8510046	—		100	46	1.1	91.5	98	760	—	RNA 5917	—	—	—	—
	IR 8510063	—		100	63	1.1	91.5	98	1 040	—	—	RNA 6917	—	—	—
90	IR 9010026	—	90 0 -0.020	100	26	1	95	98	295	—	—	—	—	NK 100/26	—
	IR 9010030	—		100	30	1	95	98	355	—	—	—	—	—	RNAF 10012030
	IR 9010036	—		100	36	1	95	98	415	—	—	—	—	NK 100/36	—
	IR 9010535	—		105	35	1.1	96.5	103	610	RNA 4918	—	—	—	—	—
	IR 9010546	—		105	46	1.1	96.5	103	800	—	—	RNA 5918	—	—	—
	IR 9010563	—		105	63	1.1	96.5	103	1 100	—	—	—	—	—	—
95	IR 9510526	—	95 0 -0.020	105	26	1	100	103	315	—	—	—	—	NK 105/26	—
	IR 9510536	—		105	36	1	100	103	430	—	—	—	—	NK 105/36	—
	IR 9511035	—		110	35	1.1	101.5	108	650	RNA 4919	—	—	—	—	—
	IR 9511046	—		110	46	1.1	101.5	108	850	—	RNA 5919	—	—	—	—
	IR 9511063	—		110	63	1.1	101.5	108	1 160	—	—	RNA 6919	—	—	—
100	IR 10011030	—	100 0 -0.020	110	30	1.1	106.5	108	380	—	—	—	—	NK 110/30	—
	IR 10011040	—		110	40	1.1	106.5	108	500	—	—	—	—	NK 110/40	—
	IR 10011540	—		115	40	1.1	106.5	113	700	RNA 4920	—	—	—	—	—

INNER RINGS



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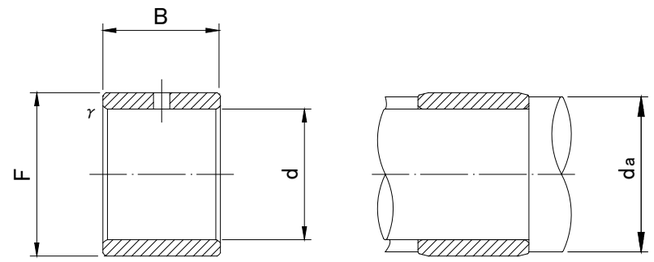


IRZ

IR,IRZ TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation					
	IR	IRZ	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA 49	RNA 59	RNA 69	RNA 48	NK	RNAF
110	**IR 11012030**	—	110 $^{0}_{-0.020}$	120	30	1.0	115	118	410	—	—	—	RNA 4822	—	—
	IR 11012540	—	110 $^{0}_{-0.020}$	125	40	1.1	116.5	123	840	RNA 4922	—	—	—	—	—
120	**IR 12013030**	—	120 $^{0}_{-0.020}$	130	30	1.0	125	128	450	—	—	—	RNA 4824	—	—
	IR 12013545	—	120 $^{0}_{-0.020}$	135	45	1.1	126.5	133	1 030	RNA 4924	—	—	—	—	—
130	**IR 13014535**	—	130 $^{0}_{-0.025}$	145	35	1.1	136.5	143	860	—	—	—	RNA 4826	—	—
	IR 13015050	—	130 $^{0}_{-0.025}$	150	50	1.5	138	148	1 670	RNA 4926	—	—	—	—	—
140	**IR 14015535**	—	140 $^{0}_{-0.025}$	155	35	1.1	146.5	153	930	—	—	—	RNA 4828	—	—
	IR 14016050	—	140 $^{0}_{-0.025}$	160	50	1.5	148	158	1 790	RNA 4928	—	—	—	—	—
150	**IR 15016540**	—	150 $^{0}_{-0.025}$	165	40	1.1	156.5	163	1 130	—	—	—	RNA 4830	—	—
160	**IR 16017540**	—	160 $^{0}_{-0.025}$	175	40	1.1	166.5	173	1 200	—	—	—	RNA 4832	—	—

CAM FOLLOWERS

Cam follower with pre-installed grease nipple

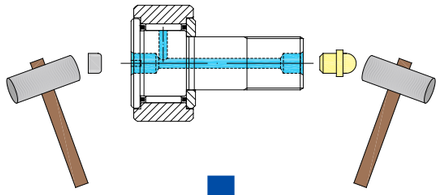
Newly available versatile cam follower which has conquered disadvantages in traditional products!!

CF..AB Standard type | **CF..MAB** Stainless type | **CFH..AB** Eccentric type | **CFH..MAB** Eccentric stainless type

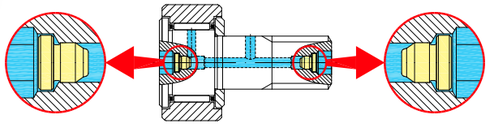
Ready use instantly after unpack the box thanks to pre-installed grease nipple.

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

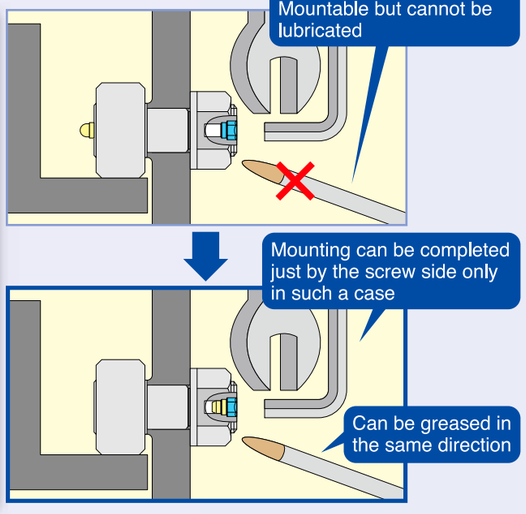
•Conventional type: Need to fit a nipple



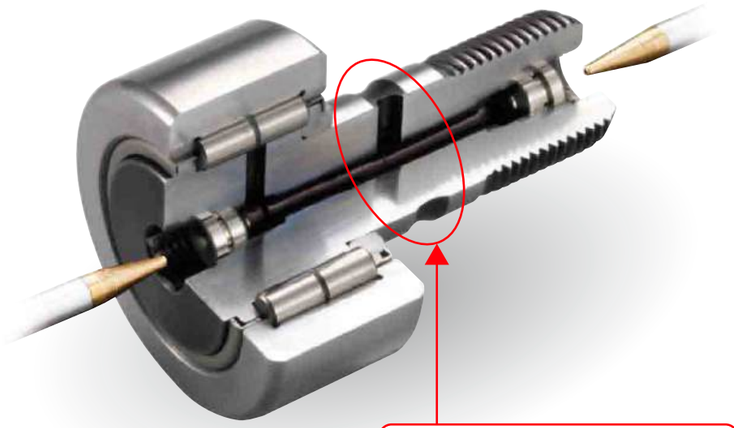
•Grease nipple fitted



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.

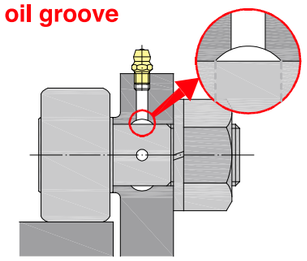


NUCF..AB Double-row cylindrical roller type | stud diameter **16 to 30mm**

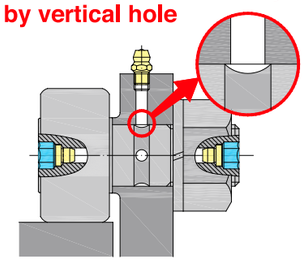


Lubrication area at the side of stud has an oil groove to eliminate bothersome groove machining process in the mounting side(NUCF type).

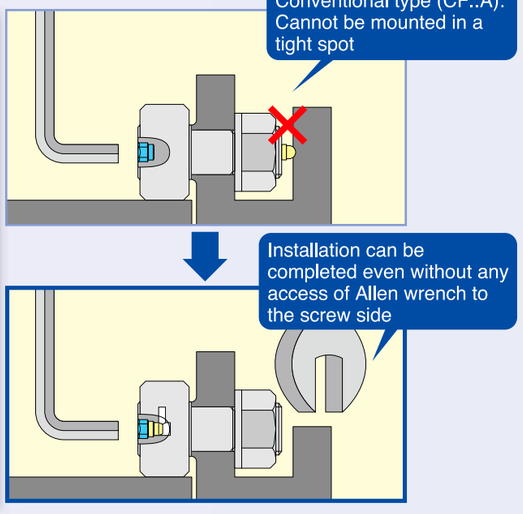
•Need to machine an internal oil groove



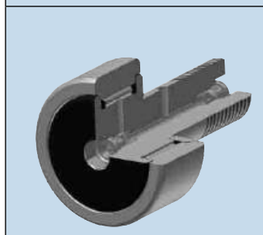
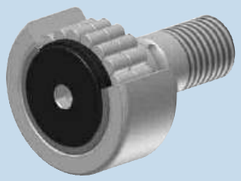
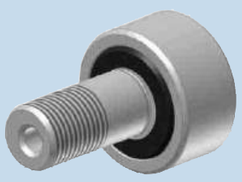
•Lubrication enabled only by vertical hole

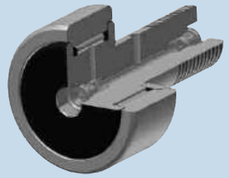
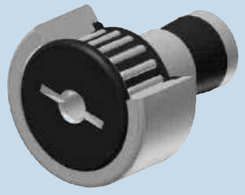


No restriction for mounting location thanks to hexagon socket shape in stud head and thread side.Easy mounting and removal is available thanks to having hexagon socket shape in both side.



Type and Part Code

Type	Applicable axis diameter	Feature	Part Code
 CF	ϕ 5 ~ ϕ 30	General purpose cam follower with screwdriver groove on the stud head. Available with stainless steel type (code M) for higher durability.	**V**: Full complement **None**: With cage **UU**: With seal **None**: With shield **CF** **16** **V** **M** **UU** **R** **N** Type **M**: Stainless steel **None**: High carbon steel **R**: Crowned outer ring **None**: Cylindrical outer ring Option (Dedicated grease nipple)
 CF-A Hexagon hole	ϕ 3 ~ ϕ 30	Hexagon sockets at the head of stud. Easy mounting with hex-wrench. Available with hexagon sockets at thread side model(CF-B). (Applicable for shaft diameter 12 or more) Available with stainless steel type (code M) for higher corrosive resistance.	**V**: Full complement **None**: With cage **UU**: With seal **None**: With shield **R**: Crowned outer ring **None**: Cylindrical outer ring **CF** **16** **V** **M** **UU** **R** **A** **N** Type **M**: Stainless steel **None**: High carbon steel **A**: with hexagon socket on the stud head **B**: with hexagon socket on the thread side (Applicable shaft diameter ϕ 12 ~ ϕ 30) Option (Dedicated grease nipple)
 CF-AB	ϕ 10 ~ ϕ 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. Available with stainless steel type (code M) for higher corrosive resistance.	**V**: Full complement **None**: With cage **UU**: With seal **None**: With shield **R**: Crowned outer ring **None**: Cylindrical outer ring **CF** **16** **V** **M** **UU** **R** **AB** Type **M**: Stainless steel **None**: High carbon steel **AB**: with hexagon socket on both sides. (With integrated concave nipple)
 NUCF-AB Double cylindrical roller	ϕ 16 ~ ϕ 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 in both sides allow mounting and lubrication from either side.	**NUCF** **16** **R** **AB** Type **AB**: with hexagon socket on both sides. (With integrated concave nipple) **R**: Crowned outer ring **None**: Cylindrical outer rings
 CFH-A Hexagon socket, Eccentric	ϕ 5 ~ ϕ 30	Available for the same mounting hole as general type. Compact and high accuracy eccentric cam followers with integral structure enables easy fine positioning adjustment simply by rotating stud due to eccentric stud head shifting 0.2 to 1mm from stud mounting axis. Drastic reduction of machining and assembling process is enabled by eliminating positioning against cam groove or high accuracy machining of mounting holes. Available with stainless steel type (code M) for higher corrosive resistance.	**V**: Full complement **None**: With cage **UU**: With seal **None**: With shield **R**: Crowned outer ring **None**: Cylindrical outer ring **CFH** **16** **V** **M** **UU** **R** **A** Type **M**: Stainless steel **None**: High carbon steel **A**: with hexagon socket on the stud head **B**: with hexagon socket on the thread side (Applicable shaft diameter ϕ 12 ~ ϕ 30) **None**: Standard typed

Type	Applicable axis diameter	Feature	Part Code
 CFH-AB	ϕ 12 ~ ϕ 30	Eccentric cam follower with integrated concave grease nipples on both sides. Available for mounting and lubrication with hexagon holes on both sides. Available with stainless steel type (code M) for higher corrosive resistance.	**V**: Full complement **None**: With cage **UU**: With seal **None**: With shield **R**: Crowned outer ring **None**: Cylindrical outer ring **CFH 16 V M UU R AB** Type **M**: Stainless steel **None**: High carbon steel **AB**: with hexagon socket on both sides (Applicable shaft diameter ϕ 12~ ϕ 30) (With integrated concave nipple)
 CFT Lubrication tap hole	ϕ 6 ~ ϕ 30	Cam follower with tap for piping at stud head and thread of general type. Optimal for location that requires concentrated lubrication piping. Available with stainless steel type (code M) for higher corrosive resistance.	**V**: Full complement **None**: With cage **UU**: With seal **None**: With shield **R**: Crowned outer ring **None**: Cylindrical outer ring **CFT 16 V M UU R A** **CFT**: Standard typed **CFHT**: Eccentric type **M**: Stainless steel **None**: High carbon steel **A**: with hexagon socket on the stud head (Applicable shaft diameter ϕ 12 ~ ϕ 30) **B**: with hexagon socket on the thread side (Applicable shaft diameter ϕ 12 ~ ϕ 30) **None**: Standard typed
 CFS Compact outer ring	ϕ 2.5 ~ ϕ 6	Built-in very thin needle roller. Enables compact design due to very small outer ring diameter in comparison to stud diameter. Available with stainless steel type (code M) for higher corrosive resistance.	**CFS 6 V M A** Type **V**: Full complement **None**: With cage **M**: Stainless steel **None**: High carbon steel **A**: with hexagon socket on the stud head
 CF-SFU Easy mounting	ϕ 6 ~ ϕ 20	A type with step on stud to allow easy mounting. Optimal for devices with limited space for stud tightening. Available with seal only.	**V**: Full complement **None**: With cage **CF-SFU 16 V R** Type **R**: Crowned outer ring **None**: Cylindrical outer ring
 CR Inch type	ϕ 4.826 ~ ϕ 22.225	Cam followers in inch dimension.	**R**: Crowned outer ring **None**: Cylindrical outer ring **CR 16 UU R** Type **UU**: With seal **None**: With shield

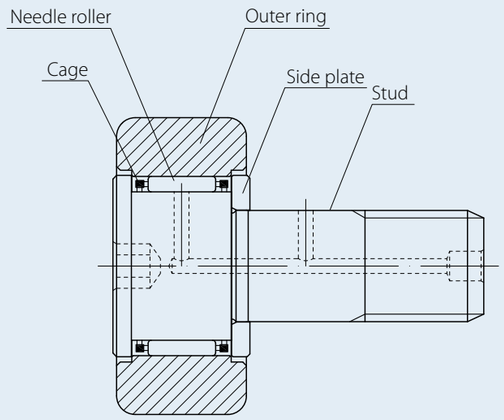
Structure and Features

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.

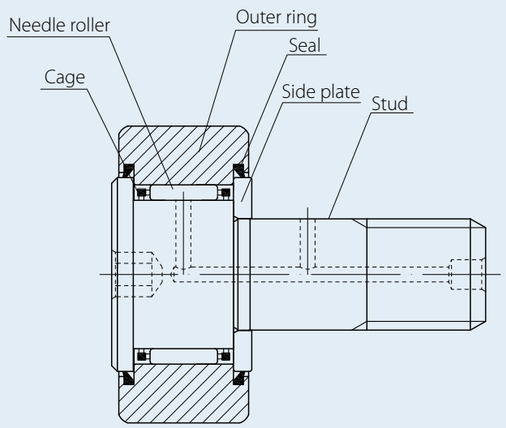
Outer rings have two shapes – crowned outer ring and cylindrical outer ring. The cylindrical outer ring is effective for heavy duty applications since it contacts with large contact area of the associated objects so that can mitigate the contact surface pressure. The crowned outer ring is suited for 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.

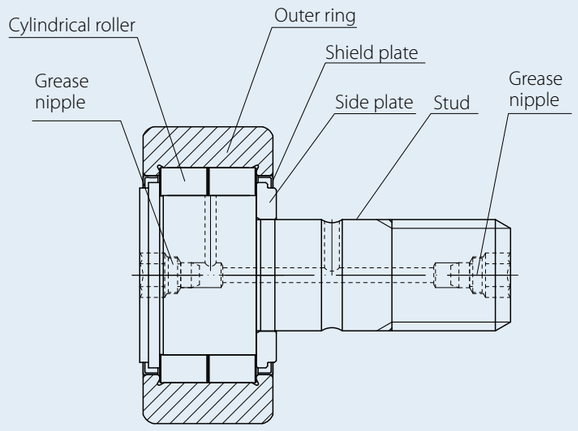
Cam followers with eccentric axis on the stud thread have an advantage to adjust the variation of mounting position within its eccentric range, without requesting high machining accuracy of mounting hole position.



CF··Structure of type A



CF··UU Structure of type A



NUCF··Structure of type AB

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 permissive load

Permissive 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 permissive load.

Track load capacity

Track load capacity means a permissive 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.

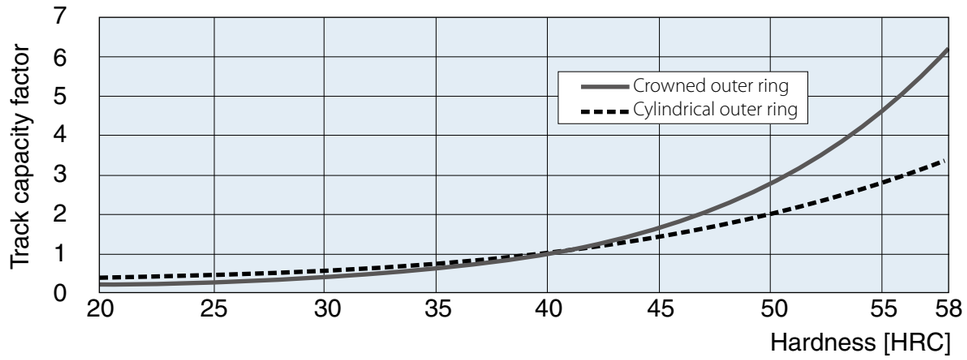


Figure-1 Track capacity factor

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 conde--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.

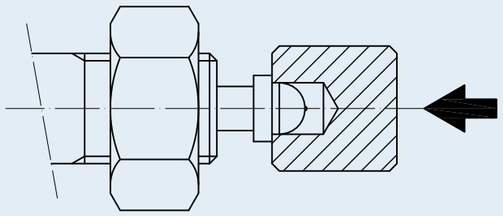


Figure-2

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

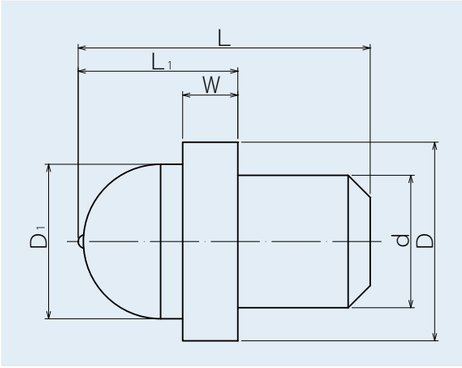
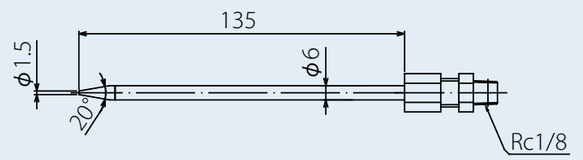
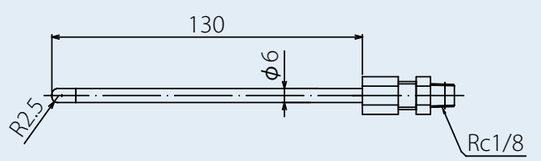


Table-6

Applicable part code	Nipple dimension					
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) CF10-1ABK(M10 × 1) CF12AB CF12-1AB CF16AB CF18AB	NUCF16AB NUCF18AB
NPAB-2		CF20AB CF20-1AB CF24AB CF24-1AB CF30AB CF30-1AB CF30-2AB	NUCF20AB NUCF20-1AB NUCF24AB NUCF24-1AB NUCF30AB 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.

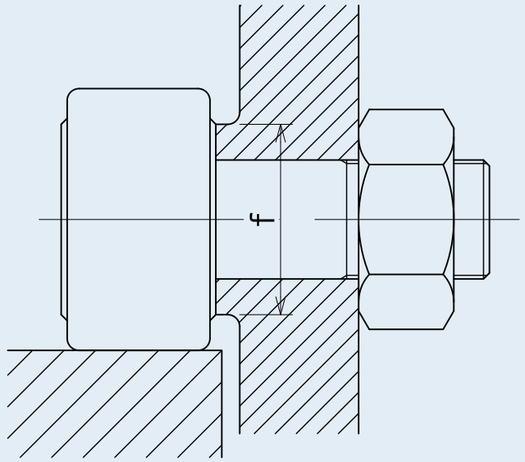


Figure-3

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.

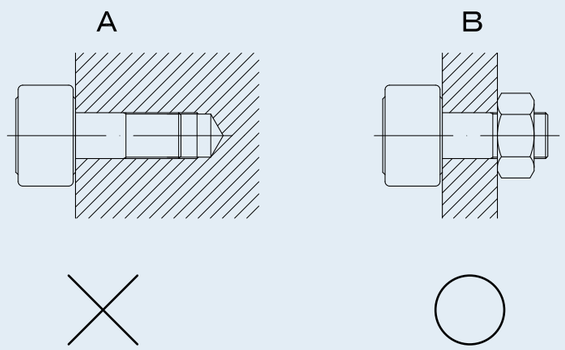


Figure-4

- 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.

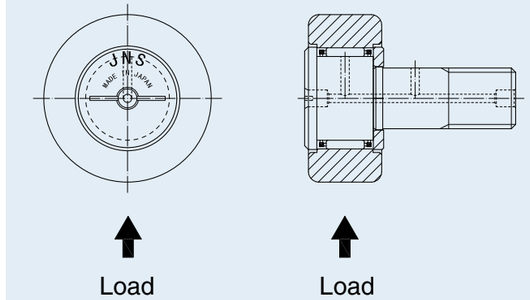


Figure-5

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 shape 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.

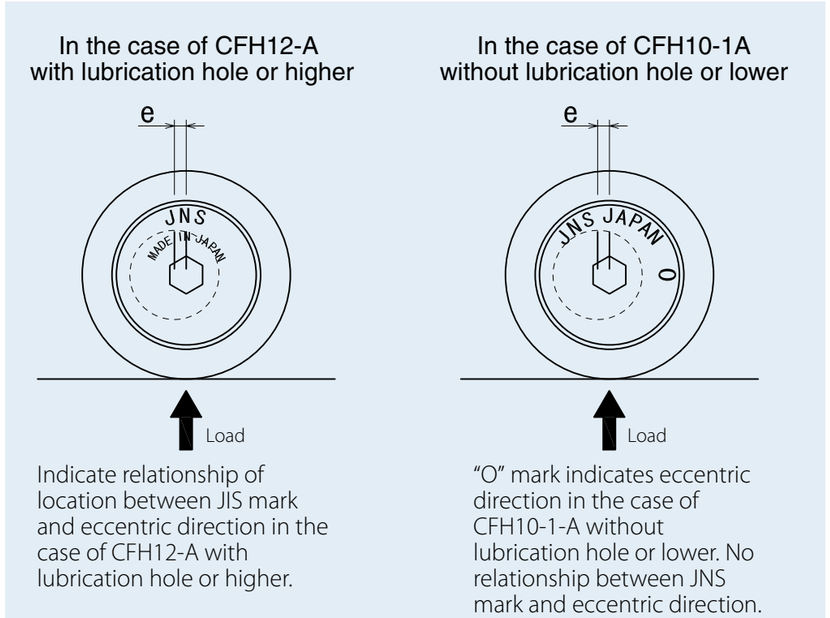
Mounting of eccentric cam follower

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.



Indicate relationship of location between JIS mark and eccentric direction in the case of CFH12-A with lubrication hole or higher.

"O" mark indicates eccentric direction in the case of CFH10-1-A without lubrication hole or lower. No relationship between JNS mark and eccentric direction.

Figure-6

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.

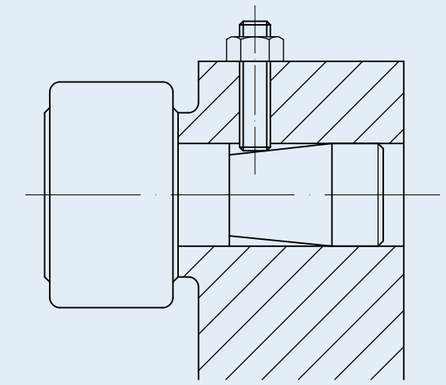
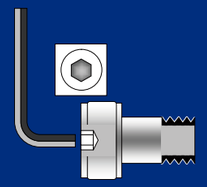


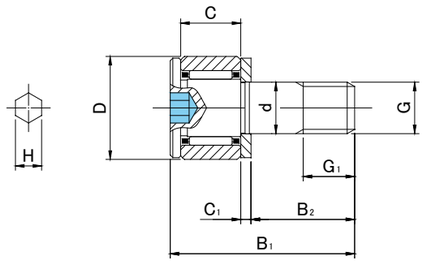
Figure-7

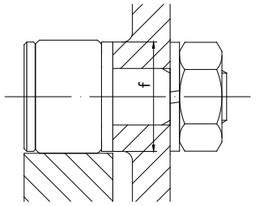
CAM FOLLOWERS
MINIATURE TYPE
HEXAGON SOCKET ON STUD HEAD



CFS..A

CFS..VA





CFS..A TYPE

Prepacked Grease

Stud diameter (mm)	h6 tolerance	Designation Cylindrical outer ring: With cage	Full roller	D	C	d	G	G1	B1	B2	C1	H	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Max tightening torque N·m	Mass g (approx)
2.5	0 -0.006	**CFS 2.5A**	—	**5**	3	2.5	M2.5×0.45	2.5	9.5	5	0.7	0.9	4.8	410	335	260	0.2	1
		—	**CFS 2.5VA**											1 000	1 080	260		
3	0 -0.006	**CFS 3A**	—	**6**	4	3	M3×0.5	3	11.5	6	0.7	1.5	5.8	630	610	360	0.3	2
		—	**CFS 3VA**											1 370	1 770	360		
4	0 -0.008	**CFS 4A**	—	**8**	5	4	M4×0.7	4	15	8	1	2	7.7	1 080	1 080	780	0.6	4
		—	**CFS 4VA**											2 350	3 040	780		
5	0 -0.008	**CFS 5A**	—	**10**	6	5	M5×0.8	5	18	10	1	2.5	9.6	1 570	1 860	1 420	1.3	7
		—	**CFS 5VA**											3 140	4 710	1 420		
6	0 -0.008	**CFS 6A**	—	**12**	7	6	M6×1	6	21.5	12	1.2	3	11.6	2 060	2 160	2 110	2.3	13
		—	**CFS 6VA**											4 610	6 270	2 110		

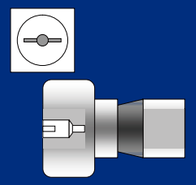
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring
CFS2.5,CFS3,CFS4,CFS5,CFS6	0/-8

ACCESSORIES

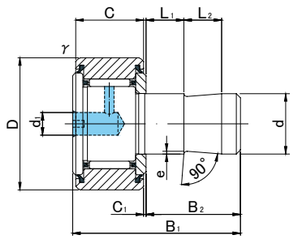
TYPE	 NUT
All types	Attached

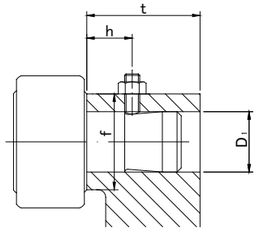
CAM FOLLOWERS
EASY MOUNTING TYPE
SCREWDRIVER SLOT HEAD



CF-SFU

CF-SFU..V





CF-SFU TYPE

Prepacked Grease

Stud diameter (mm)		Designation R500(CF6~CF18) R1000(CF20≦)		Dimensions (mm)										Mounting dimensions (mm)					Basic dynamic load rating	Basic static load rating	Largest permissible load	Track load capacity		Mass
	h7 tolerance	Cylindrical outer ring	Crowned outer ring	D	C	d	B1	B2	C1	L1	L2	d1	e	rs min	D1 Tolerance	t Min	f Min	h (Ref)	Cr N	Cor N	N	Cylindrical outer ring N	Crowned outer ring N	g (approx)
6	0 -0.012	CF-SFU-6	CF-SFU-6R	16	11	6	32	20	0.6	5	10	4	0.3	0.3	6 0 +0.012	20	11	10	3 630	3 630	2 110	3 430	1 080	19
		CF-SFU-6V	CF-SFU-6VR																6 960	8 530	2 110	3 430	1 080	
8	0 -0.015	CF-SFU-8	CF-SFU-8R	19	11	8	32	20	0.6	5	10	4	0.5	0.3	8 0 +0.015	20	13	10	4 310	4 710	4 710	4 020	1 370	28.5
		CF-SFU-8V	CF-SFU-8VR																8 130	11 170	4 710	4 020	1 370	
10	0 -0.015	CF-SFU-10	CF-SFU-10R	22	12	10	33	20	0.6	5	10	4	0.5	0.3	10 0 +0.015	20	15	10	5 390	6 860	6 860	4 700	1 670	43
		CF-SFU-10V	CF-SFU-10VR																9 510	14 500	7 450	4 700	1 670	
10	0 -0.015	CF-SFU-10-1	CF-SFU-10-1R	26	12	10	33	20	0.6	5	10	4	0.5	0.3	10 0 +0.015	20	15	10	5 390	6 860	6 860	5 490	2 060	58.5
		CF-SFU-10-1V	CF-SFU-10-1VR																9 510	14 500	7 450	5 490	2 060	
12	0 -0.018	CF-SFU-12	CF-SFU-12R	30	14	12	35	20	0.6	5	10	6	1	0.6	12 0 +0.018	20	20	10	7 940	9 800	9 800	7 060	2 450	93
		CF-SFU-12V	CF-SFU-12VR																13 430	19 700	11 270	7 060	2 450	
12	0 -0.018	CF-SFU-12-1	CF-SFU-12-1R	32	14	12	35	20	0.6	5	10	6	1	0.6	12 0 +0.018	20	20	10	7 940	9 800	9 800	7 450	2 740	103
		CF-SFU-12-1V	CF-SFU-12-1VR																13 430	19 700	11 270	7 450	2 740	
16	0 -0.018	CF-SFU-16	CF-SFU-16R	35	18	16	44.5	25	0.8	10	10	6	1	0.6	16 0 +0.018	25	24	15	12 050	18 330	18 330	11 200	3 140	164
		CF-SFU-16V	CF-SFU-16VR																20 680	37 630	19 800	11 200	3 140	
18	0 -0.018	CF-SFU-18	CF-SFU-18R	40	20	18	46.5	25	0.8	10	10	6	1	1	18 0 +0.018	25	26	15	14 700	25 200	25 200	14 400	3 720	235
		CF-SFU-18V	CF-SFU-18VR																25 280	51 350	26 560	14 400	3 720	
20	0 -0.021	CF-SFU-20	CF-SFU-20R	52	24	20	50.5	25	0.8	10	10	8	1	1	20 0 +0.021	25	36	15	20 680	34 600	32 140	23 200	8 230	436
		CF-SFU-20V	CF-SFU-20VR																33 120	64 480	32 140	23 200	8 230	
20	0 -0.021	CF-SFU-20-1	CF-SFU-20-1R	47	24	20	50.5	25	0.8	10	10	8	1	1	20 0 +0.021	25	36	15	20 680	34 600	32 140	21 000	7 150	361
		CF-SFU-20-1V	CF-SFU-20-1VR																32 120	64 480	32 140	21 000	7 150	

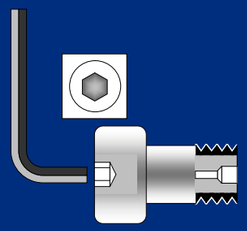
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
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	0/-13	0/-50

ACCESSORIES

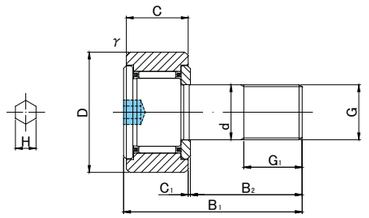
TYPE	 STOP PLUG	 RESIN PLUG
CF6/CF8/CF10/CF10-1	—	ϕ 4 Attached
CF12/CF12-1/CF16/CF18	ϕ 6 Attached	ϕ 6 Attached
CF20/CF20-1	ϕ 8 Attached	ϕ 8 Attached

CAM FOLLOWERS
HEXAGON SOCKET ON STUD HEAD

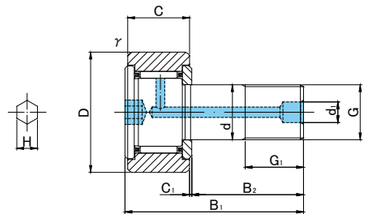


CF..A

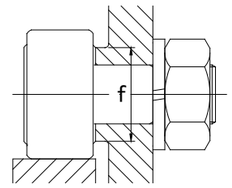
CF..VA



CF3(V)A～CF10−1(V)A



CF10(V)AK～CF10−1(V)AK



CF..A TYPE

Prepacked Grease

Stud diameter (mm)		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 ～ CF10)																							
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	H	r_s min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
3	0 -0.010	**CF 3A**	**CF 3UUA**	**CF 3RA**	**CF 3UURA**	**10**	7	3	M3×0.5	5	17	9	—	0.5	—	—	2	0.2	6.8	1 470	1 180	360	47 000	1 370	540	0.4	4.5
		CF 3VA	**CF 3VUUA**	**CF 3VRA**	**CF 3VUURA**															2 800	2 500	360	18 800				
4	0 -0.012	**CF 4A**	**CF 4UUA**	**CF 4RA**	**CF 4UURA**	**12**	8	4	M4×0.7	6	20	11	—	0.5	—	—	2.5	0.3	8.6	2 060	2 050	780	37 000	1 760	690	1	7.5
		CF 4VA	**CF 4VUUA**	**CF 4VRA**	**CF 4VUURA**															4 000	4 300	780	14 800				
5	0 -0.012	**CF 5A**	**CF 5UUA**	**CF 5RA**	**CF 5UURA**	**13**	9	5	M5×0.8	7.5	23	13	—	0.5	—	—	3	0.3	9.7	3 140	2 770	1 420	29 000	2 250	780	2	10.5
		CF 5VA	**CF 5VUUA**	**CF 5VRA**	**CF 5VUURA**															5 100	5 500	1 420	11 600				
6	0 -0.012	**CF 6A**	**CF 6UUA**	**CF 6RA**	**CF 6UURA**	**16**	11	6	M6×1	8	28	16	—	0.6	—	—	3	0.3	11	3 630	3 630	2 110	25 000	3 430	1 080	3	18.5
		CF 6VA	**CF 6VUUA**	**CF 6VRA**	**CF 6VUURA**															6 960	8 530	2 110	12 000				
8	0 -0.015	**CF 8A**	**CF 8UUA**	**CF 8RA**	**CF 8UURA**	**19**	11	8	M8×1.25	10	32	20	—	0.6	—	—	4	0.3	13	4 310	4 710	4 710	20 000	4 020	1 370	8	28.5
		CF 8VA	**CF 8VUUA**	**CF 8VRA**	**CF 8VUURA**															8 130	11 170	4 710	9 000				
10	0 -0.015	**CF10A**	**CF10UUA**	**CF10RA**	**CF10UURA**	**22**	12	10	M10×1.25	12	36	23	—	0.6	—	—	5	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CF10VA	**CF10VUUA**	**CF10VRA**	**CF10VUURA**															9 510	14 500	7 450	7 500				
10	0 -0.015	**CF10-1A**	**CF10-1UUA**	**CF10-1RA**	**CF10-1UURA**	**26**	12	10	M10×1.25	12	36	23	—	0.6	—	—	5	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CF10-1VA	**CF10-1VUUA**	**CF10-1VRA**	**CF10-1VUURA**															9 510	14 500	7 450	7 500				
10	0 -0.015	**CF10AK**	**CF10UUAK**	**CF10RAK**	**CF10UURAK**	**22**	12	10	M10×1	12	36	23	—	0.6	4	—	5	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CF10VAK	**CF10VUUAK**	**CF10VRAK**	**CF10VUURAK**															9 510	14 500	7 450	7 500				
10	0 -0.015	**CF10-1AK**	**CF10-1UUAK**	**CF10-1RAK**	**CF10-1UURAK**	**26**	12	10	M10×1	12	36	23	—	0.6	4	—	5	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CF10-1VAK	**CF10-1VUUAK**	**CF10-1VRAK**	**CF10-1VUURAK**															9 510	14 500	7 450	7 500				

* 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.

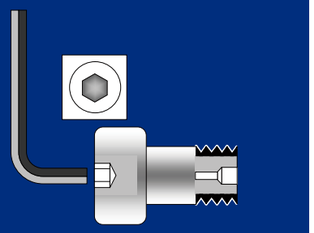
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF3,CF4,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

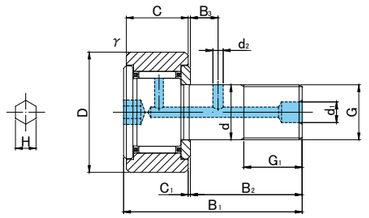
TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF3/CF4/CF5/CF6/CF8/CF10/CF10-1	—	—	Attached
CF10K/CF10-1K	ϕ 4 Attached	ϕ 4 Attached	Attached
CF12/CF12-1/CF16/CF18	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	ϕ 8 Attached	ϕ 8 Attached	Attached

CAM FOLLOWERS
HEXAGON SOCKET ON STUD HEAD

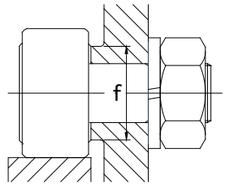


CF..A

CF..VA



CF12(V)A～CF30-2(V)A



CF..A TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R500(CF12～CF18) R1000(CF20≦), Without seals	Crowned outer ring, With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	H	rs min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
12	0 -0.018	**CF12A**	**CF12UUA**	**CF12RA**	**CF12UURA**	**30**	14	12	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CF12VA	**CF12VUUA**	**CF12VRA**	**CF12VUURA**															13 430	19 700	11 270	6 000				
12	0 -0.018	**CF12-1A**	**CF12-1UUA**	**CF12-1RA**	**CF12-1UURA**	**32**	14	12	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CF12-1VA	**CF12-1VUUA**	**CF12-1VRA**	**CF12-1VUURA**															13 430	19 700	11 270	6 000				
16	0 -0.018	**CF16A**	**CF16UUA**	**CF16RA**	**CF16UURA**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	6	3	6	0.6	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CF16VA	**CF16VUUA**	**CF16VRA**	**CF16VUURA**															20 680	37 630	19 800	4 500				
18	0 -0.018	**CF18A**	**CF18UUA**	**CF18RA**	**CF18UURA**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	6	3	6	1	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CF18VA	**CF18VUUA**	**CF18VRA**	**CF18VUURA**															25 280	51 350	26 560	3 500				
20	0 -0.021	**CF20A**	**CF20UUA**	**CF20RA**	**CF20UURA**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CF20VA	**CF20VUUA**	**CF20VRA**	**CF20VUURA**															33 120	64 480	32 140	3 500				
20	0 -0.021	**CF20-1A**	**CF20-1UUA**	**CF20-1RA**	**CF20-1UURA**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CF20-1VA	**CF20-1VUUA**	**CF20-1VRA**	**CF20-1VUURA**															33 120	64 480	32 140	3 500				
24	0 -0.021	**CF24A**	**CF24UUA**	**CF24RA**	**CF24UURA**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CF24VA	**CF24VUUA**	**CF24VRA**	**CF24VUURA**															46 550	92 020	49 500	3 000				
24	0 -0.021	**CF24-1A**	**CF24-1UUA**	**CF24-1RA**	**CF24-1UURA**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VA	**CF24-1VUUA**	**CF24-1VRA**	**CF24-1VUURA**															46 550	92 020	49 500	3 000				
30	0 -0.021	**CF30A**	**CF30UUA**	**CF30RA**	**CF30UURA**	**80**	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CF30VA	**CF30VUUA**	**CF30VRA**	**CF30VUURA**															67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-1A**	**CF30-1UUA**	**CF30-1RA**	**CF30-1UURA**	**85**	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	45 370	85 060	73 700	5 000	56 000	56 000	450	2 030
		CF30-1VA	**CF30-1VUUA**	**CF30-1VRA**	**CF30-1VUURA**															67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-2A**	**CF30-2UUA**	**CF30-2RA**	**CF30-2UURA**	**90**	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	45 370	85 060	73 700	5 000	59 300	59 300	450	2 220
		CF30-2VA	**CF30-2VUUA**	**CF30-2VRA**	**CF30-2VURA**															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.

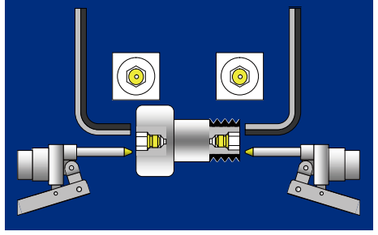
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF3,CF4,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

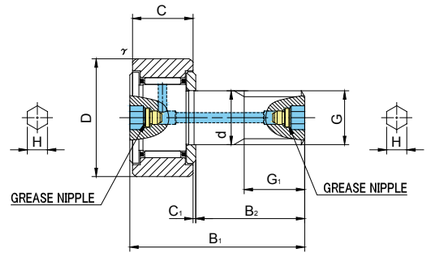
TYPE	STOP PLUG	RESIN PLUG	NUT
CF3/CF4/CF5/CF6/CF8/CF10/CF10-1	—	—	Attached
CF10K/CF10-1K	ϕ 4 Attached	ϕ 4 Attached	Attached
CF12/CF12-1/CF16/CF18	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	ϕ 8 Attached	ϕ 8 Attached	Attached

CAM FOLLOWERS
HEXAGON SOCKET ON BOTH SIDES GREASE NIPPLE INSTALLED

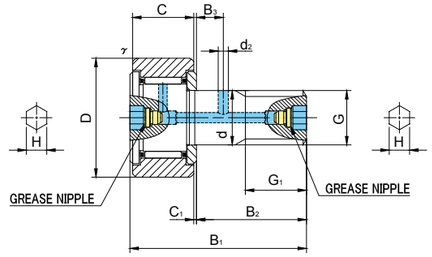


CF..AB

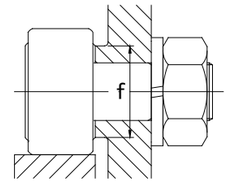
CF..VAB



CF10(V)ABK～CF10-1(V)ABK



CF12(V)AB～CF18(V)AB



CF..AB TYPE

Prepacked Grease

Stud diameter (mm)		Designation: Cylindrical outer ring		Designation: Crowned outer ring R500(CF10～CF18) R1000(CF20≦)		Dimensions (mm)												Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	d2	H	r s min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
10	0 -0.015	**CF10ABK**	**CF10UUABK**	**CF10RABK**	**CF10UURABK**	**22**	12	10	**M10×1**	12	36	23	—	0.6	—	5	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CF10VABK	**CF10VUUABK**	**CF10VRABK**	**CF10VUURABK**														9 510	14 500	7 450	7 500				
10	0 -0.015	**CF10-1ABK**	**CF10-1UUABK**	**CF10-1RABK**	**CF10-1UURABK**	**26**	12	10	**M10×1**	12	36	23	—	0.6	—	5	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CF10-1VABK	**CF10-1VUUABK**	**CF10-1VRABK**	**CF10-1VUURABK**														9 510	14 500	7 450	7 500				
12	0 -0.018	**CF12AB**	**CF12UUAB**	**CF12RAB**	**CF12UURAB**	**30**	14	12	M12×1.5	13	40	25	6	0.6	3	6	0.6	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CF12VAB	**CF12VUUAB**	**CF12VRAB**	**CF12VUURAB**														13 430	19 700	11 270	6 000				
12	0 -0.018	**CF12-1AB**	**CF12-1UUAB**	**CF12-1RAB**	**CF12-1UURAB**	**32**	14	12	M12×1.5	13	40	25	6	0.6	3	6	0.6	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CF12-1VAB	**CF12-1VUUAB**	**CF12-1VRAB**	**CF12-1VUURAB**														13 430	19 700	11 270	6 000				
16	0 -0.018	**CF16AB**	**CF16UUAB**	**CF16RAB**	**CF16UURAB**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	3	6	0.6	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CF16VAB	**CF16VUUAB**	**CF16VRAB**	**CF16VUURAB**														20 680	37 630	19 800	4 500				
18	0 -0.018	**CF18AB**	**CF18UUAB**	**CF18RAB**	**CF18UURAB**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	3	6	1	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CF18VAB	**CF18VUUAB**	**CF18VRAB**	**CF18VUURAB**														25 280	51 350	26 560	3 500				
20	0 -0.021	**CF20AB**	**CF20UUAB**	**CF20RAB**	**CF20UURAB**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	4	8	1	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CF20VAB	**CF20VUUAB**	**CF20VRAB**	**CF20VUURAB**														33 120	64 480	32 140	3 500				

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

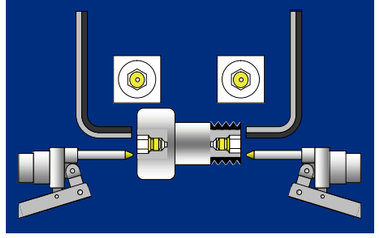
TYPE	Cylindrical outer ring	Crowned outer ring
CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

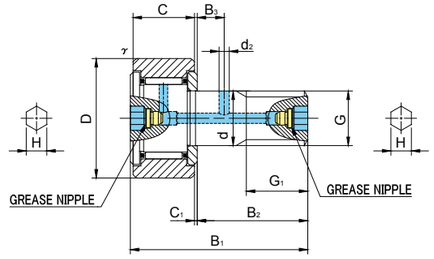
CF..AB

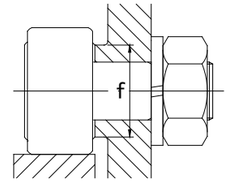
CAM FOLLOWERS
HEXAGON SOCKET ON BOTH SIDES GREASE NIPPLE INSTALLED



CF..AB

CF..VAB





CF..AB TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R1000(CF20 ≦), Without seals	Crowned outer ring R1000(CF20 ≦), With seals	D	C	d	G	G1	B1	B2	B3	C1	d2	H	r s min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
20	0 -0.021	**CF20-1AB**	**CF20-1UUAB**	**CF20-1RAB**	**CF20-1UURAB**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	4	8	1	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CF20-1VAB	**CF20-1VUUAB**	**CF20-1VRAB**	**CF20-1VUURAB**														33 120	64 480	32 140	3 500				
24	0 -0.021	**CF24AB**	**CF24UUAB**	**CF24RAB**	**CF24UURAB**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	4	8	1	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CF24VAB	**CF24VUUAB**	**CF24VRAB**	**CF24VUURAB**														46 550	92 020	49 500	3 000				
24	0 -0.021	**CF24-1AB**	**CF24-1UUAB**	**CF24-1RAB**	**CF24-1UURAB**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	4	8	1	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VAB	**CF24-1VUUAB**	**CF24-1VRAB**	**CF24-1VUURAB**														46 550	92 020	49 500	3 000				
30	0 -0.021	**CF30AB**	**CF30UUAB**	**CF30RAB**	**CF30UURAB**	**80**	35	30	M30×1.5	32	100	63	15	1	4	8	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CF30VAB	**CF30VUUAB**	**CF30VRAB**	**CF30VUURAB**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-1AB**	**CF30-1UUAB**	**CF30-1RAB**	**CF30-1UURAB**	**85**	35	30	M30×1.5	32	100	63	15	1	4	8	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030
		CF30-1VAB	**CF30-1VUUAB**	**CF30-1VRAB**	**CF30-1VUURAB**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-2AB**	**CF30-2UUAB**	**CF30-2RAB**	**CF30-2UURAB**	**90**	35	30	M30×1.5	32	100	63	15	1	4	8	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220
		CF30-2VAB	**CF30-2VUUAB**	**CF30-2VRAB**	**CF30-2VUURAB**														67 620	144 060	73 700	2 200				

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

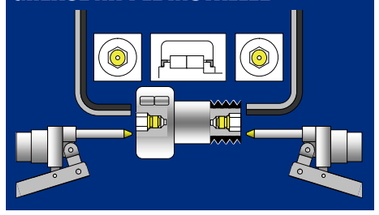
ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

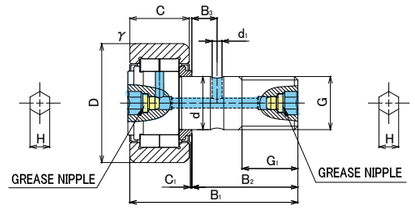
CF..AB

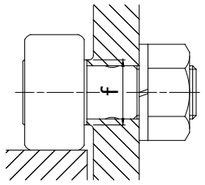
CAM FOLLOWERS

FULL COMPLEMENT DOUBLE ROW HEXAGON SOCKET ON BOTH SIDES GREASE NIPPLE INSTALLED



NUCF..AB





NUCF TYPE

Prepacked Grease

Stud diameter (mm)		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(NUCF16~NUCF18) R1000(NUCF20≦)																				
	h7 tolerance	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	D2	H	rs min	f	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
16	0 -0.018	**NUCF16AB**	**NUCF16RAB**	**35**	18	16	M16x1.5	17	52	32.5	7.8	0.8	3	6	0.6	20	23 400	27 200	11 900	5 200	11 200	3 140	58	167
18	0 -0.018	**NUCF18AB**	**NUCF18RAB**	**40**	20	18	M18x1.5	19	58	36.5	8	0.8	3	6	1	22	25 200	30 900	22 200	4 700	14 400	3 720	87	248
20	0 -0.021	**NUCF20AB**	**NUCF20RAB**	**52**	24	20	M20x1.5	21	66	40.5	9	0.8	4	8	1	31	43 000	58 100	25 700	3 300	23 200	8 230	120	461
	0 -0.021	**NUCF20-1AB**	**NUCF20-1RAB**	**47**	24	20	M20x1.5	21	66	40.5	9	0.8	4	8	1	27	38 900	48 900	25 300	3 800	21 000	7 150	120	390
24	0 -0.021	**NUCF24AB**	**NUCF24RAB**	**62**	28	24	M24x1.5	25	80	49.5	11	1.3	4	8	1	38	57 600	74 300	35 000	2 800	32 000	10 500	220	789
	0 -0.021	**NUCF24-1AB**	**NUCF24-1RAB**	**72**	28	24	M24x1.5	25	80	49.5	11	1.3	4	8	1.1	44	63 300	87 500	53 700	2 300	37 200	12 900	220	1 020
30	0 -0.021	**NUCF30AB**	**NUCF30RAB**	**80**	35	30	M30x1.5	32	100	63	15	1	4	8	1.1	47	94 800	135 700	73 700	2 100	52 600	14 900	450	1 630
	0 -0.021	**NUCF30-2AB**	**NUCF30-2RAB**	**90**	35	30	M30x1.5	32	100	63	15	1	4	8	1.1	47	94 800	135 700	73 700	2 100	59 300	17 300	450	1 990

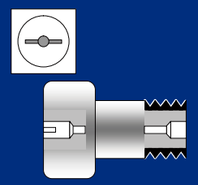
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
NUCF16,NUCF18,NUCF20-1	0/-11	0/-50
NUCF20,NUCF24,NUCF24-1,NUCF30	0/-13	0/-50
NUCF30-2	0/-15	0/-50

ACCESSORIES

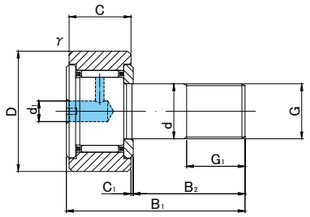
TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

CAM FOLLOWERS
SCREWDRIVER SLOT HEAD

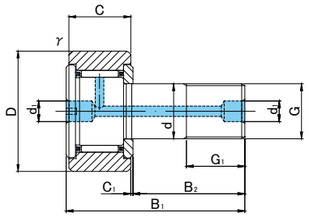


CF

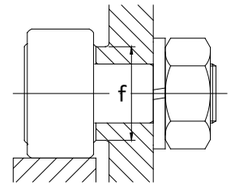
CF..V



CF5(V)～CF10−1(V)



CF10(V)K～CF10−1(V)K



CF TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Designation: Cylindrical outer ring, With seals	Designation: Crowned outer ring R250(CF5) R500(CF6 ～ CF10-1), Without seals	Designation: Crowned outer ring R250(CF5) R500(CF6 ～ CF10-1), With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	r s min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
5	0 -0.012	CF 5	CF 5UU	CF 5R	CF 5UUR	13	9	5	M5×0.8	7.5	23	13	—	0.5	3.1	—	0.3	9.7	3 140	2 770	1 420	29 000	2 250	780	2	10.5
		CF 5V	CF 5VUU	CF 5VR	CF 5VUUR														5 100	5 500	1 420	11 600				
6	0 -0.012	CF 6	CF 6UU	CF 6R	CF 6UUR	16	11	6	M6×1	8	28	16	—	0.6	4	—	0.3	11	3 630	3 630	2 110	25 000	3 430	1 080	3	18.5
		CF 6V	CF 6VUU	CF 6VR	CF 6VUUR														6 960	8 530	2 110	12 000				
8	0 -0.015	CF 8	CF 8UU	CF 8R	CF 8UUR	19	11	8	M8×1.25	10	32	20	—	0.6	4	—	0.3	13	4 310	4 710	4 710	20 000	4 020	1 370	8	28.5
		CF 8V	CF 8VUU	CF 8VR	CF 8VUUR														8 130	11 170	4 710	9 000				
10	0 -0.015	CF10	CF10UU	CF10R	CF10UUR	22	12	10	M10×1.25	12	36	23	—	0.6	4	—	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CF10V	CF10VUU	CF10VR	CF10VUUR														9 510	14 500	7 450	7 500				
10	0 -0.015	CF10-1	CF10-1UU	CF10-1R	CF10-1UUR	26	12	10	M10×1.25	12	36	23	—	0.6	4	—	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CF10-1V	CF10-1VUU	CF10-1VR	CF10-1VUUR														9 510	14 500	7 450	7 500				
10	0 -0.015	CF10K	CF10UUK	CF10RK	CF10UURK	22	12	10	M10×1	12	36	23	—	0.6	4	—	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CF10VK	CF10VUUK	CF10VRK	CF10VUURK														9 510	14 500	7 450	7 500				
10	0 -0.015	CF10-1K	CF10-1UUK	CF10-1RK	CF10-1UURK	26	12	10	M10×1	12	36	23	—	0.6	4	—	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CF10-1VK	CF10-1VUUK	CF10-1VRK	CF10-1VUURK														9 510	14 500	7 450	7 500				

* 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.

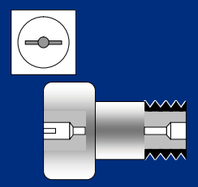
OUTER RINGS TOLERANCE

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

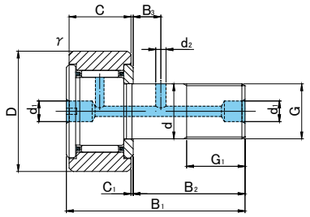
TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF5	—	—	Attached
CF6/CF8/CF10/CF10-1	—	ϕ 4 Attached	Attached
CF12/CF12-1/CF16/CF18	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	ϕ 8 Attached	ϕ 8 Attached	Attached

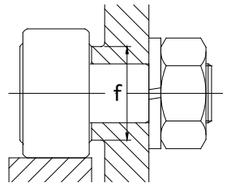
CAM FOLLOWERS
SCREWDRIVER SLOT HEAD



CF

CF..V





CF TYPE

Prepacked Grease

Stud diameter (mm)		Designation: Cylindrical outer ring		Designation: Crowned outer ring R500(CF12 ～ CF18) R1000(CF20 ≦)		Dimensions (mm)												Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	r s min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
12	0 -0.018	**CF12**	**CF12UU**	**CF12R**	**CF12UUR**	**30**	14	12	M12×1.5	13	40	25	6	0.6	6	3	0.6	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CF12V	**CF12VUU**	**CF12VR**	**CF12VUUR**														13 430	19 700	11 270	6 000				
12	0 -0.018	**CF12-1**	**CF12-1UU**	**CF12-1R**	**CF12-1UUR**	**32**	14	12	M12×1.5	13	40	25	6	0.6	6	3	0.6	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CF12-1V	**CF12-1VUU**	**CF12-1VR**	**CF12-1VUUR**														13 430	19 700	11 270	6 000				
16	0 -0.018	**CF16**	**CF16UU**	**CF16R**	**CF16UUR**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	6	3	0.6	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CF16V	**CF16VUU**	**CF16VR**	**CF16VUUR**														20 680	37 630	19 800	4 500				
18	0 -0.018	**CF18**	**CF18UU**	**CF18R**	**CF18UUR**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	6	3	1	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CF18V	**CF18VUU**	**CF18VR**	**CF18VUUR**														25 280	51 350	26 560	3 500				
20	0 -0.021	**CF20**	**CF20UU**	**CF20R**	**CF20UUR**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	1	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CF20V	**CF20VUU**	**CF20VR**	**CF20VUUR**														33 120	64 480	32 140	3 500				
20	0 -0.021	**CF20-1**	**CF20-1UU**	**CF20-1R**	**CF20-1UUR**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	1	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CF20-1V	**CF20-1VUU**	**CF20-1VR**	**CF20-1VUUR**														33 120	64 480	32 140	3 500				
24	0 -0.021	**CF24**	**CF24UU**	**CF24R**	**CF24UUR**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	1	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CF24V	**CF24VUU**	**CF24VR**	**CF24VUUR**														46 550	92 020	49 500	3 000				
24	0 -0.021	**CF24-1**	**CF24-1UU**	**CF24-1R**	**CF24-1UUR**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	1	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CF24-1V	**CF24-1VUU**	**CF24-1VR**	**CF24-1VUUR**														46 550	92 020	49 500	3 000				
30	0 -0.021	**CF30**	**CF30UU**	**CF30R**	**CF30UUR**	**80**	35	30	M30×1.5	32	100	63	15	1	8	4	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CF30V	**CF30VUU**	**CF30VR**	**CF30VUUR**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-1**	**CF30-1UU**	**CF30-1R**	**CF30-1UUR**	**85**	35	30	M30×1.5	32	100	63	15	1	8	4	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030
		CF30-1V	**CF30-1VUU**	**CF30-1VR**	**CF30-1VUUR**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-2**	**CF30-2UU**	**CF30-2R**	**CF30-2UUR**	**90**	35	30	M30×1.5	32	100	63	15	1	8	4	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220
		CF30-2V	**CF30-2VUU**	**CF30-2VR**	**CF30-2VUUR**														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

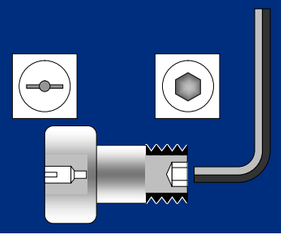
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

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

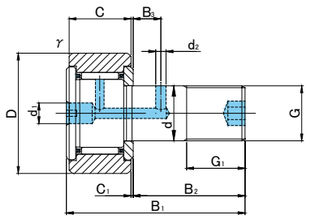
CAM FOLLOWERS

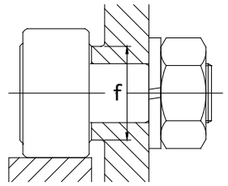
HEXAGON SOCKET ON THREAD SIDE
SCREWDRIVER SLOT HEAD



CF..B

CF..VB





CF..B TYPE

Prepacked Grease

Stud diameter (mm)		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(CF12 ～ CF18) R1000(CF20 ≦)																							
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	H	rs min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
12	0 -0.018	**CF12B**	**CF12UUB**	**CF12RB**	**CF12UURB**	**30**	14	12	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CF12VB	**CF12VUUB**	**CF12VRB**	**CF12VUURB**															13 430	19 700	11 270	6 000				
12	0 -0.018	**CF12-1B**	**CF12-1UUB**	**CF12-1RB**	**CF12-1UURB**	**32**	14	12	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CF12-1VB	**CF12-1VUUB**	**CF12-1VRB**	**CF12-1VUURB**															13 430	19 700	11 270	6 000				
16	0 -0.018	**CF16B**	**CF16UUB**	**CF16RB**	**CF16UURB**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	6	3	6	0.6	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CF16VB	**CF16VUUB**	**CF16VRB**	**CF16VUURB**															20 680	37 630	19 800	4 500				
18	0 -0.018	**CF18B**	**CF18UUB**	**CF18RB**	**CF18UURB**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	6	3	6	1	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CF18VB	**CF18VUUB**	**CF18VRB**	**CF18VUURB**															25 280	51 350	26 560	3 500				
20	0 -0.021	**CF20B**	**CF20UUB**	**CF20RB**	**CF20UURB**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CF20VB	**CF20VUUB**	**CF20VRB**	**CF20VUURB**															33 120	64 480	32 140	3 500				
20	0 -0.021	**CF20-1B**	**CF20-1UUB**	**CF20-1RB**	**CF20-1UURB**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CF20-1VB	**CF20-1VUUB**	**CF20-1VRB**	**CF20-1VUURB**															33 120	64 480	32 140	3 500				
24	0 -0.021	**CF24B**	**CF24UUB**	**CF24RB**	**CF24UURB**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CF24VB	**CF24VUUB**	**CF24VRB**	**CF24VUURB**															46 550	92 020	49 500	3 000				
24	0 -0.021	**CF24-1B**	**CF24-1UUB**	**CF24-1RB**	**CF24-1UURB**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VB	**CF24-1VUUB**	**CF24-1VRB**	**CF24-1VUURB**															46 550	92 020	49 500	3 000				
30	0 -0.021	**CF30B**	**CF30UUB**	**CF30RB**	**CF30UURB**	**80**	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CF30VB	**CF30VUUB**	**CF30VRB**	**CF30VUURB**															67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-1B**	**CF30-1UUB**	**CF30-1RB**	**CF30-1UURB**	**85**	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	45 370	85 060	73 700	5 000	56 000	16 100	450	2 030
		CF30-1VB	**CF30-1VUUB**	**CF30-1VRB**	**CF30-1VUURB**															67 620	144 060	73 700	2 200				
30	0 -0.021	**CF30-2B**	**CF30-2UUB**	**CF30-2RB**	**CF30-2UURB**	**90**	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	45 370	85 060	73 700	5 000	59 300	17 300	450	2 220
		CF30-2VB	**CF30-2VUUB**	**CF30-2VRB**	**CF30-2VUURB**															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)

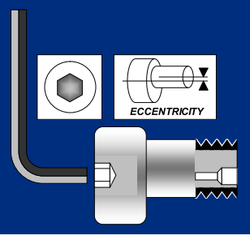
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF3/CF4/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

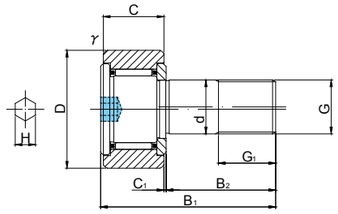
CAM FOLLOWERS

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON STUD HEAD

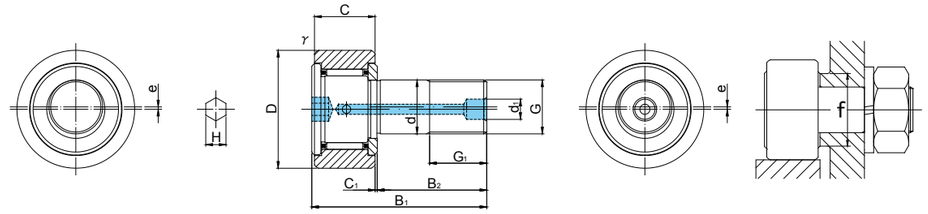


CFH..A

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: Cylindrical outer ring — Without seals	Cylindrical outer ring — With seals	Crowned outer ring R250(CF5) R500(CF6 ～ CF12-1) — Without seals	Crowned outer ring — With seals	D	C	d	G	G1	B1	B2	C1	d1	H	r s min	e	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
5 0 -0.012	**CFH 5A**	**CFH 5UUA**	**CFH 5RA**	**CFH 5URA**	**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	780	2	10.5
	CFH 5VA	**CFH 5VUUA**	**CFH 5VRA**	**CFH 5VURA**														5 100	5 500	1 420	11 600				
6 0 -0.012	**CFH 6A**	**CFH 6UUA**	**CFH 6RA**	**CFH 6URA**	**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 6VURA**														6 960	8 530	2 110	12 000				
8 0 -0.015	**CFH 8A**	**CFH 8UUA**	**CFH 8RA**	**CFH 8URA**	**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 8VURA**														8 130	11 170	4 710	9 000				
10 0 -0.015	**CFH10A**	**CFH10UUA**	**CFH10RA**	**CFH10URA**	**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**	**CFH10VURA**														9 510	14 500	7 450	7 500				
10 0 -0.015	**CFH10-1A**	**CFH10-1UUA**	**CFH10-1RA**	**CFH10-1URA**	**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**	**CFH10-1VURA**														9 510	14 500	7 450	7 500				
12 0 -0.018	**CFH12A**	**CFH12UUA**	**CFH12RA**	**CFH12URA**	**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**	**CFH12VURA**														13 430	19 700	11 270	6 000				
12 0 -0.018	**CFH12-1A**	**CFH12-1UUA**	**CFH12-1RA**	**CFH12-1URA**	**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**	**CFH12-1VURA**														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)

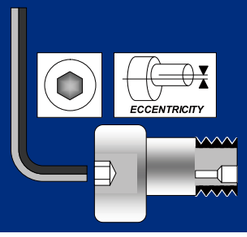
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

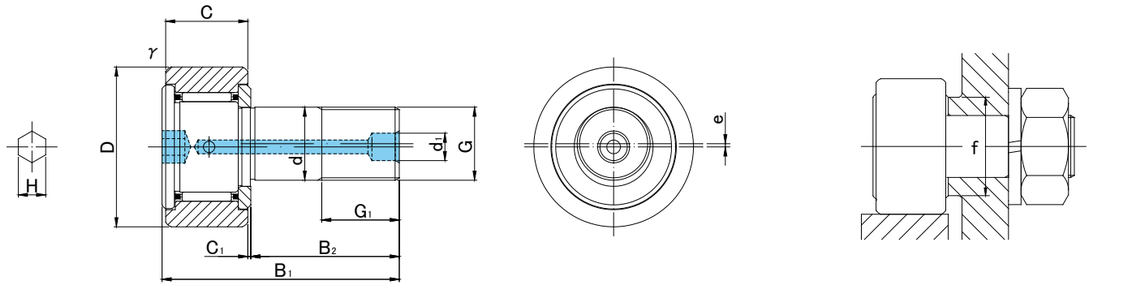
TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF5	—	—	Attached
CF6/CF8/CF10/CF10-1	—	—	Attached
CF12/CF12-1/CF16/CF18	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20/CF20-1/CF24/CF24-1/CF30/CF30-1/CF30-2	ϕ 8 Attached	ϕ 8 Attached	Attached

CAM FOLLOWERS

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON STUD HEAD



CFH..A　　CFH..VA



CFH..A TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R250(CF5) R500(CF6 ~ CF18) R1000(CF20 ≦), Without seals	Crowned outer ring, With seals	D	C	d	G	G1	B1	B2	C1	d1	H	r s min	e	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
16	0 -0.018	**CFH16A**	**CFH16UUA**	**CFH16RA**	**CFH16UURA**	**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
		CFH16VA	**CFH16VUUA**	**CFH16VRA**	**CFH16VUURA**														20 680	37 630	19 800	4 500				
18	0 -0.018	**CFH18A**	**CFH18UUA**	**CFH18RA**	**CFH18UURA**	**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
		CFH18VA	**CFH18VUUA**	**CFH18VRA**	**CFH18VUURA**														25 280	51 350	26 560	3 500				
20	0 -0.021	**CFH20A**	**CFH20UUA**	**CFH20RA**	**CFH20UURA**	**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
		CFH20VA	**CFH20VUUA**	**CFH20VRA**	**CFH20VUURA**														33 120	64 480	32 140	3 500				
20	0 -0.021	**CFH20-1A**	**CFH20-1UUA**	**CFH20-1RA**	**CFH20-1URA**	**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
		CFH20-1VA	**CFH20-1VUUA**	**CFH20-1VRA**	**CFH20-1VURA**														33 120	64 480	32 140	3 500				
24	0 -0.021	**CFH24A**	**CFH24UUA**	**CFH24RA**	**CFH24UURA**	**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
		CFH24VA	**CFH24VUUA**	**CFH24VRA**	**CFH24VUURA**														46 550	92 020	49 500	3 000				
24	0 -0.021	**CFH24-1A**	**CFH24-1UUA**	**CFH24-1RA**	**CFH24-1URA**	**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
		CFH24-1VA	**CFH24-1VUUA**	**CFH24-1VRA**	**CFH24-1VURA**														46 550	92 020	49 500	3 000				
30	0 -0.021	**CFH30A**	**CFH30UUA**	**CFH30RA**	**CFH30URA**	**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
		CFH30VA	**CFH30VUUA**	**CFH30VRA**	**CFH30VURA**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CFH30-1A**	**CFH30-1UUA**	**CFH30-1RA**	**CFH30-1URA**	**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
		CFH30-1VA	**CFH30-1VUUA**	**CFH30-1VRA**	**CFH30-1VURA**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CFH30-2A**	**CFH30-2UUA**	**CFH30-2RA**	**CFH30-2URA**	**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
		CFH30-2VA	**CFH30-2VUUA**	**CFH30-2VRA**	**CFH30-2VURA**														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)

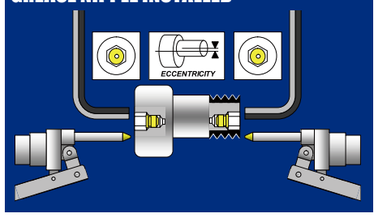
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

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

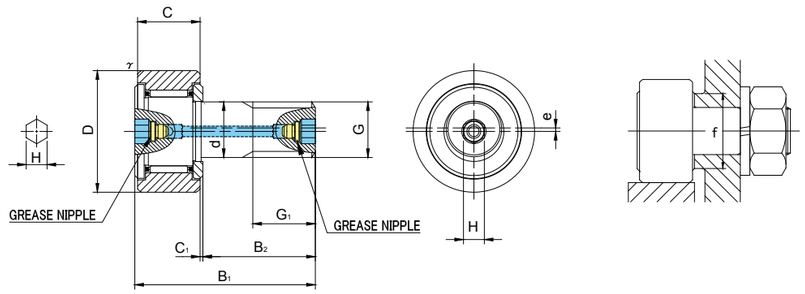
CAM FOLLOWERS

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CFH..AB

CFH..VAB



CFH..AB TYPE

Prepacked Grease

Stud diameter (mm)		Designation: Cylindrical outer ring		Designation: Crowned outer ring R500(CF10 ～ CF18) R1000(CF20 ≦)		Dimensions (mm)											Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	H	r's min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
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)

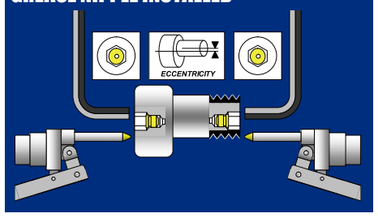
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

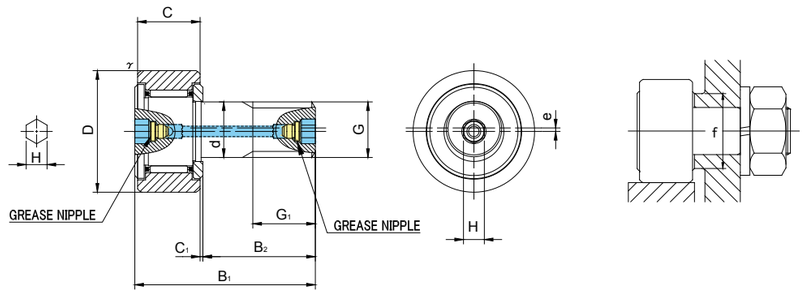
CAM FOLLOWERS

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CFH..AB

CFH..VAB



CFH..AB TYPE

Prepacked Grease

Stud diameter (mm)		Designation: Cylindrical outer ring		Designation: Crowned outer ring R1000(CF24 ≦)		Dimensions (mm)											Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	H	r's min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
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)

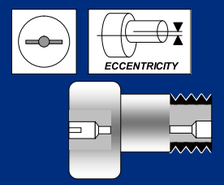
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

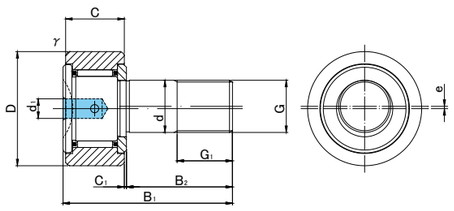
CAM FOLLOWERS

SOLID ECCENTRIC TYPE
SCREWDRIVER SLOT HEAD

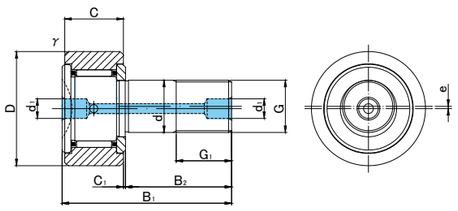


CFH

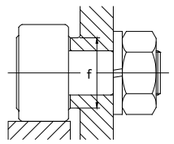
CFH..V



CFH5(V)～CFH10-1(V)



CFH12(V)～CFH16(V)



CFH TYPE

Prepacked Grease

Stud diameter (mm)		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)																				
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	d1	*r*s min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
5	0 -0.012	**CFH 5**	**CFH 5UU**	**CFH 5R**	**CFH 5UUR**	**13**	9	5	M5×0.8	7.5	23	13	0.5	3.1	0.3	0.2	9.7	3 140	2 770	1 420	29 000	2 250	780	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	M6×1	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	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 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	M10×1.25	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	M10×1.25	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	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
		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	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
		CFH12-1V	**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	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
		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)

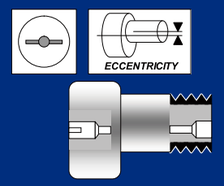
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

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

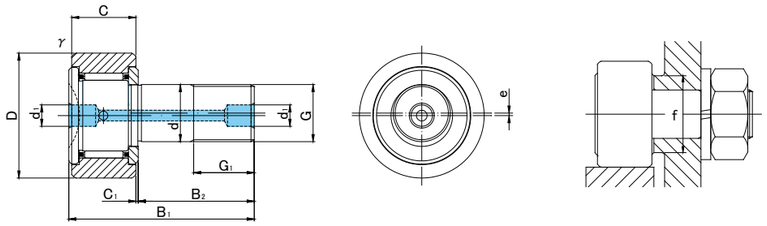
CAM FOLLOWERS

SOLID ECCENTRIC TYPE
SCREWDRIVER SLOT HEAD



CFH

CFH..V



CFH TYPE

Prepacked Grease

Stud diameter (mm)		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 ≦)																				
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	d1	r s min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
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)

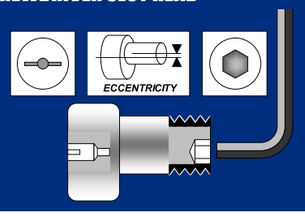
TYPE	Cylindrical outer ring	Crowned outer ring
CF5,CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

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

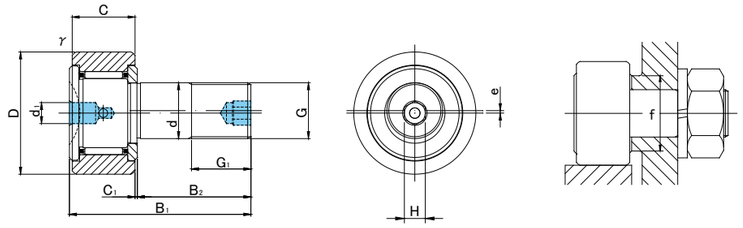
CAM FOLLOWERS

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON THREAD SIDE
SCREWDRIVER SLOT HEAD



CFH..B

CFH..VB



CFH..B TYPE

Prepacked Grease

Stud diameter (mm)		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(CF12 ～ CF18) R1000(CF20 ≦)																						
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	d1	H	*r*s min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
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)

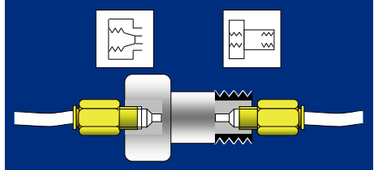
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

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

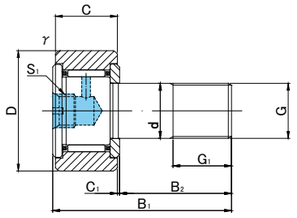
CAM FOLLOWERS

TAP HOLE FOR PIPING
SCREWDRIVER SLOT HEAD

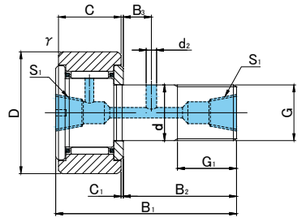


CFT

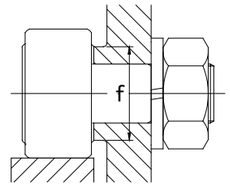
CFT..V



CFT6(V)～CFT10-1(V)



CFT12(V)～CFT18(V)



CFT TYPE

Prepacked Grease

Stud diameter (mm)		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(CF6 ～ CF18)																					
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	S1	d2	r s min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
6	0 -0.012	**CFT 6**	**CFT 6UU**	**CFT 6R**	**CFT 6UUR**	**16**	11	6	M6×1	8	28	16	—	0.6	M6×0.75	—	0.3	11	3 630	3 630	2 110	25 000	3 430	1 080	3	18.5
		CFT 6V	**CFT 6VUU**	**CFT 6VR**	**CFT 6VUUR**														6 960	8 530	2 110	12 000				
8	0 -0.015	**CFT 8**	**CFT 8UU**	**CFT 8R**	**CFT 8UUR**	**19**	11	8	M8×1.25	10	32	20	—	0.6	M6×0.75	—	0.3	13	4 310	4 710	4 710	20 000	4 020	1 370	8	28.5
		CFT 8V	**CFT 8VUU**	**CFT 8VR**	**CFT 8VUUR**														8 130	11 170	4 710	9 000				
10	0 -0.015	**CFT10**	**CFT10UU**	**CFT10R**	**CFT10UUR**	**22**	12	10	M10×1.25	12	36	23	—	0.6	M6×0.75	—	0.3	15	5 390	6 860	6 860	17 000	4 700	1 670	15	45
		CFT10V	**CFT10VUU**	**CFT10VR**	**CFT10VUUR**														9 510	14 500	7 450	7 500				
10	0 -0.015	**CFT10-1**	**CFT10-1UU**	**CFT10-1R**	**CFT10-1UUR**	**26**	12	10	M10×1.25	12	36	23	—	0.6	M6×0.75	—	0.3	15	5 390	6 860	6 860	17 000	5 490	2 060	15	60
		CFT10-1V	**CFT10-1VUU**	**CFT10-1VR**	**CFT10-1VUUR**														9 510	14 500	7 450	7 500				
12	0 -0.018	**CFT12**	**CFT12UU**	**CFT12R**	**CFT12UUR**	**30**	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	0.6	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CFT12V	**CFT12VUU**	**CFT12VR**	**CFT12VUUR**														13 430	19 700	11 270	6 000				
12	0 -0.018	**CFT12-1**	**CFT12-1UU**	**CFT12-1R**	**CFT12-1UUR**	**32**	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	0.6	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CFT12-1V	**CFT12-1VUU**	**CFT12-1VR**	**CFT12-1VUUR**														13 430	19 700	11 270	6 000				
16	0 -0.018	**CFT16**	**CFT16UU**	**CFT16R**	**CFT16UUR**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	Rc1/8	3	0.6	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CFT16V	**CFT16VUU**	**CFT16VR**	**CFT16VUUR**														20 680	37 630	19 800	4 500				
18	0 -0.018	**CFT18**	**CFT18UU**	**CFT18R**	**CFT18UUR**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	Rc1/8	3	1	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CFT18V	**CFT18VUU**	**CFT18VR**	**CFT18VUUR**														25 280	51 350	26 560	3 500				

* 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)

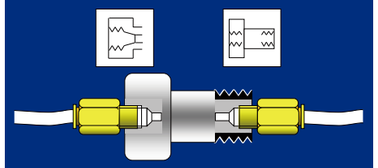
TYPE	Cylindrical outer ring	Crowned outer ring
CF6	0/-8	0/-50
CF8,CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 NUT
All types	Attached

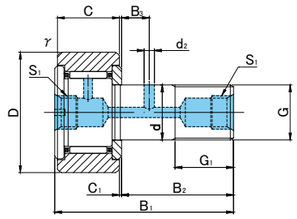
CAM FOLLOWERS

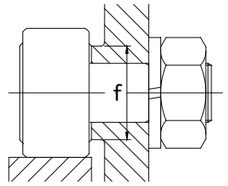
TAP HOLE FOR PIPING
SCREWDRIVER SLOT HEAD



CFT

CFT..V





CFT TYPE

Prepacked Grease

Stud diameter (mm)		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(CF20 ≦)																					
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	S1	d2	r s min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
20	0 -0.021	**CFT20**	**CFT20UU**	**CFT20R**	**CFT20UUR**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	1	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CFT20V	**CFT20VUU**	**CFT20VR**	**CFT20VUUR**														33 120	64 480	32 140	3 500				
20	0 -0.021	**CFT20-1**	**CFT20-1UU**	**CFT20-1R**	**CFT20-1UUR**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	1	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CFT20-1V	**CFT20-1VUU**	**CFT20-1VR**	**CFT20-1VUUR**														33 120	64 480	32 140	3 500				
24	0 -0.021	**CFT24**	**CFT24UU**	**CFT24R**	**CFT24UUR**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	1	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CFT24V	**CFT24VUU**	**CFT24VR**	**CFT24VUUR**														46 550	92 020	49 500	3 000				
24	0 -0.021	**CFT24-1**	**CFT24-1UU**	**CFT24-1R**	**CFT24-1UUR**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	1	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CFT24-1V	**CFT24-1VUU**	**CFT24-1VR**	**CFT24-1VUUR**														46 550	92 020	49 500	3 000				
30	0 -0.021	**CFT30**	**CFT30UU**	**CFT30R**	**CFT30UUR**	**80**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CFT30V	**CFT30VUU**	**CFT30VR**	**CFT30VUUR**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CFT30-1**	**CFT30-1UU**	**CFT30-1R**	**CFT30-1UUR**	**85**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	1	46	45 370	85 060	73 700	5 000	56 000	56 000	450	2 030
		CFT30-1V	**CFT30-1VUU**	**CFT30-1VR**	**CFT30-1VUUR**														67 620	144 060	73 700	2 200				
30	0 -0.021	**CFT30-2**	**CFT30-2UU**	**CFT30-2R**	**CFT30-2UUR**	**90**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	1	46	45 370	85 060	73 700	5 000	59 300	59 300	450	2 220
		CFT30-2V	**CFT30-2VUU**	**CFT30-2VR**	**CFT30-2VUUR**														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
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

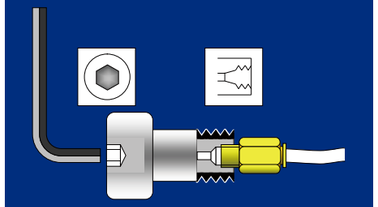
ACCESSORIES

TYPE	 NUT
All types	Attached

CFT

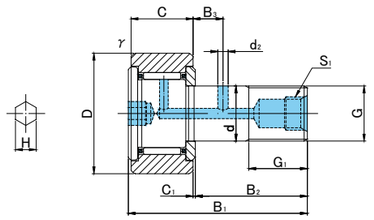
CAM FOLLOWERS

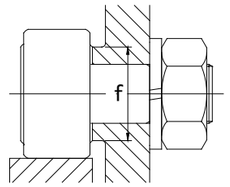
TAP HOLE FOR PIPING
HEXAGON SOCKET ON STUD HEAD



CFT..A

CFT..VA





CFT..A TYPE

Prepacked Grease

Stud diameter (mm)		Designation: Cylindrical outer ring		Designation: Crowned outer ring R500(CF12～CF18) R1000(CF20≦)		Dimensions (mm)														Basic dynamic load rating	Basic static load rating	Largest permissible load	Limiting speed *	Track load capacity		Max tightening torque	Mass
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	S1	d2	H	r's min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
12	0 -0.018	CFT12A	CFT12UUA	CFT12RA	CFT12UURA	30	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	6	0.6	20	7 940	9 800	9 800	14 000	7 060	2 450	22	95
		CFT12VA	CFT12VUUA	CFT12VRA	CFT12VUURA															13 430	19 700	11 270	6 000				
12	0 -0.018	CFT12-1A	CFT12-1UUA	CFT12-1RA	CFT12-1UURA	32	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	6	0.6	20	7 940	9 800	9 800	14 000	7 450	2 740	22	105
		CFT12-1VA	CFT12-1VUUA	CFT12-1VRA	CFT12-1VUURA															13 430	19 700	11 270	6 000				
16	0 -0.018	CFT16A	CFT16UUA	CFT16RA	CFT16UURA	35	18	16	M16×1.5	17	52	32.5	8	0.8	Rc1/8	3	6	0.6	24	12 050	18 330	18 330	10 000	11 200	3 140	58	170
		CFT16VA	CFT16VUUA	CFT16VRA	CFT16VUURA															20 680	37 630	19 800	4 500				
18	0 -0.018	CFT18A	CFT18UUA	CFT18RA	CFT18UURA	40	20	18	M18×1.5	19	58	36.5	8	0.8	Rc1/8	3	6	1	26	14 700	25 200	25 200	8 500	14 400	3 720	87	250
		CFT18VA	CFT18VUUA	CFT18VRA	CFT18VUURA															25 280	51 350	26 560	3 500				
20	0 -0.021	CFT20A	CFT20UUA	CFT20RA	CFT20UURA	52	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	8	1	36	20 680	34 600	32 140	7 000	23 200	8 230	120	460
		CFT20VA	CFT20VUUA	CFT20VRA	CFT20VUURA															33 120	64 480	32 140	3 500				
20	0 -0.021	CFT20-1A	CFT20-1UUA	CFT20-1RA	CFT20-1UURA	47	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	8	1	36	20 680	34 600	32 140	7 000	21 000	7 150	120	385
		CFT20-1VA	CFT20-1VUUA	CFT20-1VRA	CFT20-1VUURA															33 120	64 480	32 140	3 500				
24	0 -0.021	CFT24A	CFT24UUA	CFT24RA	CFT24UURA	62	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	8	1	40	30 480	52 630	49 500	6 500	34 200	10 500	220	815
		CFT24VA	CFT24VUUA	CFT24VRA	CFT24VUURA															46 550	92 020	49 500	3 000				
24	0 -0.021	CFT24-1A	CFT24-1UUA	CFT24-1RA	CFT24-1UURA	72	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	8	1	40	30 480	52 630	49 500	6 500	39 800	12 900	220	1 140
		CFT24-1VA	CFT24-1VUUA	CFT24-1VRA	CFT24-1VUURA															46 550	92 020	49 500	3 000				
30	0 -0.021	CFT30A	CFT30UUA	CFT30RA	CFT30UURA	80	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	8	1	46	45 370	85 060	73 700	5 000	52 600	14 900	450	1 870
		CFT30VA	CFT30VUUA	CFT30VRA	CFT30VUURA															67 620	144 060	73 700	2 200				
30	0 -0.021	CFT30-1A	CFT30-1UUA	CFT30-1RA	CFT30-1UURA	85	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	8	1	46	45 370	85 060	73 700	5 000	56 000	56 000	450	2 030
		CFT30-1VA	CFT30-1VUUA	CFT30-1VRA	CFT30-1VUURA															67 620	144 060	73 700	2 200				
30	0 -0.021	CFT30-2A	CFT30-2UUA	CFT30-2RA	CFT30-2UURA	90	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	8	1	46	45 370	85 060	73 700	5 000	59 300	59 300	450	2 220
		CFT30-2VA	CFT30-2VUUA	CFT30-2VRA	CFT30-2VUURA															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

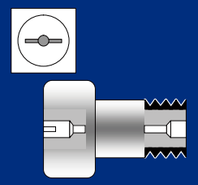
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

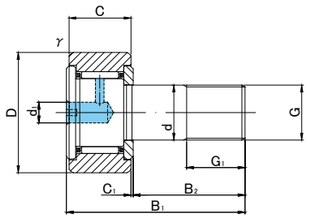
TYPE	 NUT
All types	Attached

CAM FOLLOWERS

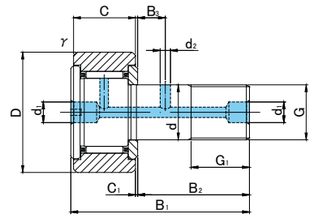
INCH DIMENSION
SCREWDRIVER SLOT HEAD



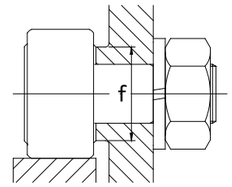
CR



CR8～CR10-1



CR12～CR36



CR TYPE

Prepacked Grease

Stud diameter d mm (inch)	Designation: Cylindrical outer ring, Without seals	Designation: Cylindrical outer ring, With seals	Designation: Crowned outer ring R250(≦CR8-1) R500(CR10≦), Without seals	Designation: Crowned outer ring R250(≦CR8-1) R500(CR10≦), With seals	Dimensions (inch/mm) D		C		d		G UNF	G1		B1		B2		B3		C1	d1		d2		r		f		Basic dynamic load rating Cr N	Basic static load rating Cor N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
4.826 (-)	**CR8**	**CR8UU**	**CR8R**	**CR8UUR**	**1/2**	12.7	11/32	8.731	—	4.826	No.10-32	1/4	6.35	7/8	22.225	1/2	12.7	—	—	0.8	1/8	3.175	—	—	1/64	0.397	21/64	8.334	2 550	2 160	28 000	2 160	730	2	9
	CR8-1	**CR8-1UU**	**CR8-1R**	**CR8-1UUR**			3/8	9.525						1 1/32	26.194	5/8	15.875																2 350	730		10
6.350 (1/4)	**CR10**	**CR10UU**	**CR10R**	**CR10UUR**	**5/8**	15.875	13/32	10.319	1/4	6.35	1/4 - 28	5/16	7.938	1 1/16	26.988	5/8	15.875	—	—	0.8	1/8	3.175	—	—	1/64	0.397	29/64	11.509	3 630	3 630	21 000	3 230	1 180	3	19
	CR10-1	**CR10-1UU**	**CR10-1R**	**CR10-1UUR**			7/16	11.112						1 7/32	30.956	3/4	19.05																3 430	1 180		21
9.525 (3/8)	**CR12**	**CR12UU**	**CR12R**	**CR12UUR**	**3/4**	19.05	1/2	12.7	3/8	9.525	3/8 - 24	3/8	9.525	1 13/32	35.719	7/8	22.225	1/4	6.35	0.8	3/16	4.762	3/32	2.381	1/32	0.794	17/32	13.494	4 410	5 100	15 000	4 510	1 270	17	35
	CR14	**CR14UU**	**CR14R**	**CR14UUR**	**7/8**	22.225																				19/32	15.081	4 800	5 780	14 000	5 290	1 760		46
11.112 (7/16)	**CR16**	**CR16UU**	**CR16R**	**CR16UUR**	**1**	25.4	5/8	15.875	7/16	11.112	7/16 - 20	1/2	12.7	1 21/32	42.069	1	25.4	1/4	6.35	0.8	3/16	4.762	1/8	3.175	3/64	1.191	45/64	17.859	8 820	10 780	13 000	7 250	1 960	20	73
	CR18	**CR18UU**	**CR18R**	**CR18UUR**	**1 1/8**	28.575																			1/16	1.588	3/4	19.05	9 210	11 560	12 000	7 740	2 350		88
12.700 (1/2)	**CR20**	**CR20UU**	**CR20R**	**CR20UUR**	**1 1/4**	31.75	3/4	19.05	1/2	12.7	1/2 - 20	5/8	15.875	2 1/32	51.594	1 1/4	31.75	5/16	7.938	0.8	3/16	4.762	1/8	3.175	1/16	1.588	55/64	21.828	14 210	15 970	11 000	10 680	2 840	28	132
	CR22	**CR22UU**	**CR22R**	**CR22UUR**	**1 3/8**	34.925																										11 760	2 940		157
15.875 (5/8)	**CR24**	**CR24UU**	**CR24R**	**CR24UUR**	**1 1/2**	38.1	7/8	22.225	5/8	15.875	5/8 - 18	3/4	19.05	2 13/32	61.119	1 1/2	38.1	3/8	9.525	0.8	3/16	4.762	5/32	3.969	1/16	1.588	1 3/64	26.196	18 520	24 210	8 500	15 390	3 820	64	225
	CR26	**CR26UU**	**CR26R**	**CR26UUR**	**1 5/8**	41.275																										16 660	3 820		260
19.05 (3/4)	**CR28**	**CR28UU**	**CR28R**	**CR28UUR**	**1 3/4**	44.45	1	25.4	3/4	19.05	3/4 - 16	7/8	22.225	2 25/32	70.644	1 3/4	44.45	7/16	11.112	0.8	3/16	4.762	5/32	3.969	1/16	1.588	1 9/32	32.543	25 090	38 220	7 000	20 970	3 820	117	365
	CR30	**CR30UU**	**CR30R**	**CR30UUR**	**1 7/8**	47.625																										22 440	4 700		410
22.225 (7/8)	**CR32**	**CR32UU**	**CR32R**	**CR32UUR**	**2**	50.8	1 1/4	31.75	7/8	22.225	7/8 - 14	1	25.4	3 9/32	83.344	2	50.8	1/2	12.7	0.8	3/16	4.762	3/16	4.762	1/16	1.588	1 15/32	37.306	32 440	63 800	5 500	30 870	4 900	186	615
	CR36	**CR36UU**	**CR36R**	**CR36UUR**	**2 1/4**	57.15																										34 690	5 980		750

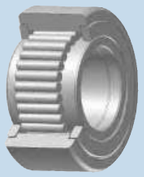
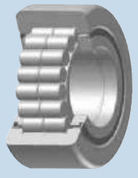
* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

ACCESSORIES

TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CR8, CR8-1,CR10,CR10-1	—	—	Attached
CR12.CR14,CR16,CR18,CR20,CR22	ϕ 4.8 Attached	ϕ 4.8 Attached	Attached
CR24,CR26,CR28,CR30,CR32,CR36	ϕ 4.8 Attached	ϕ 4.8 Attached	Attached

ROLLER FOLLOWERS

Type and Part Code

Type	Applicable shaft diameter	Feature	Part Code
 RNAST (Separable type)	ϕ 7 ~ ϕ 60	NAST type without inner ring. Available with stainless steel type (code M) for higher corrosive resistance.	**RNAST** **15** **M** **R** Type **M**: Stainless steel **None**: High Carbon steel **R**: Crowned outer ring **None**: Cylindrical outer ring
 NAST (Separable type)	ϕ 6 ~ ϕ 50	Thick wall outer ring, inner ring. Separable bearing with combined needle roller with precision cage. Available with stainless steel type (code M) for higher corrosive resistance.	**NAST** **15** **M** **R** Type **M**: Stainless steel **None**: High Carbon steel **R**: Crowned outer ring **None**: Cylindrical outer ring
 NAST-ZZ (Separable type)	ϕ 6 ~ ϕ 50	Separable bearing in which labyrinth seal is formed with combined side plate at both sides of inner ring of NAST type. (NAST-ZZUU type comes with seal) Available with stainless steel type (code M) for higher corrosive resistance.	**NAST** **15** **M** **Z Z** **U U** **R** Type **M**: Stainless steel **None**: High Carbon steel **Z Z**: With shield **UU**: With seal **None**: With shield **R**: Crowned outer ring **None**: Cylindrical outer ring
 NART-R (Non-separable type)	ϕ 5 ~ ϕ 50	Non-separable bearing with fixed side plate at inner ring. Mitigate eccentric load with spherical shape at outer diameter of outer ring (Code R). (NART-UUR type comes with seal) Available with stainless steel type (code M) for higher corrosive resistance.	**NART** **15** **M** **U U** **V** **R** Type **M**: Stainless steel **None**: High Carbon steel **UU**: With seal **None**: With shield **V**: Full complement **None**: With cage **R**: Crowned outer ring **X**: Cylindrical outer ring
 NURT-R (Double-row cylindrical roller)	ϕ 15 ~ ϕ 50	Bearing which allows high radial loading and moderate axial loading with integrated cylindrical roller in double rows. Mitigate eccentric load with spherical shape at outer diameter of outer ring (Code R).	**NURT** **15** **R** Type **R**: Crowned outer ring **X**: Cylindrical outer ring

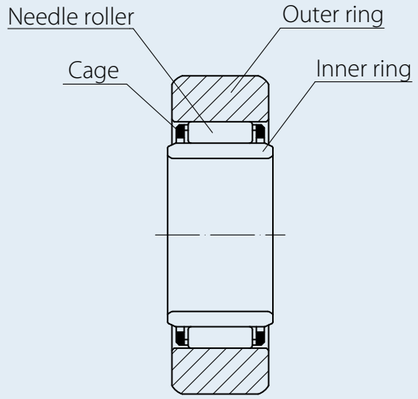
Structure and Features

Roller follower is a bearing with integrated “roller” featuring high rigidity. Its primary application is in a guide roller to have its contacting member travel in linier motion in direction of tangent using rotation of outer ring.

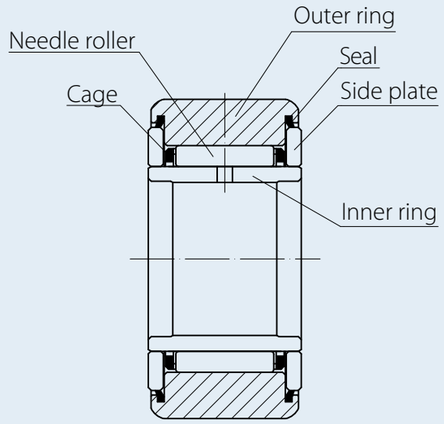
Outer ring of the roller follower is designed with thick ring in order to provide high rigidity to endure heavy load or impact load at portion to contact with the associated objects.

Type of roller follower mainly consists of separate type, which have separated inner ring and outer ring, and non-separate type, whose inner ring has fixed side plate.

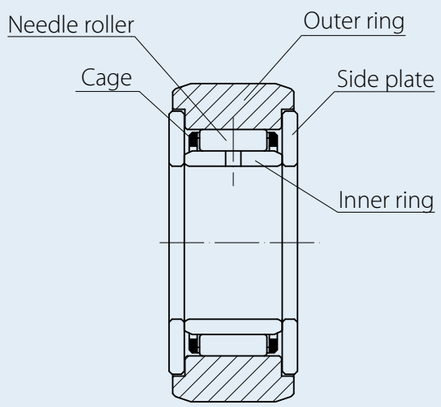
Also, various types with shapes and structures are available in accordance with application. Outer rings have two types – crowned outer ring and cylindrical outer ring. The crowned outer ring is suited for absorbing eccentric load since it absorbs angular misalignment due to a mount error. Cylindrical outer ring is effective for heavy duty since it contacts with large contact area of the associated objects so that can mitigate the contact surface pressure. They have two internal mechanism – one with cage and one with full complement. A roller follower with cage is suitable for high speed application since the guiding feature of cage enables the rotation of "rollers" to be stable. Compared with cage type, 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.



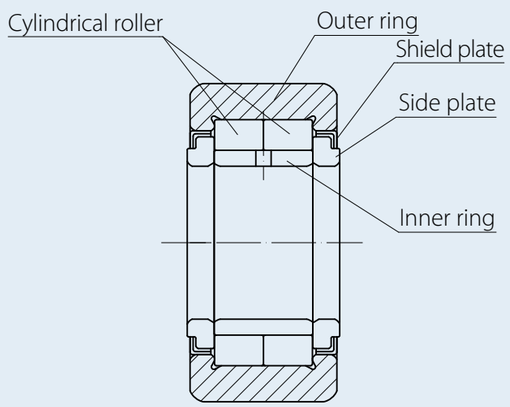
Structure of type NAST



Structure of type NART..UUR



Structure of type NAST..ZZ



Structure of type NURT

Accuracy standard

Roller followers are manufactured in accordance with the following accuracies.

Table-1 Accuracy

Unit: µm

Name \ Category		Crowned outer ring	Cylindrical outer ring
Dimension tolerance of outer ring outer diameter (D)		0 -50	Refer to Table-3
Dimension tolerance of outer ring width (C)		0 -120	
Tolerance of inner ring width (B)	Separable	0 -120	
Tolerance of bearing width (B)	Non-separable	h12	—
Fw	Separable	Refer to Table-11 on page 23	

Table-2 Accuracy of inner ring

Unit: µm

Nominal inner ring bore diameter d (mm)		Deviation of mean bore diameter in a single plane Δ_{dmp}		Tolerance of radial runout of inner ring
Over	Incl.	high	low	max.
2.5	10	0	-8	10
10	18	0	-9	10
18	30	0	-10	13
30	50	0	-12	15

Table-3 Accuracy of outer ring

Unit: µm

Nominal outer ring bore diameter D (mm)		Deviation of mean outer diameter in a single plane Δ_{Dmp}		Tolerance of radial runout of outer ring (max.)
Over	Incl.	high	low	max.
6	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 roller follower.

Table-4 Radial internal clearance

Unit: μm

Part code			Radial internal clearance	
Separable	Non-separable	Double row cylindrical roller	min.	max.
NAST6	NART5R ～ 6R		5	20
NAST8 ～ 12	NART8R ～ 12R		5	25
NAST15 ～ 25	NART15R ～ 25R		10	30
NAST30 ～ 40	NART30R ～ 40R		10	40
NAST45 ～ 50	NART45R ～ 50R		15	50
		NURT15R ～ 30-1R	0	25
		NURT35R ～ 40-1R	5	30
		NURT45R ～ 50-1R	5	35

Fits

Table below indicates recommended fits between roller follower and its mounting shaft.

Table-5 Shaft fits

Type		Tolerance grade
Separable	Without inner ring	k5,k6
	With inner ring	g6,h6
Non-separable		
Double row cylindrical roller		

Track load capacity

Track load capacity means a permissive 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 contacting steel member is assumed to be HRC40. In the case that the hardness of contacting member is not HRC40, track load capacity in the dimension table shall be multiplied by value of track capacity factor obtained by Figure-1.

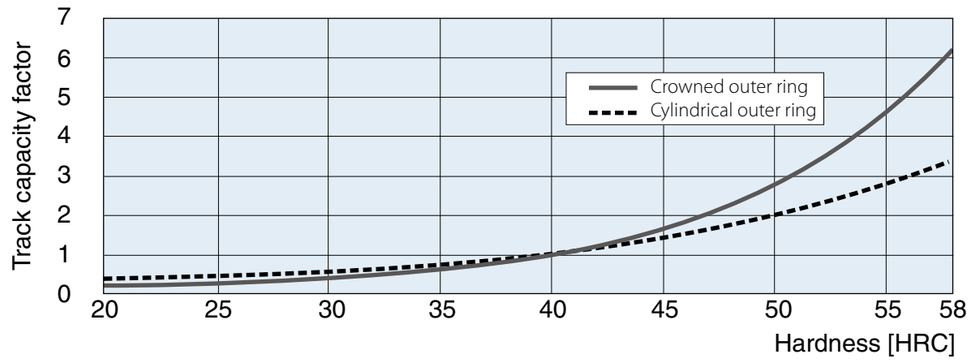


Figure-1 Track capacity factor

Lubrication

All the JNS roller 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.

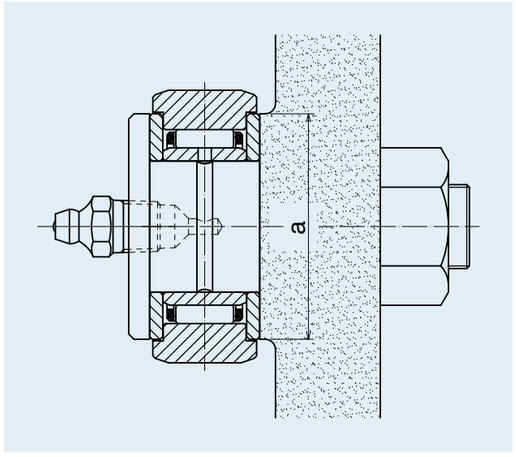
Grease shall be packed up to volume approximately one-third to one-half of internal space of bearing. Lubrication interval varies depending on operation condition. Referential interval may be every six to twenty four months for roller followers with cages and every one to six months for full complement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

Mounting

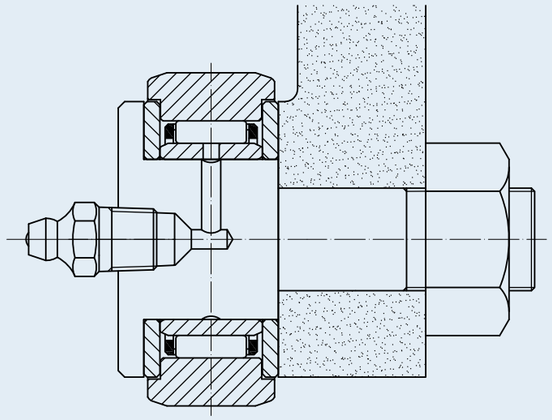
Mounting part

- Thrust load may cause damage to side plate, outer ring or roller follower since it is designed so as to support load in radial direction. It is recommended to design and assemble to avoid thrust load.
- Application with roller follower without inner ring requires heat treatment and grinding finish of shaft. Surface hardness of the shaft shall be HRC58 to 64, and surface roughness shall be R_a 0.2 μ m or less for this application.
- Side plate of non-separate type roller follower is pressed-in to fix it. Application in a manner to push the side plate shall be avoided in order to prevent risk of abnormal rotation under external force.
- Crowned outer ring is recommended in the case that contact between the outer ring and contacting member track surface is not smooth and even.
- When mounting NART, NAST-ZZ and NURT type, dimension "a" must be more than it described in dimension table in order to protect the side plate.

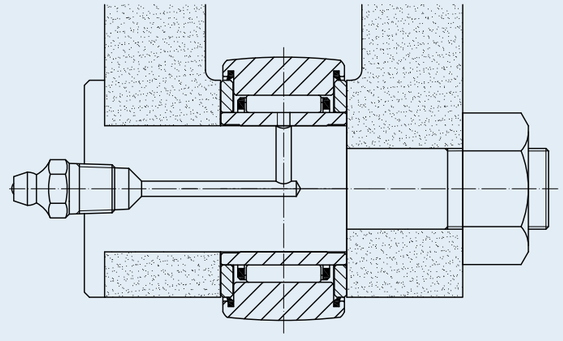


Mounting method

To prevent pre-mature failure of roller follower, lubrication hole of inner ring shall be located outside of loading range (on the side to receive load).



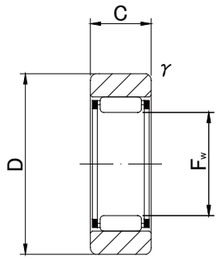
NAST..ZZ Example of mounting



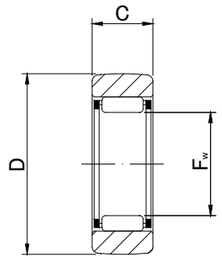
NART..UUR Example of mounting

ROLLER FOLLOWERS
SEPARABLE WITHOUT INNER RING

RNAST



RNAST



RNAST..R

RNAST TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation		Dimensions (mm)				Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed *	Mass
	Cylindrical outer ring	Crowned outer ring (R500)	Fw	D	C	r s min	Cr N	Cor N	Cylindrical outer ring N	Crowned outer ring N	rpm	g (approx)
7	**RNAST 5**	**RNAST 5R**	7 +0.022 +0.013	**16**	7.8	0.3	2 740	2 390	2 350	1 080	30 000	8.9
10	**RNAST 6**	**RNAST 6R**	10 +0.027 +0.016	**19**	9.8	0.3	4 120	4 550	3 530	1 370	20 000	13.9
12	**RNAST 8**	**RNAST 8R**	12 +0.027 +0.016	**24**	9.8	0.6	5 680	5 890	4 020	1 860	17 000	23.5
14	**RNAST10**	**RNAST10R**	14 +0.027 +0.016	**30**	11.8	1	9 700	9 670	5 590	2 450	15 000	42.5
16	**RNAST12**	**RNAST12R**	16 +0.027 +0.016	**32**	11.8	1	10 400	10 900	5 980	2 740	13 000	49.5
20	**RNAST15**	**RNAST15R**	20 +0.033 +0.020	**35**	11.8	1	12 300	14 300	6 570	3 140	10 000	50
22	**RNAST17**	**RNAST17R**	22 +0.033 +0.020	**40**	15.8	1	17 400	20 900	10 900	3 720	9 500	90
25	**RNAST20**	**RNAST20R**	25 +0.033 +0.020	**47**	15.8	1	19 200	24 500	12 700	4 610	8 500	135
30	**RNAST25**	**RNAST25R**	30 +0.033 +0.020	**52**	15.8	1	20 700	28 400	14 100	5 290	7 000	152
38	**RNAST30**	**RNAST30R**	38 +0.041 +0.025	**62**	19.8	1	30 300	45 400	22 100	6 660	5 500	255
42	**RNAST35**	**RNAST35R**	42 +0.041 +0.025	**72**	19.8	1	32 200	50 600	25 700	8 130	5 000	375
50	**RNAST40**	**RNAST40R**	50 +0.041 +0.025	**80**	19.8	1.5	35 700	61 100	26 900	9 310	4 000	420
55	**RNAST45**	**RNAST45R**	55 +0.049 +0.030	**85**	19.8	1.5	37 100	66 400	28 500	10 100	4 000	460
60	**RNAST50**	**RNAST50R**	60 +0.049 +0.030	**90**	19.8	1.5	38 700	71 800	30 200	11 000	3 500	500

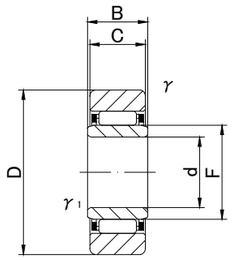
* Suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible.

OUTER RINGS TOLERANCE (μm)

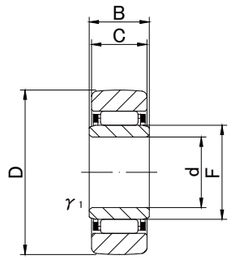
TYPE	Cylindrical outer ring	Crowned outer ring
RNAST5	0/-8	0/-50
RNAST6,RNAST8,RNAST10	0/-9	0/-50
RNAST12,RNAST15,RNAST17,RNAST20	0/-11	0/-50
RNAST25,RNAST30,RNAST35,RNAST40	0/-13	0/-50
RNAST45,RNAST50	0/-15	0/-50

ROLLER FOLLOWERS
SEPARABLE WITH INNER RING

NAST



NAST



NAST..R

NAST TYPE

Prepacked Grease

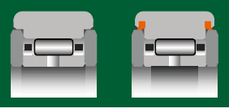
Shaft Diameter (mm)	Designation		Dimensions (mm)							Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed *	Mass
	Cylindrical outer ring	Crowned outer ring (R500)	d	D	B	C	r s min	r 1s min	F	Cr N	Cor N	Cylindrical outer ring N	Crowned outer ring N	rpm	g (approx)
6	**NAST 6**	**NAST 6R**	6 0 -0.008	**19**	10	9.8	0.3	0.3	10	4 120	4 550	3 530	1 370	20 000	17.8
8	**NAST 8**	**NAST 8R**	8 0 -0.008	**24**	10	9.8	0.6	0.3	12	5 680	5 890	4 020	1 860	17 000	28
10	**NAST10**	**NAST10R**	10 0 -0.008	**30**	12	11.8	1	0.3	14	9 700	9 670	5 590	2 450	15 000	50
12	**NAST12**	**NAST12R**	12 0 -0.008	**32**	12	11.8	1	0.3	16	10 400	10 900	5 980	2 740	13 000	58
15	**NAST15**	**NAST15R**	15 0 -0.008	**35**	12	11.8	1	0.3	20	12 300	14 300	6 570	3 140	10 000	62
17	**NAST17**	**NAST17R**	17 0 -0.010	**40**	16	15.8	1	0.3	22	17 400	20 900	10 900	3 720	9 500	110
20	**NAST20**	**NAST20R**	20 0 -0.010	**47**	16	15.8	1	0.3	25	19 200	24 500	12 700	4 610	8 500	155
25	**NAST25**	**NAST25R**	25 0 -0.010	**52**	16	15.8	1	0.3	30	20 700	28 400	14 100	5 290	7 000	180
30	**NAST30**	**NAST30R**	30 0 -0.010	**62**	20	19.8	1	0.6	38	30 300	45 400	22 100	6 660	5 500	320
35	**NAST35**	**NAST35R**	35 0 -0.012	**72**	20	19.8	1	0.6	42	32 200	50 600	25 700	8 130	5 000	440
40	**NAST40**	**NAST40R**	40 0 -0.012	**80**	20	19.8	1.5	1	50	35 700	61 100	26 900	9 310	4 000	530
45	**NAST45**	**NAST45R**	45 0 -0.012	**85**	20	19.8	1.5	1	55	37 100	66 400	28 500	10 100	4 000	580
50	**NAST50**	**NAST50R**	50 0 -0.012	**90**	20	19.8	1.5	1	60	38 700	71 800	30 200	11 000	3 500	635

* Suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible.

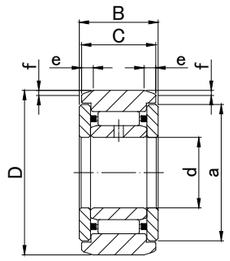
OUTER RINGS TOLERANCE (Outside diameter) (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
NAST6,NAST8,NAST10	0/-9	0/-50
NAST12,NAST15,NAST17,NAST20	0/-11	0/-50
NAST25,NAST30,NAST35,NAST40	0/-13	0/-50
NAST45,NAST50	0/-15	0/-50

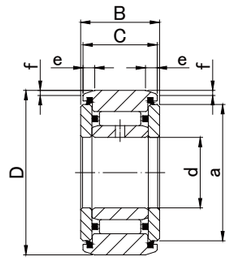
ROLLER FOLLOWERS
SEPARABLE WITH INNER RING WITH SHIELD



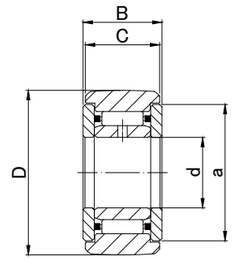
NAST..ZZ



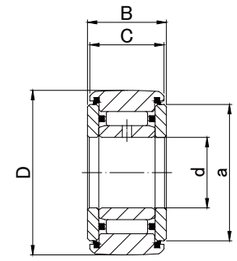
NAST..ZZ



NAST..ZZUU



NAST..ZZR



NAST..ZZUUR

NAST..ZZ TYPE

Prepacked Grease

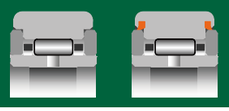
Shaft Diameter (mm)	Designation				Dimensions (mm)								Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed *	Mass
	Cylindrical outer ring		Crowned outer ring (R500)															
	Without seals	With seals	Without seals	With seals	d	D	B	C	a	e	f	rs min	Cr N	Cor N	Cylindrical outer ring N	Crowned outer ring N	rpm	g (approx)
6	NAST 6ZZ	NAST 6ZZUU	NAST 6ZZR	NAST 6ZZUUR	6 0 -0.008	19	14	13.8	14	2.5	0.8	0.3	4 120	4 550	3 530	1 370	20 000	24.5
8	NAST 8ZZ	NAST 8ZZUU	NAST 8ZZR	NAST 8ZZUUR	8 0 -0.008	24	14	13.8	17.5	2.5	0.8	0.6	5 680	5 890	4 510	1 860	17 000	39
10	NAST10ZZ	NAST10ZZUU	NAST10ZZR	NAST10ZZUUR	10 0 -0.008	30	16	15.8	23.5	2.5	0.8	1	9 700	9 670	6 860	2 450	15 000	65
12	NAST12ZZ	NAST12ZZUU	NAST12ZZR	NAST12ZZUUR	12 0 -0.008	32	16	15.8	25.5	2.5	0.8	1	10 400	10 900	7 350	2 740	13 000	75
15	NAST15ZZ	NAST15ZZUU	NAST15ZZR	NAST15ZZUUR	15 0 -0.008	35	16	15.8	29	2.5	0.8	1	12 300	14 300	8 040	3 140	10 000	83
17	NAST17ZZ	NAST17ZZUU	NAST17ZZR	NAST17ZZUUR	17 0 -0.010	40	20	19.8	32.5	3	1	1	17 400	20 900	11 800	3 720	9 500	135
20	NAST20ZZ	NAST20ZZUU	NAST20ZZR	NAST20ZZUUR	20 0 -0.010	47	20	19.8	38	3	1	1	19 200	24 500	13 800	4 610	8 500	195
25	NAST25ZZ	NAST25ZZUU	NAST25ZZR	NAST25ZZUUR	25 0 -0.010	52	20	19.8	43	3	1	1	20 700	28 400	15 300	5 290	7 000	225
30	NAST30ZZ	NAST30ZZUU	NAST30ZZR	NAST30ZZUUR	30 0 -0.010	62	25	24.8	50.5	4	1.2	1	30 300	45 400	22 100	6 660	5 500	400
35	NAST35ZZ	NAST35ZZUU	NAST35ZZR	NAST35ZZUUR	35 0 -0.012	72	25	24.8	53.5	4	1.2	1	32 200	50 600	25 700	8 130	5 000	550
40	NAST40ZZ	NAST40ZZUU	NAST40ZZR	NAST40ZZUUR	40 0 -0.012	80	26	25.8	61.5	4	1.2	1.5	35 700	61 100	30 300	9 310	4 000	710
45	NAST45ZZ	NAST45ZZUU	NAST45ZZR	NAST45ZZUUR	45 0 -0.012	85	26	25.8	66.5	4	1.2	1.5	37 100	66 400	31 100	10 100	4 000	760
50	NAST50ZZ	NAST50ZZUU	NAST50ZZR	NAST50ZZUUR	50 0 -0.012	90	26	25.8	76	4	1.2	1.5	38 700	71 800	34 000	11 000	3 500	830

* 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 (Outside diameter) (μm)

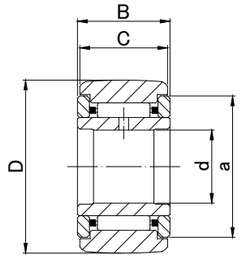
TYPE	Cylindrical outer ring	Crowned outer ring
NAST6,NAST8,NAST10	0/-9	0/-50
NAST12,NAST15,NAST17,NAST20	0/-11	0/-50
NAST25,NAST30,NAST35,NAST40	0/-13	0/-50
NAST45,NAST50	0/-15	0/-50

ROLLER FOLLOWERS
NON SEPARABLE WITH INNER RING

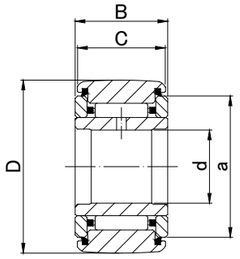


NART..R

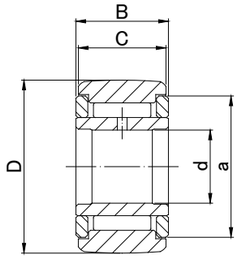
NART..VR



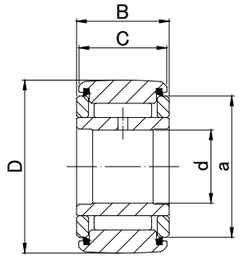
NART..R
NART..X



NART..UUR
NART..UUX



NART..VR
NART..VX



NART..UUVR
NART..UUVX

NART TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation				Dimensions (mm)						Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed *	Mass
	Crowned outer ring R500(≦ NART17) R1000(NART20 ≦)		Cylindrical outer ring													
	Without seals	With seals	Without seals	With seals	d	D	B	C	a	r s min	Cr N	Cor N	Crowned outer ring N	Cylindrical outer ring N	rpm	g (approx)
5	NART 5R NART 5VR	NART 5UUR NART 5UUVR	NART 5X NART 5VX	NART 5UUX NART 5UUVX	5 0 -0.008 5 0 -0.008	16	12	11	12	0.3	3 620 6 760	3 720 8 340	1 080	3 430	25 000 8 500	14.5 15.1
6	NART 6R NART 6VR	NART 6UUR NART 6UUVR	NART 6X NART 6VX	NART 6UUX NART 6UUVX	6 0 -0.008 6 0 -0.008	19	12	11	14	0.3	4 200 7 640	4 700 10 300	1 370	4 020	20 000 7 000	20.5 21.5
8	NART 8R NART 8VR	NART 8UUR NART 8UUVR	NART 8X NART 8VX	NART 8UUX NART 8UUVX	8 0 -0.008 8 0 -0.008	24	15	14	17.5	0.3	6 600 11 800	7 300 15 600	1 860	5 950	17 000 5 500	41.5 42.5
10	NART10R NART10VR	NART10UUR NART10UUVR	NART10X NART10VX	NART10UUX NART10UUVX	10 0 -0.008 10 0 -0.008	30	15	14	23.5	0.6	8 600 15 600	8 300 18 100	2 450	7 060	15 000 5 000	64.5 66.5
12	NART12R NART12VR	NART12UUR NART12UUVR	NART12X NART12VX	NART12UUX NART12UUVX	12 0 -0.008 12 0 -0.008	32	15	14	25.5	0.6	9 100 16 800	9 200 20 500	2 740	7 450	13 000 4 500	71 73
15	NART15R NART15VR	NART15UUR NART15UUVR	NART15X NART15VX	NART15UUX NART15UUVX	15 0 -0.008 15 0 -0.008	35	19	18	29	0.6	14 400 25 100	17 600 36 400	3 140	11 200	10 000 3 500	102 106
17	NART17R NART17VR	NART17UUR NART17UUVR	NART17X NART17VX	NART17UUX NART17UUVX	17 0 -0.008 17 0 -0.008	40	21	20	32.5	1	18 600 32 000	22 500 46 200	3 720	14 400	9 500 3 000	149 155
20	NART20R NART20VR	NART20UUR NART20UUVR	NART20X NART20VX	NART20UUX NART20UUVX	20 0 -0.010 20 0 -0.010	47	25	24	38	1	24 100 41 700	32 700 67 300	7 150	21 000	8 000 2 500	250 255
25	NART25R NART25VR	NART25UUR NART25UUVR	NART25X NART25VX	NART25UUX NART25UUVX	25 0 -0.010 25 0 -0.010	52	25	24	43	1	25 800 45 500	37 500 79 000	8 230	23 200	7 000 2 500	285 295
30	NART30R NART30VR	NART30UUR NART30UUVR	NART30X NART30VX	NART30UUX NART30UUVX	30 0 -0.010 30 0 -0.010	62	29	28	50.5	1	36 200 59 800	56 900 110 400	10 500	33 000	5 500 1 800	470 485
35	NART35R NART35VR	NART35UUR NART35UUVR	NART35X NART35VX	NART35UUX NART35UUVX	35 0 -0.012 35 0 -0.012	72	29	28	53.5	1	38 200 63 000	62 800 121 500	12 900	38 000	5 000 1 700	640 655
40	NART40R NART40VR	NART40UUR NART40UUVR	NART40X NART40VX	NART40UUX NART40UUVX	40 0 -0.012 40 0 -0.012	80	32	30	61.5	1	46 200 76 200	84 700 164 200	14 900	44 400	4 000 1 400	845 865
45	NART45R NART45VR	NART45UUR NART45UUVR	NART45X NART45VX	NART45UUX NART45UUVX	45 0 -0.012 45 0 -0.012	85	32	30	66.5	1	49 300 80 200	95 200 181 100	16 100	47 000	4 000 1 300	915 935
50	NART50R NART50VR	NART50UUR NART50UUVR	NART50X NART50VX	NART50UUX NART50UUVX	50 0 -0.012 50 0 -0.012	90	32	30	76	1	51 100 84 100	102 300 198 000	17 300	50 000	3 500 1 200	980 1 010

* 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.

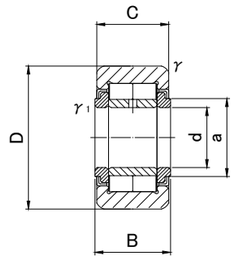
OUTER RINGS TOLERANCE (Outside diameter) (μm)

TYPE	Crowned outer ring	Cylindrical outer ring
NART5	0/-50	0/-8
NART6,NART8,NART10	0/-50	0/-9
NART12,NART15,NART17,NART20	0/-50	0/-11
NART25,NART30,NART35,NART40	0/-50	0/-13
NART45,NART50	0/-50	0/-15

ROLLER FOLLOWERS

FULL COMPLEMENT DOUBLE ROW NON SEPARABLE WITH INNER RING

NURT



NURT..R
NURT..X

NURT TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation		Dimensions (mm)							Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed	Mass
	Crowned outer ring R500(≦NURT17-1) R1000(NURT20≦)	Cylindrical outer ring	d	D	B	C	a	*r*s min	*r*1s min	Cr N	Cor N	Crowned outer ring N	Cylindrical outer ring N	rpm	g (approx)
15	NURT15R	NURT15X	15 0 -0.008	35	19	18	20	0.6	0.3	23 400	27 200	3 140	11 200	5 200	100
	NURT15-1R	NURT15-1X	15 0 -0.008	42	19	18	20	0.6	0.3	23 400	27 200	3 930	13 900	5 200	160
17	NURT17R	NURT17X	17 0 -0.008	40	21	20	22	1	0.5	25 200	30 900	3 720	14 400	4 700	147
	NURT17-1R	NURT17-1X	17 0 -0.008	47	21	20	22	1	0.5	25 200	30 900	4 550	17 300	4 700	222
20	NURT20R	NURT20X	20 0 -0.010	47	25	24	27	1	0.5	38 900	48 900	7 150	21 000	3 800	245
	NURT20-1R	NURT20-1X	20 0 -0.010	52	25	24	27	1	0.5	38 900	48 900	8 230	23 200	3 800	321
25	NURT25R	NURT25X	25 0 -0.010	52	25	24	31	1	0.5	43 000	58 100	8 230	23 200	3 300	281
	NURT25-1R	NURT25-1X	25 0 -0.010	62	25	24	31	1	0.5	43 000	58 100	10 500	27 400	3 300	450
30	NURT30R	NURT30X	30 0 -0.010	62	29	28	38	1	0.5	57 500	74 300	10 500	32 000	2 800	466
	NURT30-1R	NURT30-1X	30 0 -0.010	72	29	28	38	1	0.5	57 500	74 300	12 900	37 200	2 800	697
35	NURT35R	NURT35X	35 0 -0.012	72	29	28	44	1.1	0.6	63 300	87 500	12 900	37 200	2 300	630
	NURT35-1R	NURT35-1X	35 0 -0.012	80	29	28	44	1.1	0.6	63 300	87 500	14 900	41 300	2 300	840
40	NURT40R	NURT40X	40 0 -0.012	80	32	30	51	1.1	0.6	86 900	124 600	14 900	44 300	1 900	817
	NURT40-1R	NURT40-1X	40 0 -0.012	90	32	30	51	1.1	0.6	86 900	124 600	17 300	49 800	1 900	1 130
45	NURT45R	NURT45X	45 0 -0.012	85	32	30	55	1.1	0.6	91 700	137 100	16 100	47 100	1 700	883
	NURT45-1R	NURT45-1X	45 0 -0.012	100	32	30	55	1.1	0.6	91 700	137 100	19 840	55 400	1 700	1 400
50	NURT50R	NURT50X	50 0 -0.012	90	32	30	60	1.1	0.6	96 300	149 700	17 300	49 800	1 500	950
	NURT50-1R	NURT50-1X	50 0 -0.012	110	32	30	60	1.1	0.6	96 300	149 700	22 530	60 900	1 500	1 690

OUTER RINGS TOLERANCE (Outside diameter) (μm)

TYPE	Crowned outer ring	Cylindrical outer ring
NURT15, NURT15-1,NURT17,NURT17-1,NURT20	0/-50	0/-11
NURT20-1,NURT25,NURT25-1,NURT30,NURT30-1,NURT35,NURT35-1,NURT40	0/-50	0/-13
NURT40-1,NURT45,NURT45-1,NURT50,NURT50-1	0/-50	0/-15

NEEDLE ROLLER BEARINGS

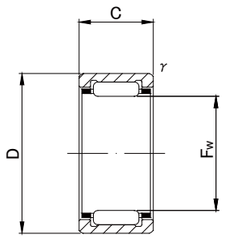
STAINLESS STEEL

MACHINED RING NEEDLE ROLLER BEARINGS STAINLESS STEEL

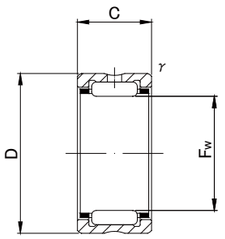
WITHOUT INNER RING

SUS/INOX

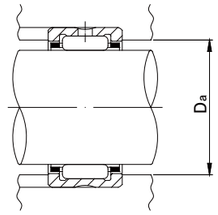
RNA49..M , NK..M



NK..M(Fw ≦ 10)



RNA49..M,NK..M



RNA49..M NK..M TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA49..M	NK..M	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
5	—	NK5/10M	5 +0.018	10	10	0.15	6.5	2 200	1 700	40 000	3.4	—	—
	—	NK5/12M	5 +0.010	10	12	0.15	6.5	2 800	2 400	40 000	4.2	—	—
6	—	NK6/10M	6 +0.018	12	10	0.015	7.5	2 400	2 100	37 000	5.3	—	—
	—	NK6/12M	6 +0.010	12	12	0.15	7.5	3 100	2 900	37 000	6.4	—	—
7	RNA495M	—	7 +0.022	13	10	0.15	8.5	2 700	2 400	34 000	5.9	—	—
	—	NK7/10M	7 +0.013	14	10	0.3	8.5	3 300	2 700	34 000	6.9	—	—
	—	NK7/12M	7 —	14	12	0.3	8.5	4 200	3 700	34 000	8.3	—	—
8	RNA496M	—	8 +0.022	15	10	0.15	13.8	3 500	3 100	32 000	7.3	IR6810M	NA496M
	—	NK8/12M	8 +0.013	15	12	0.3	13	4 600	4 300	32 000	9	IR5812M	NKI 5/12M
	—	NK8/16M	8	15	16	0.3	13	6 500	6 700	32 000	13	IR5816M	NKI 5/16M
9	—	NK9/12M	9 +0.022	16	12	0.3	14	5 000	4 800	30 000	10	IR6912M	NKI 6/12M
	—	NK9/16M	9 +0.013	16	16	0.3	14	6 900	7 500	30 000	13.2	IR6916M	NKI 6/16M
	RNA497M	—	9	17	10	0.15	15.8	4 100	3 300	30 000	9.3	IR7910M	NA497M
10	—	NK10/12M	10 +0.022	17	12	0.3	15	5 400	5 500	28 000	10.7	IR71012M	NKI 7/12M
	—	NK10/16M	10 +0.013	17	16	0.3	15	7 500	8 400	28 000	14.3	IR71016M	NKI 7/16M
	RNA498M	—	10	19	11	0.2	17.4	5 700	4 600	28 000	12.6	IR81011M	NA498M
12	—	NK12/12M	12 +0.027	19	12	0.3	17	6 000	6 700	26 000	12.2	IR91212M	NKI 9/12M
	—	NK12/16M	12 +0.016	19	16	0.3	17	8 400	10 300	26 000	16.3	IR91216M	NKI 9/16M
	RNA499M	—	12	20	11	0.3	18	6 000	5 700	26 000	13.6	IR91211M	NA499M
14	RNA4900M	—	14 +0.027	22	13	0.3	20	8 400	9 200	24 000	16.5	IR101413M	NA4900M
	—	NK14/16M	14 +0.016	22	16	0.3	20	10 800	12 600	24 000	21	IR101416M	NKI 10/16
	—	NK14/20M	14	22	20	0.3	20	13 600	17 000	24 000	26.5	IR101420M	NKI 10/20
15	—	NK15/16M	15 +0.027	23	16	0.3	21	11 400	13 700	23 000	22.5	—	—
	—	NK15/20M	15 +0.016	23	20	0.3	21	14 300	18 500	23 000	28	—	—

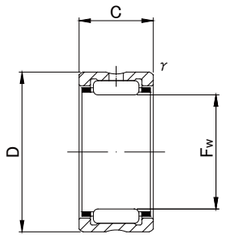
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

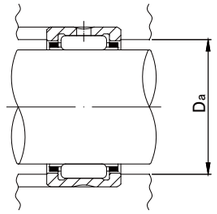
MACHINED RING NEEDLE ROLLER BEARINGS STAINLESS STEEL

WITHOUT INNER RING

SUS/INOX

RNA49..M , NK..M





RNA49..M,NK..M

RNA49..M NK..M TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)				Standard mounting dimensions (mm)	Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	RNA49..M	NK..M	Fw	D	C	r's min	Da MAX	Cr N	Cor N	rpm	g (approx)	INNER RING	WITH INNER RING
16	RNA4901M	—	16	24	13	0.3	22	8 900	10 200	23 000	18.1	IR121613M	NA4901M
	—	NK16/16M	16 +0.027 +0.016	24	16	0.3	22	11 300	13 800	23 000	23	IR121616M	NKI 12/16M
	—	NK16/20M	16	24	20	0.3	22	14 300	18 700	23 000	29	IR121620M	NKI 12/20M
17	—	NK17/16M	17 +0.027 +0.016	25	16	0.3	23	11 700	14 900	22 000	24.5	—	—
	—	NK17/20M	17	25	20	0.3	23	14 900	20 300	22 000	30.5	—	—
18	—	NK18/16M	18 +0.027 +0.016	26	16	0.3	24	12 300	16 100	21 000	25.5	—	—
	—	NK18/20M	18	26	20	0.3	24	15 600	21 700	21 000	32	—	—
19	—	NK19/16M	19 +0.033 +0.020	27	16	0.3	25	12 800	17 200	21 000	27	IR151916M	NKI 15/16M
	—	NK19/20M	19	27	20	0.3	25	16 200	23 200	21 000	34	IR151920M	NKI 15/20M
20	RNA4902M	—	20 +0.033 +0.020	28	13	0.3	26	10 000	12 600	20 000	21.5	IR152013M	NA4902M
22	RNA4903M	—	22 +0.033 +0.020	30	13	0.3	28	10 800	14 300	18 000	23.5	IR172213M	NA4903M
25	RNA4904M	—	25 +0.033 +0.020	37	17	0.3	35	19 300	23 000	16 000	55.5	IR202517M	NA4904M
30	RNA4905M	—	30 +0.033 +0.020	42	17	0.3	40	21 800	28 200	13 000	64	IR253017M	NA4905M

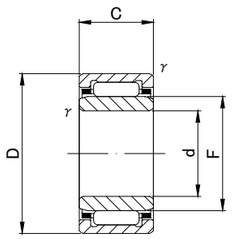
* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

MACHINED RING NEEDLE ROLLER BEARINGS STAINLESS STEEL

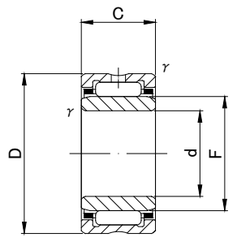
WITH INNER RING

SUS/INOX

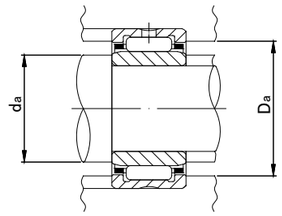
NA49..M ,NKI..M



NKI..M(d ≦ 8)



NA49..M,NKI..M



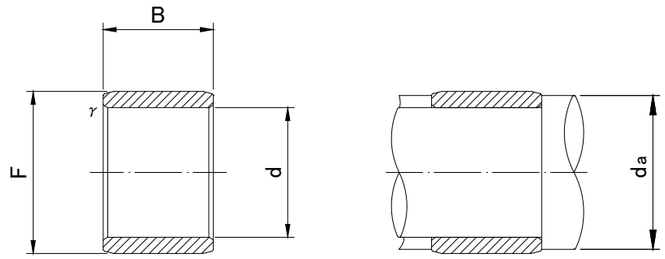
NA49..M ,NKI..M TYPE

Shaft Diameter (mm)	Designation		Dimensions (mm)					Standard mounting dimensions (mm)			Basic dynamic load rating	Basic static load rating	Limiting speed *	Mass	Usable bearing designation	
	NA49..M	NKI..M	d	D	C	r s min	F	da MIN	da MAX	Da MAX	Cr N	Cor N	rpm	g (approx)	OUTER RING	INNER RING
5	NA495M	—	5 0 -0.008	13	10	0.15	7	6.2	6.7	11.8	2 700	2 400	34 000	7.3	RNA495M	IR5710M
	—	NKI 5/12M	5	15	12	0.3	8	7	7.7	13	4 600	4 300	32 000	11.9	NK8/12M	IR5812M
	—	NKI 5/16M	5	15	16	0.3	8	7	7.7	13	6 500	6 700	32 000	16.7	NK8/16M	IR5816M
6	NA496M	—	6 0 -0.008	15	10	0.15	8	7.2	7.7	13.8	3 500	3 100	32 000	9.1	RNA496M	IR6810M
	—	NKI 6/12M	6	16	12	0.3	9	8	8.7	14	5 000	4 800	30 000	13	NK9/12M	IR6912M
	—	NKI 6/16M	6	16	16	0.3	9	8	8.7	14	6 900	7 500	30 000	17.5	NK9/16M	IR6916M
7	NA497M	—	7 0 -0.008	17	10	0.15	9	8.2	8.7	15.8	4 100	3 300	30 000	11.2	RNA497M	IR7910M
	—	NKI 7/12M	7	17	12	0.3	10	9	9.7	15	5 400	5 500	28 000	14.3	NK10/12M	IR71012M
	—	NKI 7/16M	7	17	16	0.3	10	9	9.7	15	7 500	8 400	28 000	19.2	NK10/16M	IR71016M
8	NA498M	—	8 0 -0.008	19	11	0.2	10	9.2	9.7	17.4	5 700	4 600	28 000	15	RNA498M	IR81011M
9	—	NKI 9/12M	9 0 -0.008	19	12	0.3	12	11	11.5	17	6 000	6 700	26 000	16.7	NK12/12M	IR91212M
	—	NKI 9/16M	9	19	16	0.3	12	11	11.5	17	8 400	10 300	26 000	22.5	NK12/16M	IR91216M
	NA499M	—	9	20	11	0.3	12	11	11.5	18	6 000	5 700	26 000	16.7	RNA499M	IR91211M
10	NA4900M	—	10 0 -0.008	22	13	0.3	14	12	13	20	8 400	9 200	24 000	24	RNA4900M	IR101413M
	—	NKI 10/16M	10	22	16	0.3	14	12	13	20	10 800	12 600	24 000	30	NK14/16M	IR101416M
	—	NKI 10/20M	10	22	20	0.3	14	12	13	20	13 600	17 000	24 000	38	NK14/20M	IR101420M
12	NA4901M	—	12 0 -0.008	24	13	0.3	16	14	15	22	8 900	10 200	23 000	26.5	RNA4901M	IR121613M
	—	NKI 12/16M	12	24	16	0.3	16	14	15	22	11 300	13 800	23 000	33.5	NK16/16M	IR121616M
	—	NKI 12/20M	12	24	20	0.3	16	14	15	22	14 300	18 700	23 000	42.5	NK16/20M	IR121620M
15	—	NKI 15/16M	15 0 -0.008	27	16	0.3	19	17	18	25	12 800	17 200	21 000	39.5	NK19/16M	IR151916M
	—	NKI 15/20M	15	27	20	0.3	19	17	18	25	16 200	23 200	21 000	50	NK19/20M	IR151920M
	NA4902M	—	15	28	13	0.3	20	17	19	26	10 000	12 600	20 000	35	RNA4902M	IR152013M
17	NA4903M	—	17 0 -0.008	30	13	0.3	22	19	21	28	10 800	14 300	18 000	39	RNA4903M	IR172213M
20	NA4904M	—	20 0 -0.010	37	17	0.3	25	22	24	35	19 300	23 000	16 000	78.5	RNA4904M	IR202517M
25	NA4905M	—	25 0 -0.010	42	17	0.3	30	27	29	40	21 800	28 200	13 000	92.5	RNA4905M	IR253017M

* Suitable for oil lubrication. In case of grease lubrication, down to 60% of this value.

INNER RINGS STAINLESS STEEL

IR..M



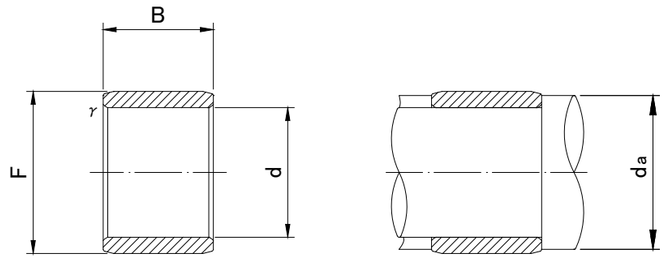
IR..M

IR..M TYPE

Shaft Diameter (mm)	Designation	Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation	
	IR..M	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA49..M	NK..M
5	**IR 5710M**	5 0 -0.008	7	10	0.15	6.2	6.7	1.4	RNA495M	—
	IR 5812M	5	8	12	0.3	7	7.7	3	—	NK8/12M
	IR 5816M	5	8	16	0.3	7	7.7	4	—	NK8/16M
6	**IR 6810M**	6 0 -0.008	8	10	0.15	7.2	7.7	1.7	RNA496M	—
	IR 6912M	6	9	12	0.3	8	8.7	3.2	—	NK9/12M
	IR 6916M	6	9	16	0.3	8	8.7	4.3	—	NK9/16M
	IR 61010M	6	10	10	0.3	8	9.7	4	—	—
7	**IR 7910M**	7 0 -0.008	9	10	0.15	8.2	8.7	1.9	RNA497M	—
	IR 71012M	7	10	12	0.3	9	9.7	3.6	—	NK10/12M
	IR 71016M	7	10	16	0.3	9	9.7	5	—	NK10/16M
8	**IR 81011M**	8 0 -0.008	10	11	0.15	9.2	9.7	2.4	RNA498M	—
	IR 81210M	8	12	10	0.3	10	11	4.8	—	—
9	**IR 91211M**	9 0 -0.008	12	11	0.3	11	11.5	3.1	RNA499M	—
	IR 91212M	9	12	12	0.3	11	11.5	4.5	—	NK12/12M
	IR 91216M	9	12	16	0.3	11	11.5	6	—	NK12/16M
10	**IR 101412M**	10 0 -0.008	14	12	0.3	12	13	7	—	—
	IR 101413M	10	14	13	0.3	12	13	7.5	RNA4900M	—
	IR 101416M	10	14	16	0.3	12	13	9	—	NK14/16M
	IR 101420M	10	14	20	0.3	12	13	11.5	—	NK14/20M
12	**IR 121612M**	12 0 -0.008	16	12	0.3	14	15	8	—	—
	IR 121613M	12	16	13	0.3	14	15	8.5	RNA4901M	—
	IR 121616M	12	16	16	0.3	14	15	10.5	—	NK16/16M
	IR 121620M	12	16	20	0.3	14	15	13.5	—	NK16/20M
15	**IR 151916M**	15 0 -0.008	19	16	0.3	17	18	12.5	—	NK19/16M
	IR 151920M	15	19	20	0.3	17	18	16	—	NK19/20M
	IR 152012M	15	20	12	0.3	17	19	12	—	—
	IR 152013M	15	20	13	0.3	17	19	13.5	RNA4902M	—
17	**IR 172213M**	17 0 -0.008	22	13	0.3	19	21	15.5	RNA4903M	—
	IR 172216M	17	22	16	0.3	19	21	19	—	—

INNER RINGS STAINLESS STEEL

IR..M



IR..M

IR..M TYPE

Shaft Diameter (mm)	Designation	Dimensions (mm)				Standard mounting dimensions (mm)		Mass	Usable bearing designation	
	IR..M	d	F	B	*r*s min	da MIN	da MAX	g (approx)	RNA49..M	NK..M
20	**IR 202516M** **IR 202517M**	20 0 -0.010 20	25 25	16 17	0.3 0.3	22 22	24 24	22 23	— RNA4904M	— —
25	**IR 253016M** **IR253017M**	25 0 -0.010 25	30 30	16 17	0.3 0.3	27 27	29 29	28 28.5	— RNA4905M	— —
30	**IR 303820M**	30 0 -0.010	38	20	0.6	34	37	65	—	—
35	**IR 354220M**	35 0 -0.012	42	20	0.6	39	41	65	—	—
50	**IR 506020M**	50 0 -0.012	60	20	1	55	59	135	—	—

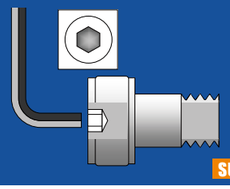
IR..M

CAM FOLLOWERS

STAINLESS STEEL

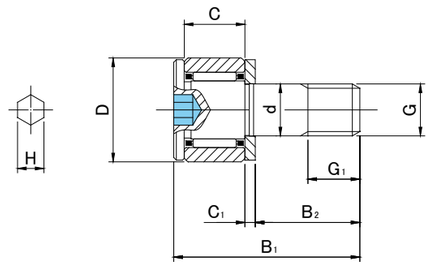
CAM FOLLOWERS STAINLESS STEEL

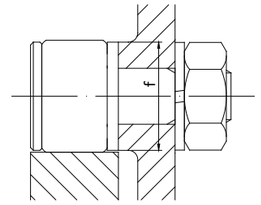
MINIATURE TYPE HEXAGON SOCKET ON STUD HEAD



CFS..MA

CFS..VMA





CFS..MA TYPE

Prepacked Grease

Stud diameter (mm)	h6 tolerance	Designation Cylindrical outer ring: With cage	Full roller	D	C	d	G	G1	B1	B2	C1	H	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Max tightening torque N·m	Mass g (approx)
2.5	0 -0.006	**CFS 2.5MA**	—	**5**	3	2.5	M2.5×0.45	2.5	9.5	5	0.7	0.9	4.8	370	300	260	0.2	1
		—	**CFS 2.5VMA**											920	990	260		
3	0 -0.006	**CFS 3MA**	—	**6**	4	3	M3×0.5	3	11.5	6	0.7	1.5	5.8	570	560	360	0.3	2
		—	**CFS 3VMA**											1 260	1 620	360		
4	0 -0.008	**CFS 4MA**	—	**8**	5	4	M4×0.7	4	15	8	1	2	7.7	990	990	780	0.6	4
		—	**CFS 4VMA**											2 160	2 790	780		
5	0 -0.008	**CFS 5MA**	—	**10**	6	5	M5×0.8	5	18	10	1	2.5	9.6	1 440	1 710	1 420	1.3	7
		—	**CFS 5VMA**											2 880	4 330	1 420		
6	0 -0.008	**CFS 6MA**	—	**12**	7	6	M6×1	6	21.5	12	1.2	3	11.6	1 890	1 980	2 110	2.3	13
		—	**CFS 6VMA**											4 240	5 760	2 110		

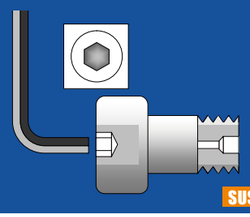
OUTER RINGS TOLERANCE (µm)

TYPE	Cylindrical outer ring
CFS2.5M,CFS3M,CFS4M,CFS5M,CFS6M	0/-8

ACCESSORIES

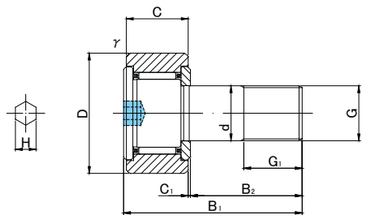
TYPE	 NUT
All types	Attached

CAM FOLLOWERS STAINLESS STEEL
HEXAGON SOCKET ON STUD HEAD

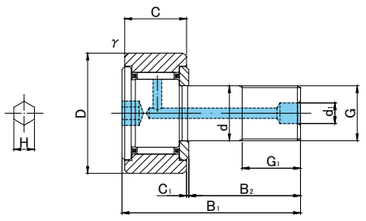



CF..MA

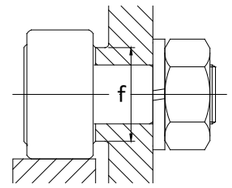

CF..VMA



CF3(V)MA～CF10−1(V)MA



CF10(V)MAK～CF10−1(V)MAK



CF..MA TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R250(CF3 ～ CF5) R500(CF6 ～ CF10-1), Without seals	Crowned outer ring, With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	H	r s min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
3	0 -0.010	**CF 3MA**	**CF 3MUUA**	**CF 3MRA**	**CF 3MUURA**	**10**	7	3	M3×0.5	5	17	9	—	0.5	—	—	1.5	0.2	6.8	1 350	1 080	360	47 000	1 370	540	0.4	4.5
		CF 3VMA	**CF 3VMUUA**	**CF 3VMRA**	**CF 3VMUURA**															2 570	2 300	360	18 800				
4	0 -0.012	**CF 4MA**	**CF 4MUUA**	**CF 4MRA**	**CF 4MUURA**	**12**	8	4	M4×0.7	6	20	11	—	0.5	—	—	2	0.3	8.6	1 890	1 880	780	37 000	1 760	690	1	7.5
		CF 4VMA	**CF 4VMUUA**	**CF 4VMRA**	**CF 4VMUURA**															3 680	3 950	780	14 800				
5	0 -0.012	**CF 5MA**	**CF 5MUUA**	**CF 5MRA**	**CF 5MUURA**	**13**	9	5	M5×0.8	7.5	23	13	—	0.5	—	—	2.5	0.3	9.7	2 880	2 540	1 420	29 000	2 250	780	2	10.5
		CF 5VMA	**CF 5VMUUA**	**CF 5VMRA**	**CF 5VMUURA**															4 690	5 060	1 420	11 600				
6	0 -0.012	**CF 6MA**	**CF 6MUUA**	**CF 6MRA**	**CF 6MUURA**	**16**	11	6	M6×1	8	28	16	—	0.6	—	—	3	0.3	11	3 330	3 330	2 110	25 000	3 430	1 080	3	18.5
		CF 6VMA	**CF 6VMUUA**	**CF 6VMRA**	**CF 6VMUURA**															6 400	7 840	2 110	12 000				
8	0 -0.015	**CF 8MA**	**CF 8MUUA**	**CF 8MRA**	**CF 8MUURA**	**19**	11	8	M8×1.25	10	32	20	—	0.6	—	—	4	0.3	13	3 960	4 330	4 710	20 000	4 020	1 370	8	28.5
		CF 8VMA	**CF 8VMUUA**	**CF 8VMRA**	**CF 8VMUURA**															7 470	10 270	4 710	9 000				
10	0 -0.015	**CF10MA**	**CF10MUUA**	**CF10MRA**	**CF10MUURA**	**22**	12	10	M10×1.25	12	36	23	—	0.6	—	—	5	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CF10VMA	**CF10VMUUA**	**CF10VMRA**	**CF10VMUURA**															8 740	13 340	7 450	7 500				
10	0 -0.015	**CF10-1MA**	**CF10-1MUUA**	**CF10-1MRA**	**CF10-1MUURA**	**26**	12	10	M10×1.25	12	36	23	—	0.6	—	—	5	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CF10-1VMA	**CF10-1VMUUA**	**CF10-1VMRA**	**CF10-1VMUURA**															8 740	13 340	7 450	7 500				
10	0 -0.015	**CF10MAK**	**CF10MUUAK**	**CF10MRAK**	**CF10MUURAK**	**22**	12	10	M10×1	12	36	23	—	0.6	4	—	5	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CF10VMAK	**CF10VMUUAK**	**CF10VMRAK**	**CF10VMUURAK**															8 740	13 340	7 450	7 500				
10	0 -0.015	**CF10-1MAK**	**CF10-1MUUAK**	**CF10-1MRAK**	**CF10-1MUURAK**	**26**	12	10	M10×1	12	36	23	—	0.6	4	—	5	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CF10-1VMAK	**CF10-1VMUUAK**	**CF10-1VMRAK**	**CF10-1VMUURAK**															8 740	13 340	7 450	7 500				

* 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.

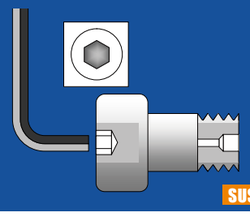
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF3M,CF4M,CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

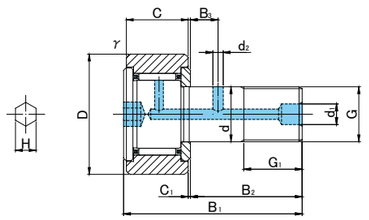
TYPE	STOP PLUG	RESIN PLUG	NUT
CF3M/CF4M/CF5M/CF6M/CF8M/CF10M/CF10-1M	—	—	Attached
CF10MK/CF10-1MK	ϕ 4 Attached	ϕ 4 Attached	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

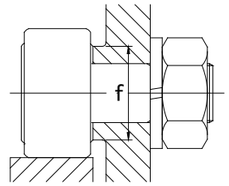
CAM FOLLOWERS STAINLESS STEEL
HEXAGON SOCKET ON STUD HEAD




CF..MA


CF..VMA





CF..MA TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R500(CF12 ～ CF18) R1000(CF20 ≦), Without seals	Crowned outer ring, With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	H	r s min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
12	0 -0.018	CF12MA	CF12MUUA	CF12MRA	CF12MUURA	30	14	12	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CF12VMA	CF12VMUUA	CF12VMRA	CF12VMUURA															12 350	18 120	11 270	6 000				
12	0 -0.018	CF12-1MA	CF12-1MUUA	CF12-1MRA	CF12-1MUURA	32	14	12	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CF12-1VMA	CF12-1VMUUA	CF12-1VMRA	CF12-1VMUURA															12 350	18 120	11 270	6 000				
16	0 -0.018	CF16MA	CF16MUUA	CF16MRA	CF16MUURA	35	18	16	M16×1.5	17	52	32.5	8	0.8	6	3	6	0.6	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CF16VMA	CF16VMUUA	CF16VMRA	CF16VMUURA															19 020	34 610	19 800	4 500				
18	0 -0.018	CF18MA	CF18MUUA	CF18MRA	CF18MUURA	40	20	18	M18×1.5	19	58	36.5	8	0.8	6	3	6	1	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CF18VMA	CF18VMUUA	CF18VMRA	CF18VMUURA															23 250	47 240	26 560	3 500				
20	0 -0.021	CF20MA	CF20MUUA	CF20MRA	CF20MUURA	52	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CF20VMA	CF20VMUUA	CF20VMRA	CF20VMUURA															30 470	59 320	32 140	3 500				
20	0 -0.021	CF20-1MA	CF20-1MUUA	CF20-1MRA	CF20-1MUURA	47	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CF20-1VMA	CF20-1VMUUA	CF20-1VMRA	CF20-1VMUURA															30 470	59 320	32 140	3 500				
24	0 -0.021	CF24MA	CF24MUUA	CF24MRA	CF24MUURA	62	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CF24VMA	CF24VMUUA	CF24VMRA	CF24VMUURA															42 820	84 650	49 500	3 000				
24	0 -0.021	CF24-1MA	CF24-1MUUA	CF24-1MRA	CF24-1MUURA	72	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VMA	CF24-1VMUUA	CF24-1VMRA	CF24-1VMUURA															42 820	84 650	49 500	3 000				
30	0 -0.021	CF30MA	CF30MUUA	CF30MRA	CF30MUURA	80	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CF30VMA	CF30VMUUA	CF30VMRA	CF30VMUURA															62 210	132 530	73 700	2 200				
30	0 -0.021	CF30-1MA	CF30-1MUUA	CF30-1MRA	CF30-1MUURA	85	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	41 740	78 250	73 700	5 000	56 000	56 000	450	2 030
		CF30-1VMA	CF30-1VMUUA	CF30-1VMRA	CF30-1VMUURA															62 210	132 530	73 700	2 200				
30	0 -0.021	CF30-2MA	CF30-2MUUA	CF30-2MRA	CF30-2MUURA	90	35	30	M30×1.5	32	100	63	15	1	8	4	8	1	46	41 740	78 250	73 700	5 000	59 300	59 300	450	2 220
		CF30-2VMA	CF30-2VMUUA	CF30-2VMRA	CF30-2VMUURA															62 210	132 530	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)

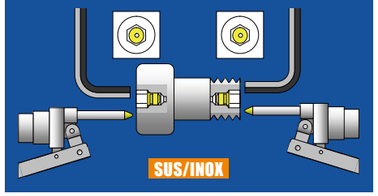
TYPE	Cylindrical outer ring	Crowned outer ring
CF3M,CF4M,CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF3M/CF4M/CF5M/CF6M/CF8M/CF10M/CF10-1M	—	—	Attached
CF10MK/CF10-1MK	ϕ 4 Attached	ϕ 4 Attached	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

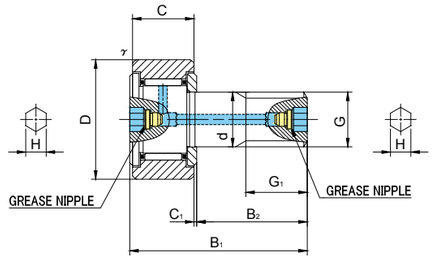
CAM FOLLOWERS STAINLESS STEEL

HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED

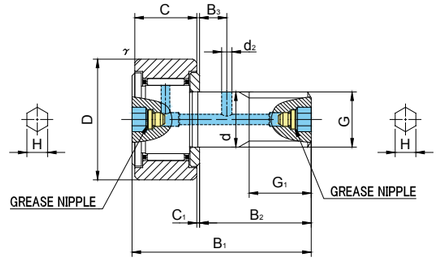


CF..MAB

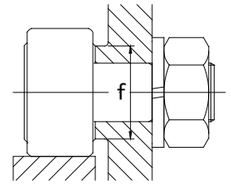
CF..VMAB



CF10(V)ABK～CF10-1(V)MABK



CF12(V)AB～CF18(V)MAB



CF..MAB TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R500(CF10～CF18), Without seals	Crowned outer ring R500(CF10～CF18), With seals	D	C	d	G	G1	B1	B2	B3	C1	d2	H	r s min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
10	0 -0.015	**CF10MABK**	**CF10MUUABK**	**CF10MRABK**	**CF10MUURABK**	**22**	12	10	**M10×1**	12	36	23	—	0.6	—	5	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CF10VMABK	**CF10VMUUABK**	**CF10VMRABK**	**CF10VMUURABK**														8 740	13 340	7 450	7 500				
10	0 -0.015	**CF10-1MABK**	**CF10-1MUUABK**	**CF10-1MRABK**	**CF10-1MUURABK**	**26**	12	10	**M10×1**	12	36	23	—	0.6	—	5	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CF10-1VMABK	**CF10-1VMUUABK**	**CF10-1VMRABK**	**CF10-1VMUURABK**														8 740	13 340	7 450	7 500				
12	0 -0.018	**CF12MAB**	**CF12MUUAB**	**CF12MRAB**	**CF12MUURAB**	**30**	14	12	M12×1.5	13	40	25	6	0.6	3	6	0.6	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CF12VMAB	**CF12VMUUAB**	**CF12VMRAB**	**CF12VMUURAB**														12 350	18 120	11 270	6 000				
12	0 -0.018	**CF12-1MAB**	**CF12-1MUUAB**	**CF12-1MRAB**	**CF12-1MUURAB**	**32**	14	12	M12×1.5	13	40	25	6	0.6	3	6	0.6	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CF12-1VMAB	**CF12-1VMUUAB**	**CF12-1VMRAB**	**CF12-1VMUURAB**														12 350	18 120	11 270	6 000				
16	0 -0.018	**CF16MAB**	**CF16MUUAB**	**CF16MRAB**	**CF16MUURAB**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	3	6	0.6	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CF16VMAB	**CF16VMUUAB**	**CF16VMRAB**	**CF16VMUURAB**														19 020	34 610	19 800	4 500				
18	0 -0.018	**CF18MAB**	**CF18MUUAB**	**CF18MRAB**	**CF18MUURAB**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	3	6	1	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CF18VMAB	**CF18VMUUAB**	**CF18VMRAB**	**CF18VMUURAB**														23 250	47 240	26 560	3 500				

CF..MAB 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)

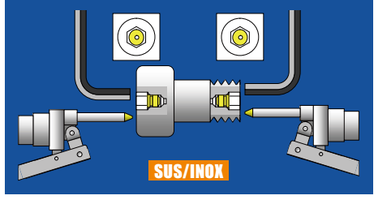
TYPE	Cylindrical outer ring	Crowned outer ring
CF10,CF10-1,CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

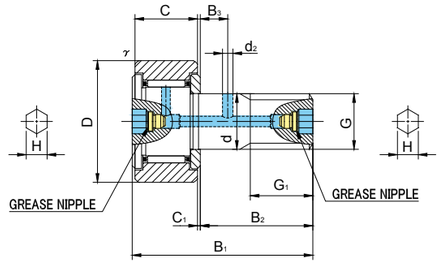
CAM FOLLOWERS STAINLESS STEEL

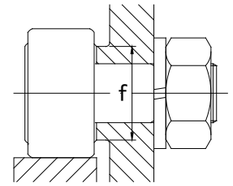
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CF..MAB

CF..VMAB





CF..MAB TYPE

Prepacked Grease

Stud diameter (mm)		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(CF20 ≦)																						
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	d2	H	rs min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
20	0 -0.021	**CF20MAB**	**CF20MUUAB**	**CF20MRAB**	**CF20MUURAB**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	4	8	1	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CF20VMAB	**CF20VMUUAB**	**CF20VMRAB**	**CF20VMUURAB**														30 470	59 320	32 140	3 500				
20	0 -0.021	**CF20-1MAB**	**CF20-1MUUAB**	**CF20-1MRAB**	**CF20-1MUURAB**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	4	8	1	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CF20-1VMAB	**CF20-1VMUUAB**	**CF20-1VMRAB**	**CF20-1VMUURAB**														30 470	59 320	32 140	3 500				
24	0 -0.021	**CF24MAB**	**CF24MUUAB**	**CF24MRAB**	**CF24MUURAB**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	4	8	1	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CF24VMAB	**CF24VMUUAB**	**CF24VMRAB**	**CF24VMUURAB**														42 820	84 650	49 500	3 000				
24	0 -0.021	**CF24-1MAB**	**CF24-1MUUAB**	**CF24-1MRAB**	**CF24-1MUURAB**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	4	8	1	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VMAB	**CF24-1VMUUAB**	**CF24-1VMRAB**	**CF24-1VMUURAB**														42 820	84 650	49 500	3 000				
30	0 -0.021	**CF30MAB**	**CF30MUUAB**	**CF30MRAB**	**CF30MUURAB**	**80**	35	30	M30×1.5	32	100	63	15	1	4	8	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CF30VMAB	**CF30VMUUAB**	**CF30VMRAB**	**CF30VMUURAB**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CF30-1MAB**	**CF30-1MUUAB**	**CF30-1MRAB**	**CF30-1MUURAB**	**85**	35	30	M30×1.5	32	100	63	15	1	4	8	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CF30-1VMAB	**CF30-1VMUUAB**	**CF30-1VMRAB**	**CF30-1VMUURAB**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CF30-2MAB**	**CF30-2MUUAB**	**CF30-2MRAB**	**CF30-2MUURAB**	**90**	35	30	M30×1.5	32	100	63	15	1	4	8	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CF30-2VMAB	**CF30-2VMUUAB**	**CF30-2VMRAB**	**CF30-2VMUURAB**														62 210	132 530	73 700	2 200				

CF..MAB 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.

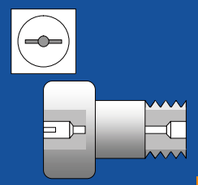
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
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

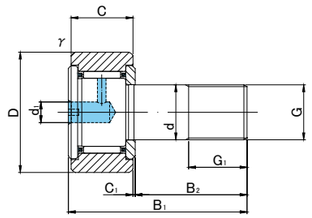
TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

CAM FOLLOWERS STAINLESS STEEL
SCREWDRIVER SLOT HEAD

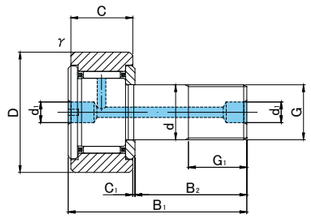



CF..M

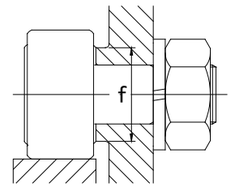

CF..VM



CF5(V)M～CF10−1(V)M



CF10(V)MK～CF10−1(V)MK



CF..M TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R250(CF5) R500(CF6 ～ CF10-1), Without seals	Crowned outer ring, With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	r's min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
5	0 -0.012	CF 5M	CF 5MUU	CF 5MR	CF 5MUUR	13	9	5	M5×0.8	7.5	23	13	—	0.5	3.1	—	0.3	9.7	2 880	2 540	1 420	29 000	2 250	780	2	10.5
		CF 5VM	CF 5VMUU	CF 5VMR	CF 5VMUUR														4 690	5 060	1 420	11 600				
6	0 -0.012	CF 6M	CF 6MUU	CF 6MR	CF 6MUUR	16	11	6	M6×1	8	28	16	—	0.6	4	—	0.3	11	3 330	3 330	2 110	25 000	3 430	1 080	3	18.5
		CF 6VM	CF 6VMUU	CF 6VMR	CF 6VMUUR														6 400	7 840	2 110	12 000				
8	0 -0.015	CF 8M	CF 8MUU	CF 8MR	CF 8MUUR	19	11	8	M8×1.25	10	32	20	—	0.6	4	—	0.3	13	3 960	4 330	4 710	20 000	4 020	1 370	8	28.5
		CF 8VM	CF 8VMUU	CF 8VMR	CF 8VMUUR														7 470	10 270	4 710	9 000				
10	0 -0.015	CF10M	CF10MUU	CF10MR	CF10MUUR	22	12	10	M10×1.25	12	36	23	—	0.6	4	—	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CF10VM	CF10VMUU	CF10VMR	CF10VMUUR														8 740	13 340	7 450	7 500				
10	0 -0.015	CF10-1M	CF10-1MUU	CF10-1MR	CF10-1MUUR	26	12	10	M10×1.25	12	36	23	—	0.6	4	—	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CF10-1VM	CF10-1VMUU	CF10-1VMR	CF10-1VMUUR														8 740	13 340	7 450	7 500				
10	0 -0.015	CF10MK	CF10MUUK	CF10MRK	CF10MUURK	22	12	10	M10×1	12	36	23	—	0.6	4	—	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CF10VMK	CF10VMUUK	CF10VMRK	CF10VMUURK														8 740	13 340	7 450	7 500				
10	0 -0.015	CF10-1MK	CF10-1MUUK	CF10-1MRK	CF10-1MUURK	26	12	10	M10×1	12	36	23	—	0.6	4	—	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CF10-1VMK	CF10-1VMUUK	CF10-1VMRK	CF10-1VMUURK														8 740	13 340	7 450	7 500				

* 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.

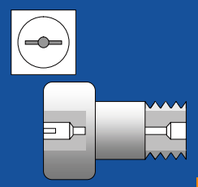
OUTER RINGS TOLERANCE (μm)

TYPE	Cylindrical outer ring	Crowned outer ring
CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

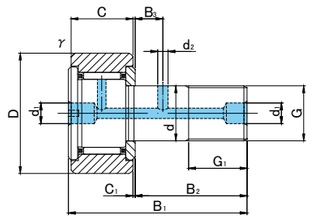
TYPE	STOP PLUG	RESIN PLUG	NUT
CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	ϕ 4 Attached	Attached
CF10MK/CF10-1MK	ϕ 4 Attached	ϕ 4 Attached	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

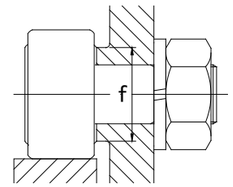
CAM FOLLOWERS STAINLESS STEEL
SCREWDRIVER SLOT HEAD



CF..M

CF..VM





CF..M TYPE

Prepacked Grease

Stud diameter (mm)		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(CF12 ～ CF18) R1000(CF20 ≦)																					
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	d1	d2	r s min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
12	0 -0.018	**CF12M**	**CF12MUU**	**CF12MR**	**CF12MUUR**	**30**	14	12	M12×1.5	13	40	25	6	0.6	6	3	0.6	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CF12VM	**CF12VMUU**	**CF12VMR**	**CF12VMUUR**														12 350	18 120	11 270	6 000				
12	0 -0.018	**CF12-1M**	**CF12-1MUU**	**CF12-1MR**	**CF12-1MUUR**	**32**	14	12	M12×1.5	13	40	25	6	0.6	6	3	0.6	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CF12-1VM	**CF12-1VMUU**	**CF12-1VMR**	**CF12-1VMUUR**														12 350	18 120	11 270	6 000				
16	0 -0.018	**CF16M**	**CF16MUU**	**CF16MR**	**CF16MUUR**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	6	3	0.6	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CF16VM	**CF16VMUU**	**CF16VMR**	**CF16VMUUR**														19 020	34 610	19 800	4 500				
18	0 -0.018	**CF18M**	**CF18MUU**	**CF18MR**	**CF18MUUR**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	6	3	1	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CF18VM	**CF18VMUU**	**CF18VMR**	**CF18VMUUR**														23 250	47 240	26 560	3 500				
20	0 -0.021	**CF20M**	**CF20MUU**	**CF20MR**	**CF20MUUR**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	1	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CF20VM	**CF20VMUU**	**CF20VMR**	**CF20VMUUR**														30 470	59 320	32 140	3 500				
20	0 -0.021	**CF20-1M**	**CF20-1MUU**	**CF20-1MR**	**CF20-1MUUR**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	8	4	1	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CF20-1VM	**CF20-1VMUU**	**CF20-1VMR**	**CF20-1VMUUR**														30 470	59 320	32 140	3 500				
24	0 -0.021	**CF24M**	**CF24MUU**	**CF24MR**	**CF24MUUR**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	1	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CF24VM	**CF24VMUU**	**CF24VMR**	**CF24VMUUR**														42 820	84 650	49 500	3 000				
24	0 -0.021	**CF24-1M**	**CF24-1MUU**	**CF24-1MR**	**CF24-1MUUR**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	8	4	1	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VM	**CF24-1VMUU**	**CF24-1VMR**	**CF24-1VMUUR**														42 820	84 650	49 500	3 000				
30	0 -0.021	**CF30M**	**CF30MUU**	**CF30MR**	**CF30MUUR**	**80**	35	30	M30×1.5	32	100	63	15	1	8	4	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CF30VM	**CF30VMUU**	**CF30VMR**	**CF30VMUUR**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CF30-1M**	**CF30-1MUU**	**CF30-1MR**	**CF30-1MUUR**	**85**	35	30	M30×1.5	32	100	63	15	1	8	4	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CF30-1VM	**CF30-1VMUU**	**CF30-1VMR**	**CF30-1VMUUR**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CF30-2M**	**CF30-2MUU**	**CF30-2MR**	**CF30-2MUUR**	**90**	35	30	M30×1.5	32	100	63	15	1	8	4	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CF30-2VM	**CF30-2VMUU**	**CF30-2VMR**	**CF30-2VMUUR**														62 210	132 530	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)

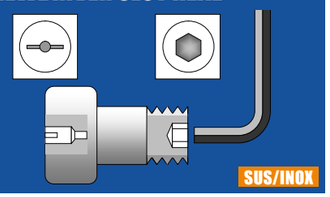
TYPE	Cylindrical outer ring	Crowned outer ring
CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	ϕ 4 Attached	Attached
CF10MK/CF10-1MK	ϕ 4 Attached	ϕ 4 Attached	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

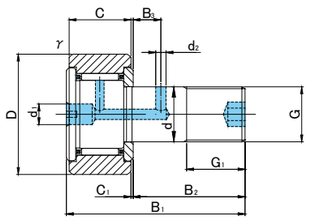
CAM FOLLOWERS STAINLESS STEEL

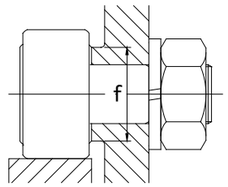
HEXAGON SOCKET ON THREAD SIDE SCREWDRIVER SLOT HEAD



CF..MB

CF..VMB





CF..MB TYPE

Prepacked Grease

Stud diameter (mm) d	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R500 (CF12 ～ CF18) R1000 (CF20 ≦), Without seals	Crowned outer ring, With seals	Dimensions (mm) D	C	G	G1	B1	B2	B3	C1	d1	d2	H	r s min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
12	0 -0.018	**CF12MB**	**CF12MUUB**	**CF12MRB**	**CF12MUURB**	**30**	14	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CF12VMB	**CF12VMUUB**	**CF12VMRB**	**CF12VMUURB**														12 350	18 120	11 270	6 000				
12	0 -0.018	**CF12-1MB**	**CF12-1MUUB**	**CF12-1MRB**	**CF12-1MUURB**	**32**	14	M12×1.5	13	40	25	6	0.6	6	3	6	0.6	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CF12-1VMB	**CF12-1VMUUB**	**CF12-1VMRB**	**CF12-1VMUURB**														12 350	18 120	11 270	6 000				
16	0 -0.018	**CF16MB**	**CF16MUUB**	**CF16MRB**	**CF16MUURB**	**35**	18	M16×1.5	17	52	32.5	8	0.8	6	3	6	0.6	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CF16VMB	**CF16VMUUB**	**CF16VMRB**	**CF16VMUURB**														19 020	34 610	19 800	4 500				
18	0 -0.018	**CF18MB**	**CF18MUUB**	**CF18MRB**	**CF18MUURB**	**40**	20	M18×1.5	19	58	36.5	8	0.8	6	3	6	1	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CF18VMB	**CF18VMUUB**	**CF18VMRB**	**CF18VMUURB**														23 250	47 240	26 560	3 500				
20	0 -0.021	**CF20MB**	**CF20MUUB**	**CF20MRB**	**CF20MUURB**	**52**	24	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CF20VMB	**CF20VMUUB**	**CF20VMRB**	**CF20VMUURB**														30 470	59 320	32 140	3 500				
20	0 -0.021	**CF20-1MB**	**CF20-1MUUB**	**CF20-1MRB**	**CF20-1MUURB**	**47**	24	M20×1.5	21	66	40.5	9	0.8	8	4	8	1	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CF20-1VMB	**CF20-1VMUUB**	**CF20-1VMRB**	**CF20-1VMUURB**														30 470	59 320	32 140	3 500				
24	0 -0.021	**CF24MB**	**CF24MUUB**	**CF24MRB**	**CF24MUURB**	**62**	29	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CF24VMB	**CF24VMUUB**	**CF24VMRB**	**CF24VMUURB**														42 820	84 650	49 500	3 000				
24	0 -0.021	**CF24-1MB**	**CF24-1MUUB**	**CF24-1MRB**	**CF24-1MUURB**	**72**	29	M24×1.5	25	80	49.5	11	0.8	8	4	8	1	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CF24-1VMB	**CF24-1VMUUB**	**CF24-1VMRB**	**CF24-1VMUURB**														42 820	84 650	49 500	3 000				
30	0 -0.021	**CF30MB**	**CF30MUUB**	**CF30MRB**	**CF30MUURB**	**80**	35	M30×1.5	32	100	63	15	1	8	4	8	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CF30VMB	**CF30VMUUB**	**CF30VMRB**	**CF30VMUURB**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CF30-1MB**	**CF30-1MUUB**	**CF30-1MRB**	**CF30-1MUURB**	**85**	35	M30×1.5	32	100	63	15	1	8	4	8	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CF30-1VMB	**CF30-1VMUUB**	**CF30-1VMRB**	**CF30-1VMUURB**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CF30-2MB**	**CF30-2MUUB**	**CF30-2MRB**	**CF30-2MUURB**	**90**	35	M30×1.5	32	100	63	15	1	8	4	8	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CF30-2VMB	**CF30-2VMUUB**	**CF30-2VMRB**	**CF30-2VMUURB**														62 210	132 530	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)

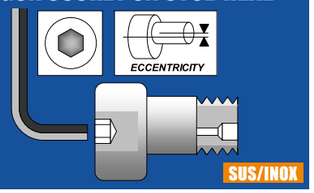
TYPE	Cylindrical outer ring	Crowned outer ring
CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF3M/CF4M/CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	—	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

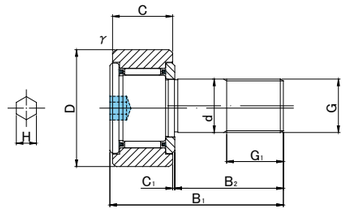
CAM FOLLOWERS STAINLESS STEEL

SOLID ECCENTRIC TYPE HEXAGON SOCKET ON STUD HEAD

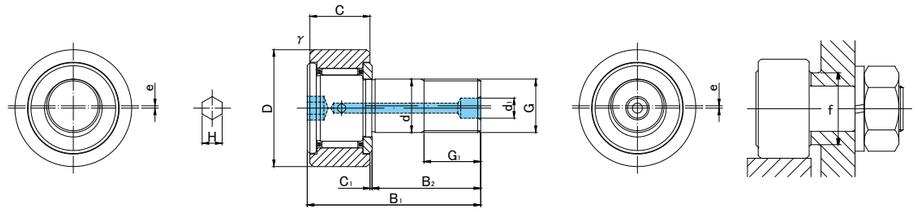


CFH..MA

CFH..VMA



CFH5(V)MA～CFH10-1(V)MA



CFH12(V)MA～CFH12-1(V)MA

CFH..MA TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Designation: Cylindrical outer ring, With seals	Designation: Crowned outer ring R500(CF5～CF12), Without seals	Designation: Crowned outer ring R500(CF5～CF12), With seals	D	C	d	G	G1	B1	B2	C1	d1	H	r's min	e	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
5	0 -0.012	**CFH 5MA**	**CFH 5MUUA**	**CFH 5MRA**	**CFH 5MUURA**	**13**	9	5	M5×0.8	7.5	23	13	0.5	—	2.5	0.3	0.2	9.7	2 880	2 540	1 420	29 000	2 250	780	2	10.5
		CFH 5VMA	**CFH 5VMUUA**	**CFH 5VMRA**	**CFH 5VMUURA**														4 690	5 060	1 420	11 600				
6	0 -0.012	**CFH 6MA**	**CFH 6MUUA**	**CFH 6MRA**	**CFH 6MUURA**	**16**	11	6	M6×1	8	28	16	0.6	—	3	0.3	0.25	11	3 330	3 330	2 110	25 000	3 430	1 080	3	18.5
		CFH 6VMA	**CFH 6VMUUA**	**CFH 6VMRA**	**CFH 6VMUURA**														6 400	7 840	2 110	12 000				
8	0 -0.015	**CFH 8MA**	**CFH 8MUUA**	**CFH 8MRA**	**CFH 8MUURA**	**19**	11	8	M8×1.25	10	32	20	0.6	—	4	0.3	0.25	13	3 960	4 330	4 710	20 000	4 020	1 370	8	28.5
		CFH 8VMA	**CFH 8VMUUA**	**CFH 8VMRA**	**CFH 8VMUURA**														7 470	10 270	4 710	9 000				
10	0 -0.015	**CFH10MA**	**CFH10MUUA**	**CFH10MRA**	**CFH10MUURA**	**22**	12	10	M10×1.25	12	36	23	0.6	—	5	0.3	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CFH10VMA	**CFH10VMUUA**	**CFH10VMRA**	**CFH10VMUURA**														8 740	13 340	7 450	7 500				
10	0 -0.015	**CFH10-1MA**	**CFH10-1MUUA**	**CFH10-1MRA**	**CFH10-1MUURA**	**26**	12	10	M10×1.25	12	36	23	0.6	—	5	0.3	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CFH10-1VMA	**CFH10-1VMUUA**	**CFH10-1VMRA**	**CFH10-1VMUURA**														8 740	13 340	7 450	7 500				
12	0 -0.018	**CFH12MA**	**CFH12MUUA**	**CFH12MRA**	**CFH12MUURA**	**30**	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CFH12VMA	**CFH12VMUUA**	**CFH12VMRA**	**CFH12VMUURA**														12 350	18 120	11 270	6 000				
12	0 -0.018	**CFH12-1MA**	**CFH12-1MUUA**	**CFH12-1MRA**	**CFH12-1MUURA**	**32**	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CFH12-1VMA	**CFH12-1VMUUA**	**CFH12-1VMRA**	**CFH12-1VMUURA**														12 350	18 120	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)

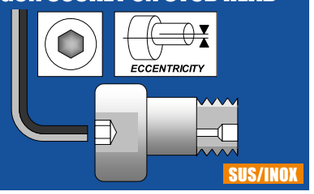
TYPE	Cylindrical outer ring	Crowned outer ring
CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF3M/CF4M/CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	—	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

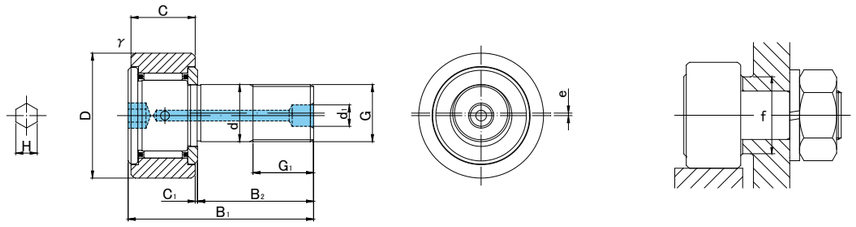
CAM FOLLOWERS STAINLESS STEEL

SOLID ECCENTRIC TYPE HEXAGON SOCKET ON STUD HEAD



CFH..MA

CFH..VMA



CFH..MA TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Designation: Cylindrical outer ring, With seals	Designation: Crowned outer ring R500(CF16 ～ CF18) R1000(CF20 ≦), Without seals	Designation: Crowned outer ring R500(CF16 ～ CF18) R1000(CF20 ≦), With seals	D	C	d	G	G1	B1	B2	C1	d1	H	rs min	e	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
16	0 -0.018	**CFH16MA**	**CFH16MUUA**	**CFH16MRA**	**CFH16MUURA**	**35**	18	16	M16×1.5	17	52	32.5	0.8	6	6	0.6	0.5	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CFH16VMA	**CFH16VMUUA**	**CFH16VMRA**	**CFH16VMUURA**														19 020	34 610	19 800	4 500				
18	0 -0.018	**CFH18MA**	**CFH18MUUA**	**CFH18MRA**	**CFH18MUURA**	**40**	20	18	M18×1.5	19	58	36.5	0.8	6	6	1	0.6	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CFH18VMA	**CFH18VMUUA**	**CFH18VMRA**	**CFH18VMUURA**														23 250	47 240	26 560	3 500				
20	0 -0.021	**CFH20MA**	**CFH20MUUA**	**CFH20MRA**	**CFH20MUURA**	**52**	24	20	M20×1.5	21	66	40.5	0.8	8	8	1	0.7	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CFH20VMA	**CFH20VMUUA**	**CFH20VMRA**	**CFH20VMUURA**														30 470	59 320	32 140	3 500				
20	0 -0.021	**CFH20-1MA**	**CFH20-1MUUA**	**CFH20-1MRA**	**CFH20-1MUURA**	**47**	24	20	M20×1.5	21	66	40.5	0.8	8	8	1	0.7	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CFH20-1VMA	**CFH20-1VMUUA**	**CFH20-1VMRA**	**CFH20-1VMUURA**														30 470	59 320	32 140	3 500				
24	0 -0.021	**CFH24MA**	**CFH24MUUA**	**CFH24MRA**	**CFH24MUURA**	**62**	29	24	M24×1.5	25	80	49.5	0.8	8	8	1	0.8	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CFH24VMA	**CFH24VMUUA**	**CFH24VMRA**	**CFH24VMUURA**														42 820	84 650	49 500	3 000				
24	0 -0.021	**CFH24-1MA**	**CFH24-1MUUA**	**CFH24-1MRA**	**CFH24-1MUURA**	**72**	29	24	M24×1.5	25	80	49.5	0.8	8	8	1	0.8	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1VMA	**CFH24-1VMUUA**	**CFH24-1VMRA**	**CFH24-1VMUURA**														42 820	84 650	49 500	3 000				
30	0 -0.021	**CFH30MA**	**CFH30MUUA**	**CFH30MRA**	**CFH30MUURA**	**80**	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CFH30VMA	**CFH30VMUUA**	**CFH30VMRA**	**CFH30VMUURA**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CFH30-1MA**	**CFH30-1MUUA**	**CFH30-1MRA**	**CFH30-1MUURA**	**85**	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1VMA	**CFH30-1VMUUA**	**CFH30-1VMRA**	**CFH30-1VMUURA**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CFH30-2MA**	**CFH30-2MUUA**	**CFH30-2MRA**	**CFH30-2MUURA**	**90**	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2VMA	**CFH30-2VMUUA**	**CFH30-2VMRA**	**CFH30-2VMUURA**														62 210	132 530	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)

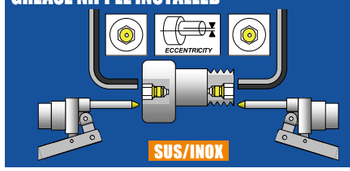
TYPE	Cylindrical outer ring	Crowned outer ring
CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF3M/CF4M/CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	—	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

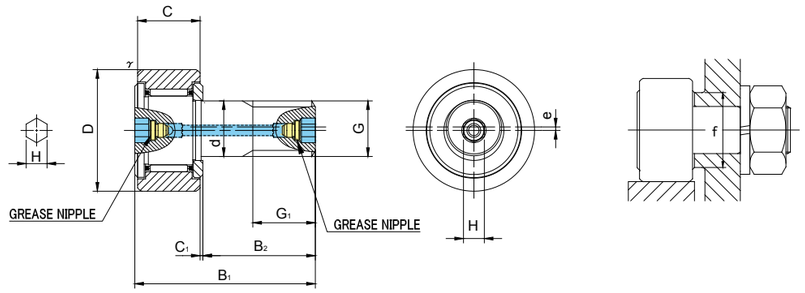
CAM FOLLOWERS STAINLESS STEEL

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CFH..MAB

CFH..VMAB



CFH..MAB TYPE

Prepacked Grease

Stud diameter (mm)		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(CF12 ～ CF18) R1000(CF20 ≦)																				
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	H	r's min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
12	0 -0.018	CFH12MAB	CFH12MUUAB	CFH12MRAB	CFH12MUURAB	30	14	12	M12×1.5	13	40	25	0.6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CFH12VMAB	CFH12VMUUAB	CFH12VMRAB	CFH12VMUURAB													12 350	18 120	11 270	6 000				
12	0 -0.018	CFH12-1MAB	CFH12-1MUUAB	CFH12-1MRAB	CFH12-1MUURAB	32	14	12	M12×1.5	13	40	25	0.6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CFH12-1VMAB	CFH12-1VMUUAB	CFH12-1VMRAB	CFH12-1VMUURAB													12 350	18 120	11 270	6 000				
16	0 -0.018	CFH16MAB	CFH16MUUAB	CFH16MRAB	CFH16MUURAB	35	18	16	M16×1.5	17	52	32.5	0.8	6	0.6	0.5	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CFH16VMAB	CFH16VMUUAB	CFH16VMRAB	CFH16VMUURAB													19 020	34 610	19 800	4 500				
18	0 -0.018	CFH18MAB	CFH18MUUAB	CFH18MRAB	CFH18MUURAB	40	20	18	M18×1.5	19	58	36.5	0.8	6	1	0.6	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CFH18VMAB	CFH18VMUUAB	CFH18VMRAB	CFH18VMUURAB													23 250	47 240	26 560	3 500				
20	0 -0.021	CFH20MAB	CFH20MUUAB	CFH20MRAB	CFH20MUURAB	52	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CFH20VMAB	CFH20VMUUAB	CFH20VMRAB	CFH20VMUURAB													30 470	59 320	32 140	3 500				
20	0 -0.021	CFH20-1MAB	CFH20-1MUUAB	CFH20-1MRAB	CFH20-1MUURAB	47	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CFH20-1VMAB	CFH20-1VMUUAB	CFH20-1VMRAB	CFH20-1VMUURAB													30 470	59 320	32 140	3 500				

CFH..MAB 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)

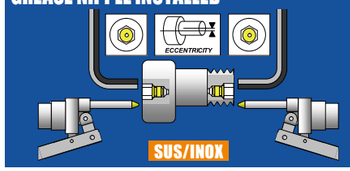
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

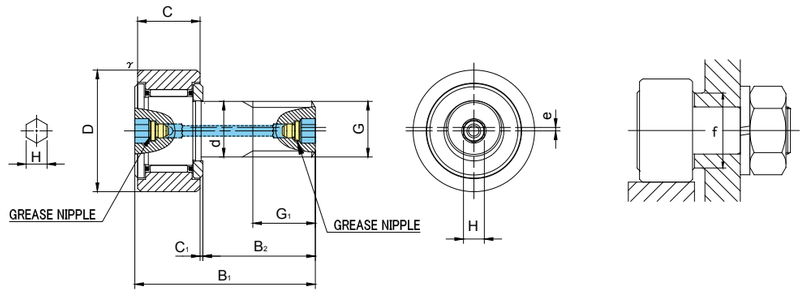
CAM FOLLOWERS STAINLESS STEEL

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CFH..MAB

CFH..VMAB



CFH..MAB TYPE

Prepacked Grease

Stud diameter (mm)		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 ≦)																				
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	H	r s min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
24	0 -0.021	CFH24MAB	CFH24MUUAB	CFH24MRAB	CFH24MUURAB	62	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CFH24VMAB	CFH24VMUUAB	CFH24VMRAB	CFH24VMUURAB													42 820	84 650	49 500	3 000				
24	0 -0.021	CFH24-1MAB	CFH24-1MUUAB	CFH24-1MRAB	CFH24-1MUURAB	72	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1VMAB	CFH24-1VMUUAB	CFH24-1VMRAB	CFH24-1VMUURAB													42 820	84 650	49 500	3 000				
30	0 -0.021	CFH30MAB	CFH30MUUAB	CFH30MRAB	CFH30MUURAB	80	35	30	M30×1.5	32	100	63	1	8	1	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CFH30VMAB	CFH30VMUUAB	CFH30VMRAB	CFH30VMUURAB													62 210	132 530	73 700	2 200				
30	0 -0.021	CFH30-1MAB	CFH30-1MUUAB	CFH30-1MRAB	CFH30-1MUURAB	85	35	30	M30×1.5	32	100	63	1	8	1	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1VMAB	CFH30-1VMUUAB	CFH30-1VMRAB	CFH30-1VMUURAB													62 210	132 530	73 700	2 200				
30	0 -0.021	CFH30-2MAB	CFH30-2MUUAB	CFH30-2MRAB	CFH30-2MUURAB	90	35	30	M30×1.5	32	100	63	1	8	1	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2VMAB	CFH30-2VMUUAB	CFH30-2VMRAB	CFH30-2VMUURAB													62 210	132 530	73 700	2 200				

CFH..MAB 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)

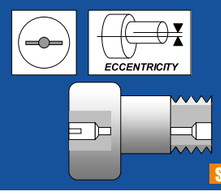
TYPE	Cylindrical outer ring	Crowned outer ring
CF12	0/-9	0/-50
CF12-1,CF16,CF18,CF20-1	0/-11	0/-50
CF20,CF24,CF24-1,CF30	0/-13	0/-50
CF30-1,CF30-2	0/-15	0/-50

ACCESSORIES

TYPE	 Grease Nipple	 NUT
All types	Installed	Attached

CAM FOLLOWERS STAINLESS STEEL

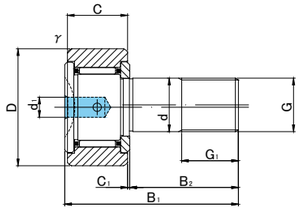
SOLID ECCENTRIC TYPE SCREWDRIVER SLOT HEAD



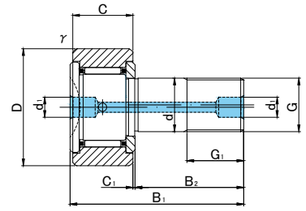
SUS/INOX

CFH..M

CFH..VM



CFH5(V)M～CFH10-1(V)M



CFH12(V)M～CFH18(V)M

CFH..M TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R250(CF5) R500(CF6～CF18), Without seals	Crowned outer ring R250(CF5) R500(CF6～CF18), With seals	D	C	d	G	G1	B1	B2	C1	d1	r's min	e	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
5	0 -0.012	CFH 5M	CFH 5MUU	CFH 5MR	CFH 5MUUR	13	9	5	M5×0.8	7.5	23	13	0.5	3.1	0.3	0.2	9.7	2 880	2 540	1 420	29 000	2 250	780	2	10.5
		CFH 5VM	CFH 5VMUU	CFH 5VMR	CFH 5VMUUR													4 690	5 060	1 420	11 600				
6	0 -0.012	CFH 6M	CFH 6MUU	CFH 6MR	CFH 6MUUR	16	11	6	M6×1	8	28	16	0.6	4	0.3	0.25	11	3 330	3 330	2 110	25 000	3 430	1 080	3	18.5
		CFH 6VM	CFH 6VMUU	CFH 6VMR	CFH 6VMUUR													6 400	7 840	2 110	12 000				
8	0 -0.015	CFH 8M	CFH 8MUU	CFH 8MR	CFH 8MUUR	19	11	8	M8×1.25	10	32	20	0.6	4	0.3	0.25	13	3 960	4 330	4 710	20 000	4 020	1 370	8	28.5
		CFH 8VM	CFH 8VMUU	CFH 8VMR	CFH 8VMUUR													7 470	10 270	4 710	9 000				
10	0 -0.015	CFH10M	CFH10MUU	CFH10MR	CFH10MUUR	22	12	10	M10×1.25	12	36	23	0.6	4	0.3	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CFH10VM	CFH10VMUU	CFH10VMR	CFH10VMUUR													8 740	13 340	7 450	7 500				
10	0 -0.015	CFH10-1M	CFH10-1MUU	CFH10-1MR	CFH10-1MUUR	26	12	10	M10×1.25	12	36	23	0.6	4	0.3	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CFH10-1VM	CFH10-1VMUU	CFH10-1VMR	CFH10-1VMUUR													8 740	13 340	7 450	7 500				
12	0 -0.018	CFH12M	CFH12MUU	CFH12MR	CFH12MUUR	30	14	12	M12×1.5	13	40	25	0.6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CFH12VM	CFH12VMUU	CFH12VMR	CFH12VMUUR													12 350	18 120	11 270	6 000				
12	0 -0.018	CFH12-1M	CFH12-1MUU	CFH12-1MR	CFH12-1MUUR	32	14	12	M12×1.5	13	40	25	0.6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CFH12-1VM	CFH12-1VMUU	CFH12-1VMR	CFH12-1VMUUR													12 350	18 120	11 270	6 000				
16	0 -0.018	CFH16M	CFH16MUU	CFH16MR	CFH16MUUR	35	18	16	M16×1.5	17	52	32.5	0.8	6	0.6	0.5	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CFH16VM	CFH16VMUU	CFH16VMR	CFH16VMUUR													19 020	34 610	19 800	4 500				
18	0 -0.018	CFH18M	CFH18MUU	CFH18MR	CFH18MUUR	40	20	18	M18×1.5	19	58	36.5	0.8	6	1	0.6	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CFH18VM	CFH18VMUU	CFH18VMR	CFH18VMUUR													23 250	47 240	26 560	3 500				

* 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)

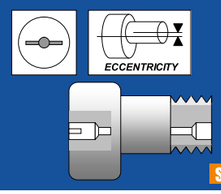
TYPE	Cylindrical outer ring	Crowned outer ring
CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	STOP PLUG	RESIN PLUG	NUT
CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	ϕ 4 Attached	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

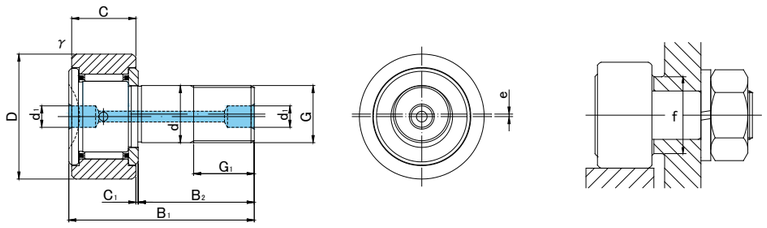
CAM FOLLOWERS STAINLESS STEEL

SOLID ECCENTRIC TYPE SCREWDRIVER SLOT HEAD



CFH..M

CFH..VM



CFH..M TYPE

Prepacked Grease

Stud diameter (mm)		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(CF20 ≦)																				
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	C1	d1	r's min	e	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
20	0 -0.021	**CFH20M**	**CFH20MUU**	**CFH20MR**	**CFH20MUUR**	**52**	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CFH20VM	**CFH20VMUU**	**CFH20VMR**	**CFH20VMUUR**													30 470	59 320	32 140	3 500				
20	0 -0.021	**CFH20-1M**	**CFH20-1MUU**	**CFH20-1MR**	**CFH20-1MUUR**	**47**	24	20	M20×1.5	21	66	40.5	0.8	8	1	0.7	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CFH20-1VM	**CFH20-1VMUU**	**CFH20-1VMR**	**CFH20-1VMUUR**													30 470	59 320	32 140	3 500				
24	0 -0.021	**CFH24M**	**CFH24MUU**	**CFH24MR**	**CFH24MUUR**	**62**	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CFH24VM	**CFH24VMUU**	**CFH24VMR**	**CFH24VMUUR**													42 820	84 650	49 500	3 000				
24	0 -0.021	**CFH24-1M**	**CFH24-1MUU**	**CFH24-1MR**	**CFH24-1MUUR**	**72**	29	24	M24×1.5	25	80	49.5	0.8	8	1	0.8	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1VM	**CFH24-1VMUU**	**CFH24-1VMR**	**CFH24-1VMUUR**													42 820	84 650	49 500	3 000				
30	0 -0.021	**CFH30M**	**CFH30MUU**	**CFH30MR**	**CFH30MUUR**	**80**	35	30	M30×1.5	32	100	63	1	8	1	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CFH30VM	**CFH30VMUU**	**CFH30VMR**	**CFH30VMUUR**													62 210	132 530	73 700	2 200				
30	0 -0.021	**CFH30-1M**	**CFH30-1MUU**	**CFH30-1MR**	**CFH30-1MUUR**	**85**	35	30	M30×1.5	32	100	63	1	8	1	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1VM	**CFH30-1VMUU**	**CFH30-1VMR**	**CFH30-1VMUUR**													62 210	132 530	73 700	2 200				
30	0 -0.021	**CFH30-2M**	**CFH30-2MUU**	**CFH30-2MR**	**CFH30-2MUUR**	**90**	35	30	M30×1.5	32	100	63	1	8	1	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2VM	**CFH30-2VMUU**	**CFH30-2VMR**	**CFH30-2VMUUR**													62 210	132 530	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)

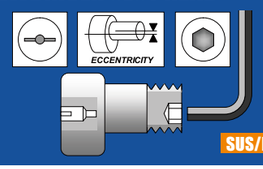
TYPE	Cylindrical outer ring	Crowned outer ring
CF5M,CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF5M	—	—	Attached
CF6M/CF8M/CF10M/CF10-1M	—	ϕ 4 Attached	Attached
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

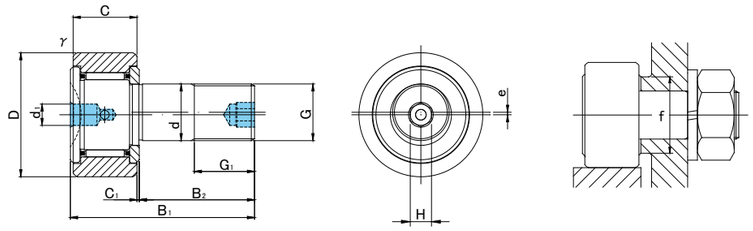
CAM FOLLOWERS STAINLESS STEEL

SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON THREAD SIDE
SCREWDRIVER SLOT HEAD



CFH..MB

CFH..VMB



CFH..MB TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R500(CF12 ～ CF18) R1000(CF20 ≦), Without seals	Crowned outer ring, With seals	D	C	d	G	G1	B1	B2	C1	d1	H	rs min	e	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
12	0 -0.018	**CFH12MB**	**CFH12MUUB**	**CFH12MRB**	**CFH12MUURB**	**30**	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 060	2 450	22	95
		CFH12VMB	**CFH12VMUUB**	**CFH12VMRB**	**CFH12VMUURB**														12 350	18 120	11 270	6 000				
12	0 -0.018	**CFH12-1MB**	**CFH12-1MUUB**	**CFH12-1MRB**	**CFH12-1MUURB**	**32**	14	12	M12×1.5	13	40	25	0.6	6	6	0.6	0.4	20	7 300	9 010	9 800	14 000	7 450	2 740	22	105
		CFH12-1VMB	**CFH12-1VMUUB**	**CFH12-1VMRB**	**CFH12-1VMUURB**														12 350	18 120	11 270	6 000				
16	0 -0.018	**CFH16MB**	**CFH16MUUB**	**CFH16MRB**	**CFH16MUURB**	**35**	18	16	M16×1.5	17	52	32.5	0.8	6	6	0.6	0.5	24	11 080	16 860	18 330	10 000	11 200	3 140	58	170
		CFH16VMB	**CFH16VMUUB**	**CFH16VMRB**	**CFH16VMUURB**														19 020	34 610	19 800	4 500				
18	0 -0.018	**CFH18MB**	**CFH18MUUB**	**CFH18MRB**	**CFH18MUURB**	**40**	20	18	M18×1.5	19	58	36.5	0.8	6	6	1	0.6	26	13 520	23 180	25 200	8 500	14 400	3 720	87	250
		CFH18VMB	**CFH18VMUUB**	**CFH18VMRB**	**CFH18VMUURB**														23 250	47 240	26 560	3 500				
20	0 -0.021	**CFH20MB**	**CFH20MUUB**	**CFH20MRB**	**CFH20MUURB**	**52**	24	20	M20×1.5	21	66	40.5	0.8	8	8	1	0.7	36	19 020	31 830	32 140	7 000	23 200	8 230	120	460
		CFH20VMB	**CFH20VMUUB**	**CFH20VMRB**	**CFH20VMUURB**														30 470	59 320	32 140	3 500				
20	0 -0.021	**CFH20-1MB**	**CFH20-1MUUB**	**CFH20-1MRB**	**CFH20-1MUURB**	**47**	24	20	M20×1.5	21	66	40.5	0.8	8	8	1	0.7	36	19 020	31 830	32 140	7 000	21 000	7 150	120	385
		CFH20-1VMB	**CFH20-1VMUUB**	**CFH20-1VMRB**	**CFH20-1VMUURB**														30 470	59 320	32 140	3 500				
24	0 -0.021	**CFH24MB**	**CFH24MUUB**	**CFH24MRB**	**CFH24MUURB**	**62**	29	24	M24×1.5	25	80	49.5	0.8	8	8	1	0.8	40	28 040	48 410	49 500	6 500	34 200	10 500	220	815
		CFH24VMB	**CFH24VMUUB**	**CFH24VMRB**	**CFH24VMUURB**														42 820	84 650	49 500	3 000				
24	0 -0.021	**CFH24-1MB**	**CFH24-1MUUB**	**CFH24-1MRB**	**CFH24-1MUURB**	**72**	29	24	M24×1.5	25	80	49.5	0.8	8	8	1	0.8	40	28 040	48 410	49 500	6 500	39 800	12 900	220	1 140
		CFH24-1VMB	**CFH24-1VMUUB**	**CFH24-1VMRB**	**CFH24-1VMUURB**														42 820	84 650	49 500	3 000				
30	0 -0.021	**CFH30MB**	**CFH30MUUB**	**CFH30MRB**	**CFH30MUURB**	**80**	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	41 740	78 250	73 700	5 000	52 600	14 900	450	1 870
		CFH30VMB	**CFH30VMUUB**	**CFH30VMRB**	**CFH30VMUURB**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CFH30-1MB**	**CFH30-1MUUB**	**CFH30-1MRB**	**CFH30-1MUURB**	**85**	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	41 740	78 250	73 700	5 000	56 000	16 100	450	2 030
		CFH30-1VMB	**CFH30-1VMUUB**	**CFH30-1VMRB**	**CFH30-1VMUURB**														62 210	132 530	73 700	2 200				
30	0 -0.021	**CFH30-2MB**	**CFH30-2MUUB**	**CFH30-2MRB**	**CFH30-2MUURB**	**90**	35	30	M30×1.5	32	100	63	1	8	8	1	1	46	41 740	78 250	73 700	5 000	59 300	17 300	450	2 220
		CFH30-2VMB	**CFH30-2VMUUB**	**CFH30-2VMRB**	**CFH30-2VMUURB**														62 210	132 530	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)

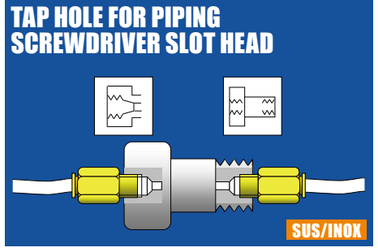
TYPE	Cylindrical outer ring	Crowned outer ring
CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 STOP PLUG	 RESIN PLUG	 NUT
CF12M/CF12-1M/CF16M/CF18M	ϕ 6 Attached	ϕ 6 Attached	Attached
CF20M/CF20-1M/CF24M/CF24-1M/CF30M/CF30-1M/CF30-2M	ϕ 8 Attached	ϕ 8 Attached	Attached

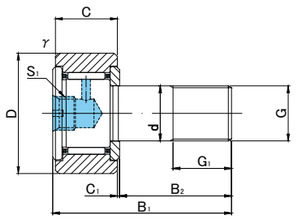
CAM FOLLOWERS STAINLESS STEEL

TAP HOLE FOR PIPING SCREWDRIVER SLOT HEAD

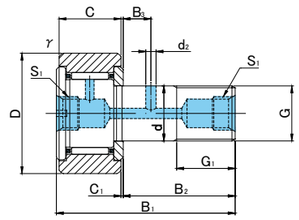


CFT..M

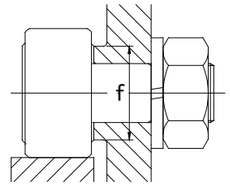
CFT..VM



CFT6(V)M～CFT10-1(V)M



CFT12(V)M～CFT18(V)M



CFT..M TYPE

Prepacked Grease

Stud diameter (mm)	h7 tolerance	Designation: Cylindrical outer ring, Without seals	Cylindrical outer ring, With seals	Crowned outer ring R500(CF6 ～ CF18), Without seals	Crowned outer ring R500(CF6 ～ CF18), With seals	D	C	d	G	G1	B1	B2	B3	C1	S1	d2	r's min	f min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Largest permissible load N	Limiting speed * rpm	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Max tightening torque N·m	Mass g (approx)
6	0 -0.012	CFT 6M	CFT 6MUU	CFT 6MR	CFT 6MUUR	16	11	6	M6×1	8	28	16	—	0.6	M6×0.75	—	0.3	11	3 330	3 330	2 110	25 000	3 430	1 080	3	18.5
		CFT 6VM	CFT 6VMUU	CFT 6VMR	CFT 6VMUUR														6 400	7 840	2 110	12 000				
8	0 -0.015	CFT 8M	CFT 8MUU	CFT 8MR	CFT 8MUUR	19	11	8	M8×1.25	10	32	20	—	0.6	M6×0.75	—	0.3	13	3 960	4 330	4 710	20 000	4 020	1 370	8	28.5
		CFT 8VM	CFT 8VMUU	CFT 8VMR	CFT 8VMUUR														7 470	10 270	4 710	9 000				
10	0 -0.015	CFT10M	CFT10MUU	CFT10MR	CFT10MUUR	22	12	10	M10×1.25	12	36	23	—	0.6	M6×0.75	—	0.3	15	4 950	6 310	6 860	17 000	4 700	1 670	15	45
		CFT10VM	CFT10VMUU	CFT10VMR	CFT10VMUUR														8 740	13 340	7 450	7 500				
10	0 -0.015	CFT10-1M	CFT10-1MUU	CFT10-1MR	CFT10-1MUUR	26	12	10	M10×1.25	12	36	23	—	0.6	M6×0.75	—	0.3	15	4 950	6 310	6 860	17 000	5 490	2 060	15	60
		CFT10-1VM	CFT10-1VMUU	CFT10-1VMR	CFT10-1VMUUR														8 740	13 340	7 450	7 500				
12	0 -0.018	CFT12M	CFT12MUU	CFT12MR	CFT12MUUR	30	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	0.6	20	7 300	9 010	7 840	14 000	7 060	2 450	22	95
		CFT12VM	CFT12VMUU	CFT12VMR	CFT12VMUUR														12 350	18 120	9 010	6 000				
12	0 -0.018	CFT12-1M	CFT12-1MUU	CFT12-1MR	CFT12-1MUUR	32	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	0.6	20	7 300	9 010	7 840	14 000	7 450	2 740	22	105
		CFT12-1VM	CFT12-1VMUU	CFT12-1VMR	CFT12-1VMUUR														12 350	18 120	9 010	6 000				
16	0 -0.018	CFT16M	CFT16MUU	CFT16MR	CFT16MUUR	35	18	16	M16×1.5	17	52	32.5	8	0.8	Rc1/8	3	0.6	24	11 080	16 860	14 660	10 000	11 200	3 140	58	170
		CFT16VM	CFT16VMUU	CFT16VMR	CFT16VMUUR														19 020	34 610	15 840	4 500				
18	0 -0.018	CFT18M	CFT18MUU	CFT18MR	CFT18MUUR	40	20	18	M18×1.5	19	58	36.5	8	0.8	Rc1/8	3	1	26	13 520	23 180	20 160	8 500	14 400	3 720	87	250
		CFT18VM	CFT18VMUU	CFT18VMR	CFT18VMUUR														23 250	47 240	21 240	3 500				

* 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)

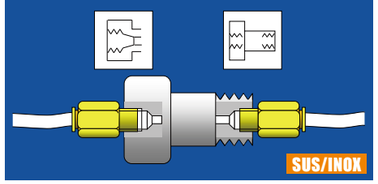
TYPE	Cylindrical outer ring	Crowned outer ring
CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 NUT
All types	Attached

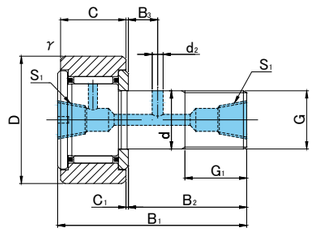
CAM FOLLOWERS STAINLESS STEEL

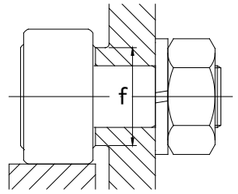
TAP HOLE FOR PIPING SCREWDRIVER SLOT HEAD



CFT..M

CFT..VM





CFT..M TYPE

Prepacked Grease

Stud diameter (mm)		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(CF20 ≦)																					
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	S1	d2	r's min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
20	0 -0.021	**CFT20M**	**CFT20MUU**	**CFT20MR**	**CFT20MUUR**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	1	36	19 020	31 830	25 710	7 000	23 200	8 230	120	460
		CFT20VM	**CFT20VMUU**	**CFT20VMR**	**CFT20VMUUR**														30 470	59 320	25 710	3 500				
20	0 -0.021	**CFT20-1M**	**CFT20-1MUU**	**CFT20-1MR**	**CFT20-1MUUR**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	1	36	19 020	31 830	25 710	7 000	21 000	7 150	120	385
		CFT20-1VM	**CFT20-1VMUU**	**CFT20-1VMR**	**CFT20-1VMUUR**														30 470	59 320	25 710	3 500				
24	0 -0.021	**CFT24M**	**CFT24MUU**	**CFT24MR**	**CFT24MUUR**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	1	40	28 040	48 410	39 600	6 500	34 200	10 500	220	815
		CFT24VM	**CFT24VMUU**	**CFT24VMR**	**CFT24VMUUR**														42 820	84 650	39 600	3 000				
24	0 -0.021	**CFT24-1M**	**CFT24-1MUU**	**CFT24-1MR**	**CFT24-1MUUR**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	1	40	28 040	48 410	39 600	6 500	39 800	12 900	220	1 140
		CFT24-1VM	**CFT24-1VMUU**	**CFT24-1VMR**	**CFT24-1VMUUR**														42 820	84 650	39 600	3 000				
30	0 -0.021	**CFT30M**	**CFT30MUU**	**CFT30MR**	**CFT30MUUR**	**80**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	1	46	41 740	78 250	58 960	5 000	52 600	14 900	450	1 870
		CFT30VM	**CFT30VMUU**	**CFT30VMR**	**CFT30VMUUR**														62 210	132 530	58 960	2 200				
30	0 -0.021	**CFT30-1M**	**CFT30-1MUU**	**CFT30-1MR**	**CFT30-1MUUR**	**85**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	1	46	41 740	78 250	58 960	5 000	56 000	56 000	450	2 030
		CFT30-1VM	**CFT30-1VMUU**	**CFT30-1VMR**	**CFT30-1VMUUR**														62 210	132 530	58 960	2 200				
30	0 -0.021	**CFT30-2M**	**CFT30-2MUU**	**CFT30-2MR**	**CFT30-2MUUR**	**90**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	1	46	41 740	78 250	58 960	5 000	59 300	59 300	450	2 220
		CFT30-2VM	**CFT30-2VMUU**	**CFT30-2VMR**	**CFT30-2VMUUR**														62 210	132 530	58 960	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)

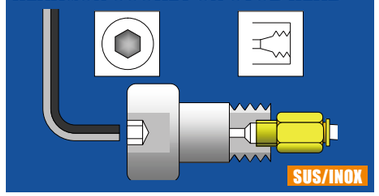
TYPE	Cylindrical outer ring	Crowned outer ring
CF6M	0/-8	0/-50
CF8M,CF10M,CF10-1M,CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 NUT
All types	Attached

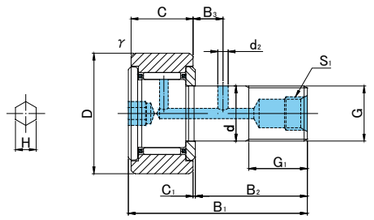
CAM FOLLOWERS STAINLESS STEEL

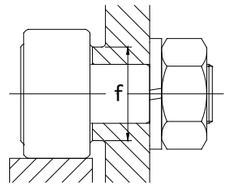
TAP HOLE FOR PIPING HEXAGON SOCKET ON STUD HEAD



CFT..MA

CFT..VMA





CFT..MA TYPE

Prepacked Grease

Stud diameter (mm)		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(CF12 ～ CF18) R1000(CF20 ≦)																							
	h7 tolerance	Without seals	With seals	Without seals	With seals	D	C	d	G	G1	B1	B2	B3	C1	S1	d2	H	rs min	f min	Cr N	Cor N	N	rpm	Cylindrical outer ring N	Crowned outer ring N	N·m	g (approx)
12	0 -0.018	**CFT12MA**	**CFT12MUUA**	**CFT12MRA**	**CFT12MUURA**	**30**	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	6	0.6	20	7 300	9 010	7 840	14 000	7 060	2 450	22	95
		CFT12VMA	**CFT12VMUUA**	**CFT12VMRA**	**CFT12VMUURA**															12 350	18 120	9 010	6 000				
12	0 -0.018	**CFT12-1MA**	**CFT12-1MUUA**	**CFT12-1MRA**	**CFT12-1MUURA**	**32**	14	12	M12×1.5	13	40	25	6	0.6	M6×0.75	3	6	0.6	20	7 300	9 010	7 840	14 000	7 450	2 740	22	105
		CFT12-1VMA	**CFT12-1VMUUA**	**CFT12-1VMRA**	**CFT12-1VMUURA**															12 350	18 120	9 010	6 000				
16	0 -0.018	**CFT16MA**	**CFT16MUUA**	**CFT16MRA**	**CFT16MUURA**	**35**	18	16	M16×1.5	17	52	32.5	8	0.8	Rc1/8	3	6	0.6	24	11 080	16 860	14 660	10 000	11 200	3 140	58	170
		CFT16VMA	**CFT16VMUUA**	**CFT16VMRA**	**CFT16VMUURA**															19 020	34 610	15 840	4 500				
18	0 -0.018	**CFT18MA**	**CFT18MUUA**	**CFT18MRA**	**CFT18MUURA**	**40**	20	18	M18×1.5	19	58	36.5	8	0.8	Rc1/8	3	6	1	26	13 520	23 180	20 160	8 500	14 400	3 720	87	250
		CFT18VMA	**CFT18VMUUA**	**CFT18VMRA**	**CFT18VMUURA**															23 250	47 240	21 240	3 500				
20	0 -0.021	**CFT20MA**	**CFT20MUUA**	**CFT20MRA**	**CFT20MUURA**	**52**	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	8	1	36	19 020	31 830	25 710	7 000	23 200	8 230	120	460
		CFT20VMA	**CFT20VMUUA**	**CFT20VMRA**	**CFT20VMUURA**															30 470	59 320	25 710	3 500				
20	0 -0.021	**CFT20-1MA**	**CFT20-1MUUA**	**CFT20-1MRA**	**CFT20-1MUURA**	**47**	24	20	M20×1.5	21	66	40.5	9	0.8	Rc1/8	4	8	1	36	19 020	31 830	25 710	7 000	21 000	7 150	120	385
		CFT20-1VMA	**CFT20-1VMUUA**	**CFT20-1VMRA**	**CFT20-1VMUURA**															30 470	59 320	25 710	3 500				
24	0 -0.021	**CFT24MA**	**CFT24MUUA**	**CFT24MRA**	**CFT24MUURA**	**62**	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	8	1	40	28 040	48 410	39 600	6 500	34 200	10 500	220	815
		CFT24VMA	**CFT24VMUUA**	**CFT24VMRA**	**CFT24VMUURA**															42 820	84 650	39 600	3 000				
24	0 -0.021	**CFT24-1MA**	**CFT24-1MUUA**	**CFT24-1MRA**	**CFT24-1MUURA**	**72**	29	24	M24×1.5	25	80	49.5	11	0.8	Rc1/8	4	8	1	40	28 040	48 410	39 600	6 500	39 800	12 900	220	1 140
		CFT24-1VMA	**CFT24-1VMUUA**	**CFT24-1VMRA**	**CFT24-1VMUURA**															42 820	84 650	39 600	3 000				
30	0 -0.021	**CFT30MA**	**CFT30MUUA**	**CFT30MRA**	**CFT30MUURA**	**80**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	8	1	46	41 740	78 250	58 960	5 000	52 600	14 900	450	1 870
		CFT30VMA	**CFT30VMUUA**	**CFT30VMRA**	**CFT30VMUURA**															62 210	132 530	58 960	2 200				
30	0 -0.021	**CFT30-1MA**	**CFT30-1MUUA**	**CFT30-1MRA**	**CFT30-1MUURA**	**85**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	8	1	46	41 740	78 250	58 960	5 000	56 000	56 000	450	2 030
		CFT30-1VMA	**CFT30-1VMUUA**	**CFT30-1VMRA**	**CFT30-1VMUURA**															62 210	132 530	58 960	2 200				
30	0 -0.021	**CFT30-2MA**	**CFT30-2MUUA**	**CFT30-2MRA**	**CFT30-2MUURA**	**90**	35	30	M30×1.5	32	100	63	15	1	Rc1/8	4	8	1	46	41 740	78 250	58 960	5 000	59 300	59 300	450	2 220
		CFT30-2VMA	**CFT30-2VMUUA**	**CFT30-2VMRA**	**CFT30-2VMUURA**															62 210	132 530	58 960	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
CF12M	0/-9	0/-50
CF12-1M,CF16M,CF18M,CF20-1M	0/-11	0/-50
CF20M,CF24M,CF24-1M,CF30M	0/-13	0/-50
CF30-1M,CF30-2M	0/-15	0/-50

ACCESSORIES

TYPE	 NUT
All types	Attached

ROLLER FOLLOWERS

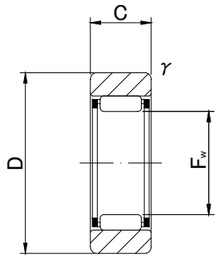
STAINLESS STEEL

ROLLER FOLLOWERS STAINLESS STEEL

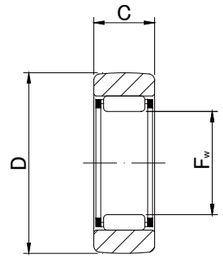
SEPARABLE WITHOUT INNER RING

SUS/INOX

RNAST..M



RNAST..M



RNAST..MR

RNAST..M TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation		Dimensions (mm)				Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed *	Mass
	Cylindrical outer ring	Crowned outer ring (R500)	Fw	D	C	r s min	Cr N	Cor N	Cylindrical outer ring N	Crowned outer ring N	rpm	g (approx)
7	**RNAST 5M**	**RNAST 5MR**	7 +0.022 +0.013	**16**	7.8	0.3	2 520	2 190	2 350	1 080	30 000	8.9
10	**RNAST 6M**	**RNAST 6MR**	10 +0.027 +0.016	**19**	9.8	0.3	3 790	4 180	3 530	1 370	20 000	13.9
12	**RNAST 8M**	**RNAST 8MR**	12 +0.027 +0.016	**24**	9.8	0.6	5 220	5 410	4 020	1 860	17 000	23.5
14	**RNAST10M**	**RNAST10MR**	14 +0.027 +0.016	**30**	11.8	1	8 920	8 890	5 590	2 450	15 000	42.5
16	**RNAST12M**	**RNAST12MR**	16 +0.027 +0.016	**32**	11.8	1	9 560	10 020	5 980	2 740	13 000	49.5
20	**RNAST15M**	**RNAST15MR**	20 +0.033 +0.020	**35**	11.8	1	11 310	13 150	6 570	3 140	10 000	50
22	**RNAST17M**	**RNAST17MR**	22 +0.033 +0.020	**40**	15.8	1	16 000	19 220	10 900	3 720	9 500	90
25	**RNAST20M**	**RNAST20MR**	25 +0.033 +0.020	**47**	15.8	1	17 660	22 540	12 700	4 610	8 500	135
30	**RNAST25M**	**RNAST25MR**	30 +0.033 +0.020	**52**	15.8	1	19 040	26 120	14 100	5 290	7 000	135
38	**RNAST30M**	**RNAST30MR**	38 +0.041 +0.025	**62**	19.8	1	27 870	41 760	22 100	6 660	5 500	255
42	**RNAST35M**	**RNAST35MR**	42 +0.041 +0.025	**72**	19.8	1	29 620	46 550	25 700	8 130	5 000	375
50	**RNAST40M**	**RNAST40MR**	50 +0.041 +0.025	**80**	19.8	1.5	32 840	56 210	26 900	9 310	4 000	420
55	**RNAST45M**	**RNAST45MR**	55 +0.049 +0.030	**85**	19.8	1.5	34 130	61 080	28 500	10 100	4 000	460
60	**RNAST50M**	**RNAST50MR**	60 +0.049 +0.030	**90**	19.8	1.5	35 600	66 050	30 200	11 000	3 500	500

* Suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible.

OUTER RINGS TOLERANCE

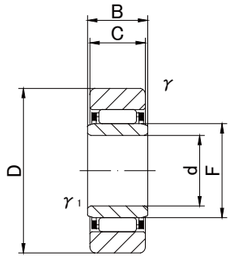
TYPE	Cylindrical outer ring	Crowned outer ring
RNAST5M	0/-8	0/-50
RNAST6M,RNAST8M,RNAST10M	0/-9	0/-50
RNAST12M,RNAST15M,RNAST17M,RNAST20M	0/-11	0/-50
RNAST25M,RNAST30M,RNAST35M,RNAST40M	0/-13	0/-50
RNAST45M,RNAST50M	0/-15	0/-50

ROLLER FOLLOWERS STAINLESS STEEL

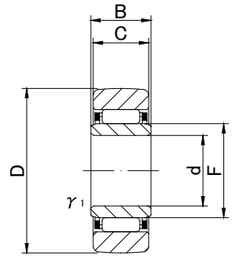
SEPARABLE WITH INNER RING

SUS/INOX

NAST..M



NAST..M



NAST..MR

NAST..M TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation		Dimensions (mm)							Basic dynamic load rating	Basic static load rating	Track load capacity		Limiting speed *	Mass
	Cylindrical outer ring	Crowned outer ring (R500)	d	D	B	C	r s min	r 1s min	F	Cr N	Cor N	Cylindrical outer ring N	Crowned outer ring N	rpm	g (approx)
6	NAST 6M	NAST 6MR	6 0 -0.008	19	10	9.8	0.3	0.3	10	3 790	4 180	3 530	1 370	20 000	17.8
8	NAST 8M	NAST 8MR	8 0 -0.008	24	10	9.8	0.6	0.3	12	5 220	5 410	4 020	1 860	17 000	28
10	NAST10M	NAST10MR	10 0 -0.008	30	12	11.8	1	0.3	14	8 920	8 890	5 590	2 450	15 000	50
12	NAST12M	NAST12MR	12 0 -0.008	32	12	11.8	1	0.3	16	9 560	10 020	5 980	2 740	13 000	58
15	NAST15M	NAST15MR	15 0 -0.008	35	12	11.8	1	0.3	20	11 310	13 150	6 570	3 140	10 000	62
17	NAST17M	NAST17MR	17 0 -0.010	40	16	15.8	1	0.3	22	16 000	19 220	10 900	3 720	9 500	110
20	NAST20M	NAST20MR	20 0 -0.010	47	16	15.8	1	0.3	25	17 660	22 540	12 700	4 610	8 500	155
25	NAST25M	NAST25MR	25 0 -0.010	52	16	15.8	1	0.3	30	19 040	26 120	14 100	5 290	7 000	180
30	NAST30M	NAST30MR	30 0 -0.010	62	20	19.8	1	0.6	38	27 870	41 760	22 100	6 660	5 500	320
35	NAST35M	NAST35MR	35 0 -0.012	72	20	19.8	1	0.6	42	29 620	46 550	25 700	8 130	5 000	440
40	NAST40M	NAST40MR	40 0 -0.012	80	20	19.8	1.5	1	50	32 840	56 210	26 900	9 310	4 000	530
45	NAST45M	NAST45MR	45 0 -0.012	85	20	19.8	1.5	1	55	34 130	61 080	28 500	10 100	4 000	580
50	NAST50M	NAST50MR	50 0 -0.012	90	20	19.8	1.5	1	60	35 600	66 050	30 200	11 000	3 500	635

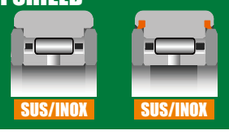
* Suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible.

OUTER RINGS TOLERANCE (Outside diameter) (μm)

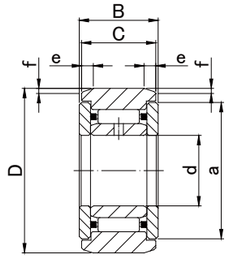
TYPE	Cylindrical outer ring	Crowned outer ring
NAST6M,NAST8M,NAST10M	0/-9	0/-50
NAST12M,NAST15M,NAST17M,NAST20M	0/-11	0/-50
NAST25M,NAST30M,NAST35M,NAST40M	0/-13	0/-50
NAST45M,NAST50M	0/-15	0/-50

ROLLER FOLLOWERS STAINLESS STEEL

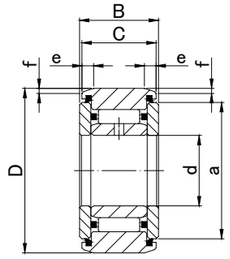
SEPARABLE
WITH INNER RING
WITH SHIELD



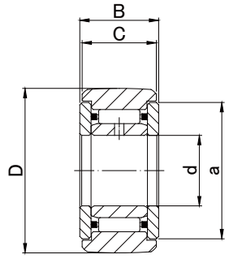
NAST..MZZ



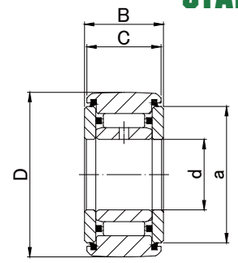
NAST..MZZ



NAST..MZZUU



NAST..MZZR



NAST..MZZUUR

NAST..MZZ TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation: Cylindrical outer ring, Without seals	Designation: Cylindrical outer ring, With seals	Designation: Crowned outer ring (R500), Without seals	Designation: Crowned outer ring (R500), With seals	Dimensions (mm): d	D	B	C	a	e	f	rs min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Track load capacity: Cylindrical outer ring N	Track load capacity: Crowned outer ring N	Limiting speed * rpm	Mass g (approx)
6	NAST 6MZZ	NAST 6MZZUU	NAST 6MZZR	NAST 6MZZUUR	6 0 -0.008	19	14	13.8	14	2.5	0.8	0.3	3 790	4 180	3 530	1 370	20 000	24.5
8	NAST 8MZZ	NAST 8MZZUU	NAST 8MZZR	NAST 8MZZUUR	8 0 -0.008	24	14	13.8	17.5	2.5	0.8	0.6	5 220	5 410	4 510	1 860	17 000	39
10	NAST10MZZ	NAST10MZZUU	NAST10MZZR	NAST10MZZUUR	10 0 -0.008	30	16	15.8	23.5	2.5	0.8	1	8 920	8 890	6 860	2 450	15 000	65
12	NAST12MZZ	NAST12MZZUU	NAST12MZZR	NAST12MZZUUR	12 0 -0.008	32	16	15.8	25.5	2.5	0.8	1	9 560	10 020	7 350	2 740	13 000	75
15	NAST15MZZ	NAST15MZZUU	NAST15MZZR	NAST15MZZUUR	15 0 -0.008	35	16	15.8	29	2.5	0.8	1	11 310	13 150	8 040	3 140	10 000	83
17	NAST17MZZ	NAST17MZZUU	NAST17MZZR	NAST17MZZUUR	17 0 -0.010	40	20	19.8	32.5	3	1	1	16 000	19 220	11 800	3 720	9 500	135
20	NAST20MZZ	NAST20MZZUU	NAST20MZZR	NAST20MZZUUR	20 0 -0.010	47	20	19.8	38	3	1	1	17 660	22 540	13 800	4 610	8 500	195
25	NAST25MZZ	NAST25MZZUU	NAST25MZZR	NAST25MZZUUR	25 0 -0.010	52	20	19.8	43	3	1	1	19 040	26 120	15 300	5 290	7 000	225
30	NAST30MZZ	NAST30MZZUU	NAST30MZZR	NAST30MZZUUR	30 0 -0.010	62	25	24.8	50.5	4	1.2	1	27 870	41 760	22 100	6 660	5 500	400
35	NAST35MZZ	NAST35MZZUU	NAST35MZZR	NAST35MZZUUR	35 0 -0.012	72	25	24.8	53.5	4	1.2	1	29 620	46 550	25 700	8 130	5 000	550
40	NAST40MZZ	NAST40MZZUU	NAST40MZZR	NAST40MZZUUR	40 0 -0.012	80	26	25.8	61.5	4	1.2	1.5	32 840	56 210	30 300	9 310	4 000	710
45	NAST45MZZ	NAST45MZZUU	NAST45MZZR	NAST45MZZUUR	45 0 -0.012	85	26	25.8	66.5	4	1.2	1.5	34 130	61 080	31 100	10 100	4 000	760
50	NAST50MZZ	NAST50MZZUU	NAST50MZZR	NAST50MZZUUR	50 0 -0.012	90	26	25.8	76	4	1.2	1.5	35 600	66 050	34 000	11 000	3 500	830

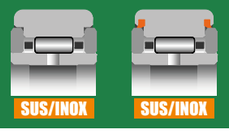
* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (Outside diameter) (µm)

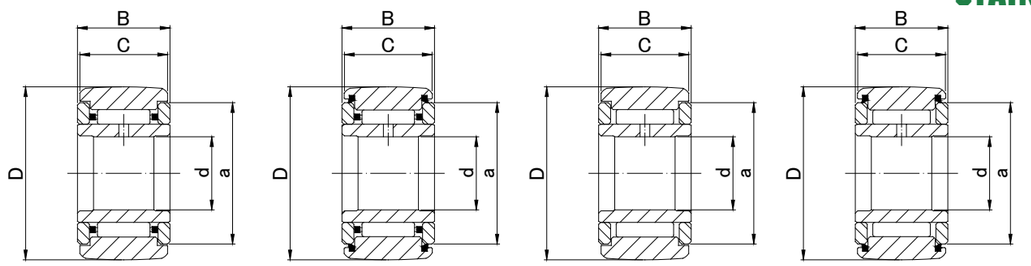
TYPE	Cylindrical outer ring	Crowned outer ring
NAST6M,NAST8M,NAST10M	0/-9	0/-50
NAST12M,NAST15M,NAST17M,NAST20M	0/-11	0/-50
NAST25M,NAST30M,NAST35M,NAST40M	0/-13	0/-50
NAST45M,NAST50M	0/-15	0/-50

ROLLER FOLLOWERS STAINLESS STEEL

NON SEPARABLE WITH INNER RING



NART..MR NART..VMR



NART..MR NART..MX | NART..MUUR NART..MUUX | NART..MVR NART..MVX | NART..MUUVR NART..MUUVX

NART.. M TYPE

Prepacked Grease

Shaft Diameter (mm)	Designation: Crowned outer ring R500(≦NART17R) R1000(NART20R≦) Without seals	Crowned outer ring With seals	Cylindrical outer ring Without seals	Cylindrical outer ring With seals	Dimensions (mm) d	D	B	C	a	r s min	Basic dynamic load rating Cr N	Basic static load rating Cor N	Track load capacity Crowned outer ring N	Track load capacity Cylindrical outer ring N	Limiting speed * rpm	Mass g (approx)
5	NART 5MR	NART 5MUUR	NART 5MX	NART 5MUUX	5 0	16	12	11	12	0.3	3 330	3 420	1 080	3 430	25 000	14.5
	NART 5MVR	NART 5MUUVR	NART 5MVX	NART 5MUUVX	5 -0.008	16	12	11	12	0.3	6 210	7 670	1 080	3 430	8 500	15.1
6	NART 6MR	NART 6MUUR	NART 6MX	NART 6MUUX	6 0	19	12	11	14	0.3	3 860	4 320	1 370	4 020	20 000	20.5
	NART 6MVR	NART 6MUUVR	NART 6MVX	NART 6MUUVX	6 -0.008	19	12	11	14	0.3	7 020	9 470	1 370	4 020	7 000	21.5
8	NART 8MR	NART 8MUUR	NART 8MX	NART 8MUUX	8 0	24	15	14	17.5	0.3	6 070	6 710	1 860	5 950	17 000	41.5
	NART 8MVR	NART 8MUUVR	NART 8MVX	NART 8MUUVX	8 -0.008	24	15	14	17.5	0.3	10 850	14 350	1 860	5 950	5 500	42.5
10	NART10MR	NART10MUUR	NART10MX	NART10MUUX	10 0	30	15	14	23.5	0.6	7 910	7 630	2 450	7 060	15 000	64.5
	NART10MVR	NART10MUUVR	NART10MVX	NART10MUUVX	10 -0.008	30	15	14	23.5	0.6	14 350	16 650	2 450	7 060	5 000	66.5
12	NART12MR	NART12MUUR	NART12MX	NART12MUUX	12 0	32	15	14	25.5	0.6	8 370	8 460	2 740	7 450	13 000	71
	NART12MVR	NART12MUUVR	NART12MVX	NART12MUUVX	12 -0.008	32	15	14	25.5	0.6	15 450	18 860	2 740	7 450	4 500	73
15	NART15MR	NART15MUUR	NART15MX	NART15MUUX	15 0	35	19	18	29	0.6	13 240	16 190	3 140	11 200	10 000	102
	NART15MVR	NART15MUUVR	NART15MVX	NART15MUUVX	15 -0.008	35	19	18	29	0.6	23 090	33 480	3 140	11 200	3 500	106
17	NART17MR	NART17MUUR	NART17MX	NART17MUUX	17 0	40	21	20	32.5	1	17 110	20 700	3 720	14 400	9 500	149
	NART17MVR	NART17MUUVR	NART17MVX	NART17MUUVX	17 -0.008	40	21	20	32.5	1	29 440	42 500	3 720	14 400	3 000	155
20	NART20MR	NART20MUUR	NART20MX	NART20MUUX	20 0	47	25	24	38	1	22 170	30 080	7 150	21 000	8 000	250
	NART20MVR	NART20MUUVR	NART20MVX	NART20MUUVX	20 -0.010	47	25	24	38	1	38 360	61 910	7 150	21 000	2 500	255
25	NART25MR	NART25MUUR	NART25MX	NART25MUUX	25 0	52	25	24	43	1	23 730	34 500	8 230	23 200	7 000	285
	NART25MVR	NART25MUUVR	NART25MVX	NART25MUUVX	25 -0.010	52	25	24	43	1	41 860	72 680	8 230	23 200	2 500	295
30	NART30MR	NART30MUUR	NART30MX	NART30MUUX	30 0	62	29	28	50.5	1	33 300	52 340	10 500	33 000	5 500	470
	NART30MVR	NART30MUUVR	NART30MVX	NART30MUUVX	30 -0.010	62	29	28	50.5	1	55 010	101 560	10 500	33 000	1 800	485
35	NART35MR	NART35MUUR	NART35MX	NART35MUUX	35 0	72	29	28	53.5	1	35 140	57 770	12 900	38 000	5 000	640
	NART35MVR	NART35MUUVR	NART35MVX	NART35MUUVX	35 -0.012	72	29	28	53.5	1	57 960	111 780	12 900	38 000	1 700	655
40	NART40MR	NART40MUUR	NART40MX	NART40MUUX	40 0	80	32	30	61.5	1	42 500	77 920	14 900	44 400	4 000	845
	NART40MVR	NART40MUUVR	NART40MVX	NART40MUUVX	40 -0.012	80	32	30	61.5	1	70 100	151 060	14 900	44 000	1 400	865
45	NART45MR	NART45MUUR	NART45MX	NART45MUUX	45 0	85	32	30	66.5	1	45 350	87 580	16 100	47 000	4 000	915
	NART45MVR	NART45MUUVR	NART45MVX	NART45MUUVX	45 -0.012	85	32	30	66.5	1	73 780	166 610	16 100	47 000	1 300	935
50	NART50MR	NART50MUUR	NART50MX	NART50MUUX	50 0	90	32	30	76	1	47 010	94 110	17 300	50 000	3 500	980
	NART50MVR	NART50MUUVR	NART50MVX	NART50MUUVX	50 -0.012	90	32	30	76	1	77 370	182 160	17 300	50 000	1 200	1 010

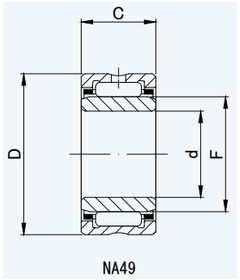
* Without seals, suitable for grease lubrication. In case of oil lubrication, up to 130% of this value shall be permissible, and 70% of this value shall apply for types with seals.

OUTER RINGS TOLERANCE (Outside diameter) (μm)

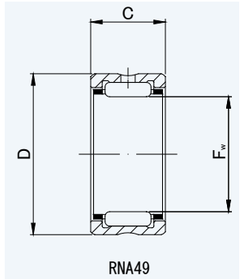
TYPE	Crowned outer ring	Cylindrical outer ring
NART5M	0/-50	0/-8
NART6M,NART8M,NART10M	0/-50	0/-9
NART12M,NART15M,NART17M,NART20M	0/-50	0/-11
NART25M,NART30M,NART35M,NART40M	0/-50	0/-13
NART45M,NART50M	0/-50	0/-15

INTERCHANGE TABLE

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



NA49



RNA49

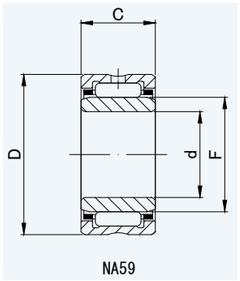
NA49, RNA49

DIMENSION TABLE

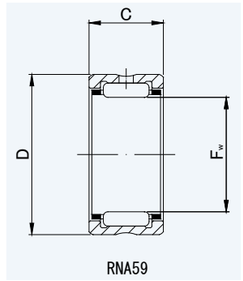
INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 49	g	RNA 49	g	IR	d	Fw (F)	D	C	Cr N	Cor N	NA 49	RNA 49	NA 49	RNA 49	NA 49	RNA 49	NA 49	RNA 49
NA 495	7.3	**RNA 495**	5.9	—	5	7	13	10	2 960	2 690	—	—	—	—	—	—	—	—
NA 496	9.1	**RNA 496**	7.3	**IR6810**	6	8	15	10	3 900	3 400	NA496	RNA496	NA496	—	NA496	RNA496	—	—
NA 497	11.2	**RNA 497**	9.3	**IR7910**	7	9	17	10	4 500	3 600	NA497	RNA497	NA497	—	NA497	RNA497	—	—
NA 498	15	**RNA 498**	12.6	**IR81011**	8	10	19	11	6 200	5 000	NA498	RNA498	NA498	—	NA498	RNA498	—	—
NA 499	16.7	**RNA 499**	13.6	**IR91211**	9	12	20	11	6 600	6 300	NA499	RNA499	NA499	—	NA499	RNA499	—	—
NA 4900	24	**RNA 4900**	16.5	**IR101413**	10	14	22	13	9 200	10 100	NA4900	RNA4900	NA4900	RNA4900	NA4900R	RNA4900R	NA4900	RNA4900
NA 4901	26.5	**RNA 4901**	18.1	**IR121613**	12	16	24	13	9 700	11 100	NA4901	RNA4901	NA4901	RNA4901	NA4901R	RNA4901R	NA4901	RNA4901
NA 4902	35	**RNA 4902**	21.5	**IR152013**	15	20	28	13	10 900	13 800	NA4902	RNA4902	NA4902	RNA4902	NA4902R	RNA4902R	NA4902	RNA4902
NA 4903	39	**RNA 4903**	23.5	**IR172213**	17	22	30	13	11 800	15 600	NA4903	RNA4903	NA4903	RNA4903	NA4903R	RNA4903R	NA4903	RNA4903
NA 4904	78.5	**RNA 4904**	55.5	**IR202517**	20	25	37	17	21 000	25 000	NA4904	RNA4904	NA4904	RNA4904	NA4904R	RNA4904R	NA4904	RNA4904
NA 49/22	87	**RNA 49/22**	56.5	**IR222817**	22	28	39	17	21 400	28 800	NA49/22	RNA49/22	NA49/22	RNA49/22	NA49/22R	RNA49/22R	NA49/22	RNA49/22
NA 4905	92.5	**RNA 4905**	64	**IR253017**	25	30	42	17	23 700	30 700	NA4905	RNA4905	NA4905	RNA4905	NA4905R	RNA4905R	NA4905	RNA4905
NA 49/28	101	**RNA 49/28**	76.5	**IR283217**	28	32	45	17	24 500	32 700	NA49/28	RNA49/28	NA49/28	RNA49/28	NA49/28R	RNA49/28R	—	—
NA 4906	106	**RNA 4906**	72.5	**IR303517**	30	35	47	17	25 200	34 700	NA4906	RNA4906	NA4906	RNA4906	NA4906R	RNA4906R	NA4906	RNA4906
NA 49/32	165	**RNA 49/32**	96	**IR324020**	32	40	52	20	31 300	47 900	NA49/32	RNA49/32	NA49/32	RNA49/32	NA49/32R	RNA49/32R	NA49/32	RNA49/32
NA 4907	178	**RNA 4907**	113	**IR354220**	35	42	55	20	32 000	50 200	NA4907	RNA4907	NA4907	RNA4907	NA4907R	RNA4907R	NA4907	RNA4907
NA 4908	245	**RNA 4908**	152	**IR404822**	40	48	62	22	41 600	67 400	NA4908	RNA4908	NA4908	RNA4908	NA4908R	RNA4908R	NA4908	RNA4908
NA 4909	285	**RNA 4909**	197	**IR455222**	45	52	68	22	43 500	73 400	NA4909	RNA4909	NA4909	RNA4909	NA4909R	RNA4909R	NA4909	RNA4909
NA 4910	295	**RNA 4910**	179	**IR505822**	50	58	72	22	46 200	82 100	NA4910	RNA4910	NA4910	RNA4910	NA4910R	RNA4910R	NA4910	RNA4910
NA 4911	410	**RNA 4911**	265	**IR556325**	55	63	80	25	57 600	97 300	NA4911	RNA4911	NA4911	RNA4911	NA4911R	RNA4911R	NA4911	RNA4911
NA 4912	440	**RNA 4912**	285	**IR606825**	60	68	85	25	60 100	104 900	NA4912	RNA4912	NA4912	RNA4912	NA4912R	RNA4912R	NA4912	RNA4912
NA 4913	470	**RNA 4913**	325	**IR657225**	65	72	90	25	62 800	113 800	NA4913	RNA4913	NA4913	RNA4913	NA4913R	RNA4913R	NA4913	RNA4913
NA 4914	765	**RNA 4914**	495	**IR708030**	70	80	100	30	83 200	157 900	NA4914	RNA4914	NA4914	RNA4914	NA4914R	RNA4914R	NA4914	RNA4914
NA 4915	810	**RNA 4915**	525	**IR758530**	75	85	105	30	86 200	169 700	NA4915	RNA4915	NA4915	RNA4915	NA4915R	RNA4915R	NA4915	RNA4915
NA 4916	855	**RNA 4916**	550	**IR809030**	80	90	110	30	87 400	174 600	NA4916	RNA4916	NA4916	RNA4916	NA4916R	RNA4916R	NA4916	RNA4916
NA 4917	1 280	**RNA 4917**	705	**IR8510035**	85	100	120	35	109 800	244 200	NA4917	RNA4917	NA4917	RNA4917	NA4917R	RNA4917R	NA4917	RNA4917
NA 4918	1 350	**RNA 4918**	740	**IR9010535**	90	105	125	35	112 800	257 900	NA4918	RNA4918	NA4918	RNA4918	NA4918R	RNA4918R	NA4918	RNA4918
NA 4919	1 420	**RNA 4919**	770	**IR9511035**	95	110	130	35	116 700	270 700	NA4919	RNA4919	NA4919	RNA4919	NA4919R	RNA4919R	NA4919	RNA4919
NA 4920	1 960	**RNA 4920**	1 190	**IR10011540**	100	115	140	40	145 000	329 000	NA4920	RNA4920	NA4920	RNA4920	NA4920	RNA4920	NA4920	RNA4920
NA 4922	2 120	**RNA 4922**	1 280	**IR11012540**	110	125	150	40	152 000	357 000	NA4922	RNA4922	NA4922	RNA4922	NA4922	RNA4922	NA4922	RNA4922
NA 4924	2 960	**RNA 4924**	1 930	**IR12013545**	120	135	165	45	187 000	435 000	NA4924	RNA4924	NA4924	RNA4924	NA4924	RNA4924	NA4924	RNA4924
NA 4926	4 030	**RNA 4926**	2 360	**IR13015050**	130	150	180	50	216 000	540 000	NA4926	RNA4926	NA4926	RNA4926	NA4926	RNA4926	NA4926	RNA4926
NA 4928	4 290	**RNA 4928**	2 500	**IR14016050**	140	160	190	50	224 000	580 000	NA4928	RNA4928	NA4928	RNA4928	NA4928	RNA4928	NA4928	RNA4928

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



NA59



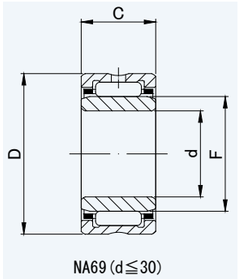
RNA59

NA59, RNA59

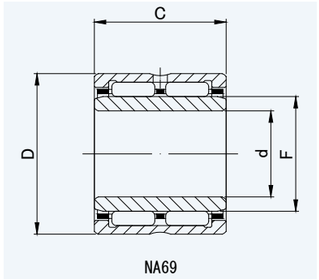
DIMENSION TABLE

INTERCHANGE TABLE

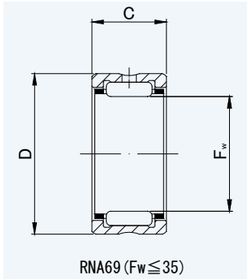
JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 59	g	RNA 59	g	IR	d	Fw (F)	D	C	Cr N	Cor N	—	—	—	—	NA 59	RNA 59	—	—
NA 5902	52	**RNA 5902**	33	**IR152018**	15	20	28	18	15 700	22 100	—	—	—	—	NA5902	RNA5902	—	—
NA 5903	56	**RNA 5903**	35	**IR172218**	17	22	30	18	16 900	24 900	—	—	—	—	NA5903	RNA5903	—	—
NA 5904	115	**RNA 5904**	84	**IR202523**	20	25	37	23	29 400	38 600	—	—	—	—	NA5904	RNA5904	—	—
NA 59/22	134	**RNA 59/22**	92	**IR222823**	22	28	39	23	29 800	44 400	—	—	—	—	NA59/22	RNA59/22	—	—
NA 5905	139	**RNA 5905**	101	**IR253023**	25	30	42	23	33 200	47 500	—	—	—	—	NA5905	RNA5905	—	—
NA 59/28	142	**RNA 59/28**	108	**IR283223**	28	32	45	23	34 300	50 500	—	—	—	—	NA59/28	RNA59/28	—	—
NA 5906	152	**RNA 5906**	108	**IR303523**	30	35	47	23	35 200	53 700	—	—	—	—	NA5906	RNA5906	—	—
NA 59/32	241	**RNA 59/32**	149	**IR324027**	32	40	52	27	41 900	69 900	—	—	—	—	NA59/32	RNA59/32	—	—
NA 5907	256	**RNA 5907**	176	**IR354227**	35	42	55	27	42 900	73 200	—	—	—	—	NA5907	RNA5907	—	—
NA 5908	348	**RNA 5908**	225	**IR404830**	40	48	62	30	58 000	103 000	—	—	—	—	NA5908	RNA5908	—	—
NA 5909	396	**RNA 5909**	232	**IR455230**	45	52	68	30	60 700	112 000	—	—	—	—	NA5909	RNA5909	—	—
NA 5910	498	**RNA 5910**	289	**IR505830**	50	58	72	30	64 400	126 000	—	—	—	—	NA5910	RNA5910	—	—
NA 5911	559	**RNA 5911**	367	**IR556334**	55	63	80	34	82 600	154 000	—	—	—	—	NA5911	RNA5911	—	—
NA 5912	614	**RNA 5912**	408	**IR606834**	60	68	85	34	86 100	167 000	—	—	—	—	NA5912	RNA5912	—	—
NA 5913	655	**RNA 5913**	462	**IR657234**	65	72	90	34	89 900	180 000	—	—	—	—	NA5913	RNA5913	—	—
NA 5914	1 060	**RNA 5914**	706	**IR708040**	70	80	100	40	112 000	232 000	—	—	—	—	NA5914	RNA5914	—	—
NA 5915	1 130	**RNA 5915**	745	**IR758540**	75	85	105	40	116 000	249 000	—	—	—	—	NA5915	RNA5915	—	—
NA 5916	1 150	**RNA 5916**	787	**IR809040**	80	90	110	40	117 000	257 000	—	—	—	—	NA5916	RNA5916	—	—
NA 5917	1 760	**RNA 5917**	1 000	**IR8510046**	85	100	120	46	144 000	346 000	—	—	—	—	NA5917	RNA5917	—	—
NA 5918	1 840	**RNA 5918**	1 040	**IR9010546**	90	105	125	46	148 000	365 000	—	—	—	—	NA5918	RNA5918	—	—
NA 5919	1 980	**RNA 5919**	1 130	**IR9511046**	95	110	130	46	152 000	384 000	—	—	—	—	NA5919	RNA5919	—	—



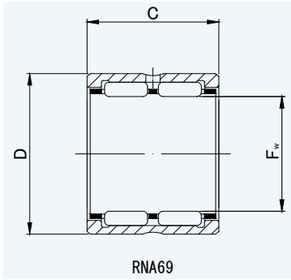
NA69 (d≦30)



NA69



RNA69 (Fw≦35)



RNA69

NA69, RNA69

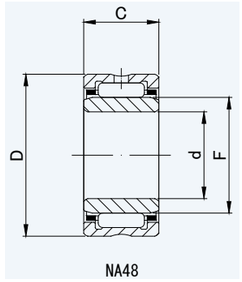
DIMENSION TABLE

INTERCHANGE TABLE

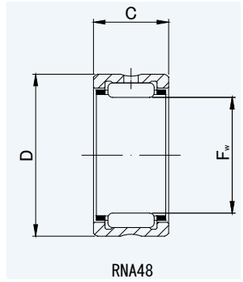
JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 69	g	RNA 69	g	IR	d	Fw (F)	D	C	Cr N	Cor N	NA 69	RNA 69	NA 69	RNA 69	NA 69	RNA 69	NA 69	RNA 69
NA 6901	44.5	**RNA 6901**	30	**IR121622**	12	16	24	22	17 100	23 000	NA6901	RNA6901	NA6901	RNA6901	NA6901R	RNA6901R	NA6901	RNA6901
NA 6902	61	**RNA 6902**	37	**IR152023**	15	20	28	23	19 300	28 700	NA6902	RNA6902	NA6902	RNA6902	NA6902R	RNA6902R	NA6902	RNA6902
NA 6903	67	**RNA 6903**	40.5	**IR172223**	17	22	30	23	20 800	32 500	NA6903	RNA6903	NA6903	RNA6903	NA6903R	RNA6903R	NA6903	RNA6903
NA 6904	136	**RNA 6904**	95.5	**IR202530**	20	25	37	30	35 400	48 800	NA6904	RNA6904	NA6904	RNA6904	NA6904R	RNA6904R	NA6904	RNA6904
NA 69/22	152	**RNA 69/22**	97.5	**IR222830**	22	28	39	30	36 300	56 900	NA69/22	RNA69/22	NA69/22	RNA69/22	NA69/22R	RNA69/22R	NA69/22	RNA69/22
NA 6905	160	**RNA 6905**	111	**IR253030**	25	30	42	30	42 100	64 200	NA6905	RNA6905	NA6905	RNA6905	NA6905R	RNA6905R	NA6905	RNA6905
NA 69/28	176	**RNA 69/28**	133	**IR283230**	28	32	45	30	41 800	64 700	NA69/28	RNA69/28	NA69/28	RNA69/28	NA69/28R	RNA69/28R	NA69/28	RNA69/28
NA 6906	184	**RNA 6906**	125	**IR303530**	30	35	47	30	43 100	69 000	NA6906	RNA6906	NA6906	RNA6906	NA6906R	RNA6906R	NA6906	RNA6906
NA 69/32	295	**RNA 69/32**	172	**IR324036**	32	40	52	36	53 500	95 700	NA69/32	RNA69/32	NA69/32	RNA69/32	NA69/32R	RNA69/32R	NA69/32	RNA69/32
NA 6907	320	**RNA 6907**	200	**IR354236**	35	42	55	36	54 800	100 000	NA6907	RNA6907	NA6907	RNA6907	NA6907R	RNA6907R	NA6907	RNA6907
NA 6908	440	**RNA 6908**	275	**IR404840**	40	48	62	40	71 300	134 400	NA6908	RNA6908	NA6908	RNA6908	NA6908R	RNA6908R	NA6908	RNA6908
NA 6909	520	**RNA 6909**	355	**IR455240**	45	52	68	40	74 600	147 100	NA6909	RNA6909	NA6909	RNA6909	NA6909R	RNA6909R	NA6909	RNA6909
NA 6910	530	**RNA 6910**	320	**IR505840**	50	58	72	40	79 100	163 800	NA6910	RNA6910	NA6910	RNA6910	NA6910R	RNA6910R	NA6910	RNA6910
NA 6911	730	**RNA 6911**	475	**IR556345**	55	63	80	45	99 000	194 200	NA6911	RNA6911	NA6911	RNA6911	NA6911R	RNA6911R	NA6911	RNA6911
NA 6912	785	**RNA 6912**	510	**IR606845**	60	68	85	45	103 000	210 800	NA6912	RNA6912	NA6912	RNA6912	NA6912R	RNA6912R	NA6912	RNA6912
NA 6913	840	**RNA 6913**	585	**IR657245**	65	72	90	45	107 900	226 500	NA6913	RNA6913	NA6913	RNA6913	NA6913R	RNA6913R	NA6913	RNA6913
NA 6914	1 400	**RNA 6914**	910	**IR708054**	70	80	100	54	133 400	310 900	NA6914	RNA6914	NA6914	RNA6914	NA6914R	RNA6914R	NA6914	RNA6914
NA 6915	1 480	**RNA 6915**	960	**IR758554**	75	85	105	54	138 300	330 500	NA6915	RNA6915	NA6915	RNA6915	NA6915R	RNA6915R	NA6915	RNA6915
NA 6916	1 560	**RNA 6916**	1 010	**IR809054**	80	90	110	54	143 200	350 100	NA6916	RNA6916	NA6916	RNA6916	NA6916R	RNA6916R	NA6916	RNA6916
NA 6917	2 340	**RNA 6917**	1 300	**IR8510063**	85	100	120	63	172 600	466 800	NA6917	RNA6917	NA6917	RNA6917	NA6917R	RNA6917R	NA6917	RNA6917
NA 6918	2 460	**RNA 6918**	1 360	**IR9010563**	90	105	125	63	177 500	490 300	NA6918	RNA6918	NA6918	RNA6918	NA6918R	RNA6918R	NA6918	RNA6918
NA 6919	2 580	**RNA 6919**	1 420	**IR9511063**	95	110	130	63	182 400	514 800	NA6919	RNA6919	NA6919	RNA6919	NA6919R	RNA6919R	NA6919	RNA6919

INTERCHANGE

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



NA48



RNA48

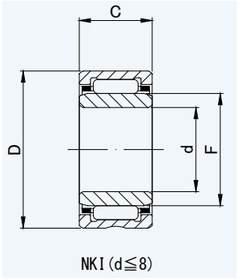
NA48, RNA48

DIMENSION TABLE

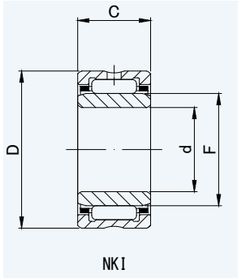
INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 48	g	RNA 48	g	IR	d	Fw (F)	D	C	Cr N	Cor N	NA 48	RNA 48	NA 48	RNA 48	NA 48	RNA 48	NA 48	RNA 48
NA 4822	1 200	**RNA4822**	790	**IR11012030**	110	120	140	30	93 000	239 000	NA4822	RNA4822	NA4822	RNA4822	NA4822	RNA4822	NA4822	RNA4822
NA 4824	1 300	**RNA4824**	850	**IR12013030**	120	130	150	30	97 000	259 000	NA4824	RNA4824	NA4824	RNA4824	NA4824	RNA4824	NA4824	RNA4824
NA 4826	1 960	**RNA4826**	1 100	**IR13014535**	130	145	165	35	117 000	340 000	NA4826	RNA4826	NA4826	RNA4826	NA4826	RNA4826	NA4826	RNA4826
NA 4828	2 100	**RNA4828**	1 170	**IR14015535**	140	155	175	35	121 000	363 000	NA4828	RNA4828	NA4828	RNA4828	NA4828	RNA4828	NA4828	RNA4828
NA 4830	2 880	**RNA4830**	1 750	**IR15016540**	150	165	190	40	168 000	446 000	NA4830	RNA4830	NA4830	RNA4830	NA4830	RNA4830	NA4830	RNA4830
NA 4832	3 050	**RNA4832**	1 850	**IR16017540**	160	175	200	40	173 000	474 000	NA4832	RNA4832	NA4832	RNA4832	NA4832	RNA4832	NA4832	RNA4832

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



NKI (d≦8)



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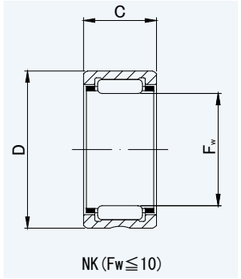
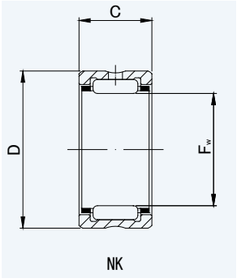


NK (Fw≦10)



NK

NK, NKI

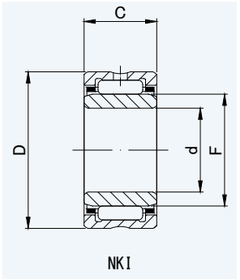
DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NKI	g	NK	g	IR	d	Fw (F)	D	C	Cr N	Cor N	TAFI	TAF	NKI	NK	NK+IR	NK	NKJ	NK
—	—	**NK5/10**	3.4	—	—	5	10	10	2 420	1 950	—	TAF51010	—	NK5/10 TN	—	NK5/10 T2	—	NK5/10 TN
—	—	**NK5/12**	4.2	—	—	5	10	12	3 080	2 660	—	TAF51012	—	NK5/12 TN	—	NK5/12 T2	—	NK5/12 TN
—	—	**NK6/10**	5.3	—	—	6	12	10	2 700	2 320	—	—	—	NK6/10 TN	—	NK6/10 T2	—	NK6/10
—	—	**NK6/12**	6.4	—	—	6	12	12	3 440	3 170	—	TAF61212	—	NK6/12 TN	—	NK6/12 T2	—	NK6/12 TN
—	—	**NK7/10**	6.9	—	—	7	14	10	3 600	2 960	—	TAF71410	—	NK7/10 TN	—	NK7/10 T2	—	NK7/10 TN
—	—	**NK7/12**	8.3	—	—	7	14	12	4 610	4 050	—	TAF71412	—	NK7/12 TN	—	NK7/12 T2	—	NK7/12 TN
NKI 5/12	11.9	**NK8/12**	9	**IR5812**	5	8	15	12	5 100	4 700	TAFI 51512	TAF81512	NKI 5/12 TN	NK8/12 TN	NK8/12 T2 + IR5812	NK8/12 T2	NKJ 5/12	NK8/12
NKI 5/16	16.7	**NK8/16**	13	**IR5816**	5	8	15	16	7 100	7 300	TAFI 51516	TAF81516	NKI 5/16 TN	NK8/16 TN	NK8/16 T2 + IR5816	NK8/16 T2	NKJ 5/16	NK8/16
NKI 6/12	13	**NK9/12**	10	**IR6912**	6	9	16	12	5 500	5 300	TAFI 61612	TAF91612	NKI 6/12 TN	NK9/12 TN	NK9/12 T2 + IR6912	NK9/12 T2	NKJ 6/12	NK9/12
NKI 6/16	17.5	**NK9/16**	13.2	**IR6916**	6	9	16	16	7 600	8 200	TAFI 61616	TAF91616	NKI 6/16 TN	NK9/16 TN	NK9/16 T2 + IR6916	NK9/16 T2	NKJ 6/16	NK9/16
NKI 7/12	14.3	**NK10/12**	10.7	**IR71012**	7	10	17	12	5 900	6 000	TAFI 71712	TAF101712	NKI 7/12 TN	NK10/12 TN	NK10/12 T2 + IR71012	NK10/12 T2	NKJ 7/12	NK10/12
NKI 7/16	19.2	**NK10/16**	14.3	**IR71016**	7	10	17	16	8 200	9 200	TAFI 71716	TAF101716	NKI 7/16 TN	NK10/16 TN	NK10/16 + IR71016	NK10/16	NKJ 7/16 TN	NK10/16 TN
NKI 9/12	16.7	**NK12/12**	12.2	**IR91212**	9	12	19	12	6 600	7 300	TAFI 91912	TAF121912	NKI 9/12	NK12/12	NK12/12 + IR91212	NK12/12	NKJ 9/12	NK12/12
NKI 9/16	22.5	**NK12/16**	16.3	**IR91216**	9	12	19	16	9 200	11 200	TAFI 91916	TAF121916	NKI 9/16	NK12/16	NK12/16 + IR91216	NK12/16	NKJ 9/16	NK12/16
NKI 10/16	30	**NK14/16**	21	**IR101416**	10	14	22	16	11 800	13 700	TAFI 102216	TAF142216	NKI 10/16	NK14/16	NK14/16R + IR101416	NK14/16R	NKJ 10/16	NK14/16
NKI 10/20	38	**NK14/20**	26.5	**IR101420**	10	14	22	20	14 800	18 500	TAFI 102220	TAF142220	NKI 10/20	NK14/20	NK14/20R + IR101420	NK14/20R	NKJ 10/20	NK14/20
—	—	**NK15/16**	22.5	—	—	15	23	16	12 400	14 900	—	TAF152316	—	NK15/16	—	NK15/16R	—	NK15/16
—	—	**NK15/20**	28	—	—	15	23	20	15 600	20 200	—	TAF152320	—	NK15/20	—	NK15/20R	—	NK15/20
NKI 12/16	33.5	**NK16/16**	23	**IR121616**	12	16	24	16	12 300	15 100	TAFI 122416	TAF162416	NKI 12/16	NK16/16	NK16/16R + IR121616	NK16/16R	NKJ 12/16	NK16/16
NKI 12/20	42.5	**NK16/20**	29	**IR121620**	12	16	24	20	15 600	20 400	TAFI 122420	TAF162420	NKI 12/20	NK16/20	NK16/20R + IR121620	NK16/20R	NKJ 12/20	NK16/20
—	—	**NK17/16**	25	—	—	17	25	16	12 800	16 300	—	TAF172516	—	NK17/16	—	NK17/16R	—	NK17/16
—	—	**NK17/20**	31	—	—	17	25	20	16 300	22 100	—	TAF172520	—	NK17/20	—	NK17/20R	—	NK17/20
—	—	**NK18/16**	26	—	—	18	26	16	13 400	17 500	—	TAF182616	—	NK18/16	—	NK18/16R	—	NK18/16
—	—	**NK18/20**	32	—	—	18	26	20	17 000	23 600	—	TAF182620	—	NK18/20	—	NK18/20R	—	NK18/20
NKI 15/16	39.5	**NK19/16**	27	**IR151916**	15	19	27	16	14 000	18 700	TAFI 152716	TAF192716	NKI 15/16	NK19/16	NK19/16R + IR151916	NK19/16R	NKJ 15/16	NK19/16
NKI 15/20	50	**NK19/20**	34	**IR151920**	15	19	27	20	17 700	25 300	TAFI 152720	TAF192720	NKI 15/20	NK19/20	NK19/20R + IR151920	NK19/20R	NKJ 15/20	NK19/20
—	—	**NK20/16**	28	—	—	20	28	16	13 900	18 700	—	TAF202816	—	NK20/16	—	NK20/16R	—	NK20/16
—	—	**NK20/20**	36	—	—	20	28	20	17 600	25 400	—	TAF202820	—	NK20/20	—	NK20/20R	—	NK20/20
NKI 17/16	43.5	**NK21/16**	29	**IR172116**	17	21	29	16	14 400	20 000	TAFI 172916	TAF212916	NKI 17/16	NK21/16	NK21/16R + IR172116	NK21/16R	NKJ 17/16	NK21/16
NKI 17/20	54	**NK21/20**	36	**IR172120**	17	21	29	20	18 200	27 100	TAFI 172920	TAF212920	NKI 17/20	NK21/20	NK21/20R + IR172120	NK21/20R	NKJ 17/20	NK21/20
—	—	**NK22/16**	30	—	—	22	30	16	14 900	21 200	—	TAF223016	—	NK22/16	—	NK22/16R	—	NK22/16
—	—	**NK22/20**	38	—	—	22	30	20	18 900	28 700	—	TAF223020	—	NK22/20	—	NK22/20R	—	NK22/20
NKI 20/16	48.5	**NK24/16**	32	**IR202416**	20	24	32	16	15 300	22 600	TAFI 203216	TAF243216	NKI 20/16	NK24/16	NK24/16R + IR202416	NK24/16R	NKJ 20/16	NK24/16
NKI 20/20	61	**NK24/20**	41	**IR202420**	20	24	32	20	19 400	30 500	TAFI 203220	TAF243220	NKI 20/20	NK24/20	NK24/20R + IR202420	NK24/20R	NKJ 20/20	NK24/20

NK type of 10mm or less inscribed circle diameter (Fw) is without oil hole.
NKI type of 8mm or less inscribed circle diameter (d) is without oil hole.

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



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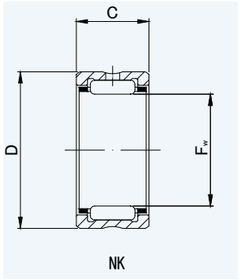

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NK, NKI

DIMENSION TABLE

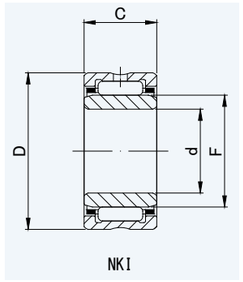
INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NKI	g	NK	g	IR	d	Fw (F)	D	C	Cr N	Cor N	TAFI	TAF	NKI	NK	NK+IR	NK	NKJ	NK
—	—	**NK25/16**	34	—	—	25	33	16	15 800	23 700	—	TAF253316	—	NK25/16	—	NK25/16R	—	NK25/16
—	—	**NK25/20**	42	—	—	25	33	20	20 000	32 200	—	TAF253320	—	NK25/20	—	NK25/20R	—	NK25/20
NKI 22/16	52	**NK26/16**	35	**IR222616**	22	26	34	16	16 300	24 900	TAFI 223416	TAF263416	NKI 22/16	NK26/16	NK26/16R + IR222616	NK26/16R	NKJ 22/16	NK26/16
NKI 22/20	67.5	**NK26/20**	44	**IR222620**	22	26	34	20	20 600	33 700	TAFI 223420	TAF263420	NKI 22/20	NK26/20	NK26/20R + IR222620	NK26/20R	NKJ 22/20	NK26/20
—	—	**NK28/20**	52	—	—	28	37	20	21 700	37 100	—	TAF283720	—	NK28/20	—	NK28/20R	—	NK28/20
—	—	**NK28/30**	84	—	—	28	37	30	31 100	58 900	—	TAF283730	—	NK28/30	—	NK28/30R	—	NK28/30
NKI 25/20	82	**NK29/20**	57	**IR252920**	25	29	38	20	21 600	37 200	TAFI 253820	TAF293820	NKI 25/20	NK29/20	NK29/20R + IR252920	NK29/20R	NKJ 25/20	NK29/20
NKI 25/30	123	**NK29/30**	85	**IR252930**	25	29	38	30	30 900	59 000	TAFI 253830	TAF293830	NKI 25/30	NK29/30	NK29/30R + IR252930	NK29/30R	NKJ 25/30	NK29/30
—	—	**NK30/20**	65	—	—	30	40	20	25 100	40 100	—	TAF304020	—	NK30/20	—	NK30/20R	—	NK30/20
—	—	**NK30/30**	98	—	—	30	40	30	36 000	63 800	—	TAF304030	—	NK30/30	—	NK30/30R	—	NK30/30
NKI 28/20	96.5	**NK32/20**	68	**IR283220**	28	32	42	20	25 700	42 200	TAFI 284220	TAF324220	NKI 28/20	NK32/20	NK32/20R + IR283220	NK32/20R	NKJ 28/20	NK32/20
NKI 28/30	145	**NK32/30**	102	**IR283230**	28	32	42	30	36 900	67 100	TAFI 284230	TAF324230	NKI 28/30	NK32/30	NK32/30R + IR283230	NK32/30R	NKJ 28/30	NK32/30
NKI 30/20	112	**NK35/20**	74	**IR303520**	30	35	45	20	27 000	46 200	TAFI 304520	TAF354520	NKI 30/20	NK35/20	NK35/20R + IR303520	NK35/20R	NKJ 30/20	NK35/20
NKI 30/30	171	**NK35/30**	112	**IR303530**	30	35	45	30	38 600	73 500	TAFI 304530	TAF354530	NKI 30/30	NK35/30	NK35/30R + IR303530	NK35/30R	NKJ 30/30	NK35/30
NKI 32/20	121	**NK37/20**	78	**IR323720**	32	37	47	20	28 200	50 100	TAFI 324720	TAF374720	NKI 32/20	NK37/20	NK37/20R + IR323720	NK37/20R	NKJ 32/20	NK37/20
NKI 32/30	180	**NK37/30**	117	**IR323730**	32	37	47	30	40 500	79 800	TAFI 324730	TAF374730	NKI 32/30	NK37/30	NK37/30R + IR323730	NK37/30R	NKJ 32/30	NK37/30
—	—	**NK38/20**	79	—	—	38	48	20	28 100	50 200	—	TAF384820	—	NK38/20	—	NK38/20R	—	NK38/20
—	—	**NK38/30**	119	—	—	38	48	30	40 300	80 000	—	TAF384830	—	NK38/30	—	NK38/30R	—	NK38/30
NKI 35/20	129	**NK40/20**	83	**IR354020**	35	40	50	20	29 400	54 100	TAFI 355020	TAF405020	NKI 35/20	NK40/20	NK40/20R + IR354020	NK40/20R	NKJ 35/20	NK40/20
NKI 35/30	192	**NK40/30**	125	**IR354030**	35	40	50	30	42 300	86 100	TAFI 355030	TAF405030	NKI 35/30	NK40/30	NK40/30R + IR354030	NK40/30R	NKJ 35/30	NK40/30
—	—	**NK42/20**	87	—	—	42	52	20	29 900	56 200	—	TAF425220	—	NK42/20	—	NK42/20R	—	NK42/20
—	—	**NK42/30**	130	—	—	42	52	30	43 000	89 500	—	TAF425230	—	NK42/30	—	NK42/30R	—	NK42/30
NKI 38/20	136	**NK43/20**	89	**IR384320**	38	43	53	20	30 500	58 100	TAFI 385320	TAF435320	NKI 38/20	NK43/20	NK43/20R + IR384320	NK43/20R	NKJ 38/20	NK43/20
NKI 38/30	205	**NK43/30**	133	**IR384330**	38	43	53	30	43 700	92 500	TAFI 385330	TAF435330	NKI 38/30	NK43/30	NK43/30R + IR384330	NK43/30R	NKJ 38/30	NK43/30
NKI 40/20	143	**NK45/20**	92	**IR404520**	40	45	55	20	31 100	60 100	TAFI 405520	TAF455520	NKI 40/20	NK45/20	NK45/20R + IR404520	NK45/20R	NKJ 40/20	NK45/20
NKI 40/30	215	**NK45/30**	138	**IR404530**	40	45	55	30	44 500	95 700	TAFI 405530	TAF455530	NKI 40/30	NK45/30	NK45/30R + IR404530	NK45/30R	NKJ 40/30	NK45/30
NKI 42/20	149	**NK47/20**	95	**IR424720**	42	47	57	20	31 500	62 300	TAFI 425720	TAF475720	NKI 42/20	NK47/20	NK47/20R + IR424720	NK47/20R	NKJ 42/20	NK47/20
NKI 42/30	225	**NK47/30**	144	**IR424730**	42	47	57	30	45 200	99 000	TAFI 425730	TAF475730	NKI 42/30	NK47/30	NK47/30R + IR424730	NK47/30R	NKJ 42/30	NK47/30
NKI 45/25	230	**NK50/25**	159	**IR455025**	45	50	62	25	43 000	85 200	TAFI 456225	TAF506225	NKI 45/25	NK50/25	NK50/25R + IR455025	NK50/25R	NKJ 45/25	NK50/25
NKI 45/35	320	**NK50/35**	225	**IR455035**	45	50	62	35	58 100	125 500	TAFI 456235	TAF506235	NKI 45/35	NK50/35	NK50/35R + IR455035	NK50/35R	NKJ 45/35	NK50/35
NKI 50/25	270	**NK55/25**	193	**IR505525**	50	55	68	25	45 400	94 100	TAFI 506825	TAF556825	NKI 50/25	NK55/25	NK55/25R + IR505525	NK55/25R	NKJ 50/25	NK55/25
NKI 50/35	365	**NK55/35**	255	**IR505535**	50	55	68	35	61 300	138 300	TAFI 506835	TAF556835	NKI 50/35	NK55/35	NK55/35R + IR505535	NK55/35R	NKJ 50/35	NK55/35
NKI 55/25	275	**NK60/25**	187	**IR556025**	55	60	72	25	47 500	103 000	TAFI 557225	TAF607225	NKI 55/25	NK60/25	NK60/25R + IR556025	NK60/25R	NKJ 55/25	NK60/25
NKI 55/35	380	**NK60/35**	260	**IR556035**	55	60	72	35	64 100	151 000	TAFI 557235	TAF607235	NKI 55/35	NK60/35	NK60/35R + IR556035	NK60/35R	NKJ 55/35	NK60/35

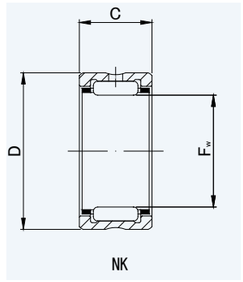
NK type of 10mm or less inscribed circle diameter (Fw) is without oil hole.
NKI type of 8mm or less inscribed circle diameter (d) is without oil hole.

INTERCHANGE

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



NKI



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NK, NKI

DIMENSION TABLE

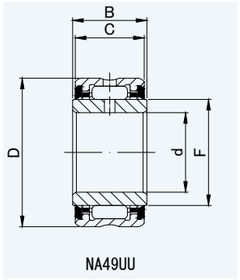
INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NKI	g	NK	g	IR	d	Fw (F)	D	C	Cr N	Cor N	TAFI	TAF	NKI	NK	NK+IR	NK	NKJ	NK
—	—	**NK65/25**	225	—	—	65	78	25	49 600	111 800	—	TAF657825	—	NK65/25	—	NK65/25R	—	NK65/25
—	—	**NK65/35**	315	—	—	65	78	35	67 000	164 800	—	TAF657835	—	NK65/35	—	NK65/35R	—	NK65/35
NKI 60/25	395	**NK68/25**	250	**IR606825**	60	68	82	25	54 800	116 700	TAFI 608225	TAF688225	NKI 60/25	NK68/25	NK68/25R + IR606825	NK68/25R	NKJ 60/25	NK68/25
NKI 60/35	560	**NK68/35**	350	**IR606835**	60	68	82	35	72 100	165 700	TAFI 608235	TAF688235	NKI 60/35	NK68/35	NK68/35R + IR606835	NK68/35R	NKJ 60/35	NK68/35
—	—	**NK70/25**	280	—	—	70	85	25	55 500	120 600	—	TAF708525	—	NK70/25	—	NK70/25R	—	NK70/25
—	—	**NK70/35**	395	—	—	70	85	35	73 000	170 600	—	TAF708535	—	NK70/35	—	NK70/35R	—	NK70/35
—	—	**NK73/25**	335	—	—	73	90	25	61 100	126 500	—	TAF739025	—	NK73/25	—	NK73/25R	—	NK73/25
NKI 65/35	710	**NK73/35**	475	**IR657335**	65	73	90	35	80 400	180 400	TAFI 659035	TAF739035	NKI 65/35	NK73/35	NK73/35R + IR657335	NK73/35R	NKJ 65/35	NK73/35
—	—	**NK75/25**	345	—	—	75	92	25	62 200	130 400	—	TAF759225	—	NK75/25	—	NK75/25R	—	NK75/25
—	—	**NK75/35**	485	—	—	75	92	35	82 700	186 300	—	TAF759235	—	NK75/35	—	NK75/35R	—	NK75/35
NKI 70/25	540	**NK80/25**	315	**IR708025**	70	80	95	25	59 400	137 300	TAFI 709525	TAF809525	NKI 70/25	NK80/25	NK80/25R + IR708025	NK80/25R	NKJ 70/25	NK80/25
NKI 70/35	755	**NK80/35**	445	**IR708035**	70	80	95	35	78 100	194 200	TAFI 709535	TAF809535	NKI 70/35	NK80/35	NK80/35R + IR708035	NK80/35R	NKJ 70/35	NK80/35
NKI 75/25	675	**NK85/25**	435	**IR758525**	75	85	105	25	76 400	145 100	TAFI 7510525	TAF8510525	NKI 75/25	NK85/25	NK85/25R + IR758525	NK85/25R	NKJ 75/25	NK85/25
NKI 75/35	945	**NK85/35**	610	**IR758535**	75	85	105	35	102 000	209 900	TAFI 7510535	TAF8510535	NKI 75/35	NK85/35	NK85/35R + IR758535	NK85/35R	NKJ 75/35	NK85/35
NKI 80/25	710	**NK90/25**	456	**IR809025**	80	90	110	25	77 400	150 000	TAFI 8011025	TAF9011025	NKI 80/25	NK90/25	NK90/25R + IR809025	NK90/25R	NKJ 80/25	NK90/25
NKI 80/35	995	**NK90/35**	640	**IR809035**	80	90	110	35	103 000	216 700	TAFI 8011035	TAF9011035	NKI 80/35	NK90/35	NK90/35R + IR809035	NK90/35R	NKJ 80/35	NK90/35
NKI 85/26	775	**NK95/26**	495	**IR859526**	85	95	115	26	79 700	158 900	TAFI 8511526	TAF9511526	NKI 85/26	NK95/26	NK95/26R + IR859526	NK95/26R	NKJ 85/26	NK95/26
NKI 85/36	1 080	**NK95/36**	690	**IR859536**	85	95	115	36	106 900	230 500	TAFI 8511536	TAF9511536	NKI 85/36	NK95/36	NK95/36R + IR859536	NK95/36R	NKJ 85/36	NK95/36
NKI 90/26	820	**NK100/26**	525	**IR9010026**	90	100	120	26	82 500	168 700	TAFI 9012026	TAF10012026	NKI 90/26	NK100/26	NK100/26R + IR9010026	NK100/26R	NKJ 90/26	NK100/26
NKI 90/36	1 140	**NK100/36**	725	**IR9010036**	90	100	120	36	109 800	244 200	TAFI 9012036	TAF10012036	NKI 90/36	NK100/36	NK100/36R + IR9010036	NK100/36R	NKJ 90/36	NK100/36
NKI 95/26	860	**NK105/26**	545	**IR9510526**	95	105	125	26	84 700	177 500	TAFI 9512526	TAF10512526	NKI 95/26	NK105/26	NK105/26R + IR9510526	NK105/26R	NKJ 95/26	NK105/26
NKI 95/36	1 190	**NK105/36**	760	**IR9510536**	95	105	125	36	112 800	257 900	TAFI 9512536	TAF10512536	NKI 95/36	NK105/36	NK105/36R + IR9510536	NK105/36R	NKJ 95/36	NK105/36
NKI 100/30	1 040	**NK110/30**	660	**IR10011030**	100	110	130	30	105 900	239 300	TAFI 10013030	TAF11013030	NKI 100/30	NK110/30	NK110/30R + IR10011030	NK110/30R	NKJ 100/30	NK110/30
NKI 100/40	1 380	**NK110/40**	880	**IR10011040**	100	110	130	40	133 400	323 600	TAFI 10013040	TAF11013040	NKI 100/40	NK110/40	NK110/40R + IR10011040	NK110/40R	NKJ 100/40	NK110/40

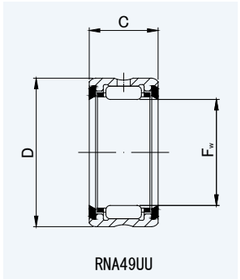
NK type of 10mm or less inscribed circle diameter (Fw) is without oil hole.
NKI type of 8mm or less inscribed circle diameter (d) is without oil hole.

MACHINED RING NEEDLE ROLLER BEARINGS

SEALED, WITH INNER RING
SEALED, WITHOUT INNER RING



NA49UU



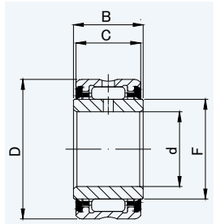
RNA49UU

NA49UU, RNA49UU

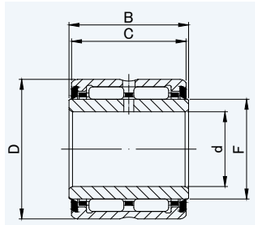
DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 49UU	g	RNA 49UU	g	IRZ	d	Fw (F)	D	C	Cr N	Cor N	NA 49UU	RNA 49UU	NA 49.2RS	RNA 49.2RS	NA 49LL	RNA 49LL	NA 49.2RS	RNA 49.2RS
NA 4900UU	25	**RNA 4900UU**	16	**IRZ101414**	10	14	22	13	8 000	8 500	NA4900UU	RNA4900UU	NA4900.2RS	RNA4900.2RS	NA4900LL	RNA4900LL	NA4900.2RS	RNA4900.2RS
NA 4901UU	28	**RNA 4901UU**	18	**IRZ121614**	12	16	24	13	8 400	9 300	NA4901UU	RNA4901UU	NA4901.2RS	RNA4901.2RS	NA4901LL	RNA4901LL	NA4901.2RS	RNA4901.2RS
NA 4902UU	36	**RNA 4902UU**	22	**IRZ152014**	15	20	28	13	9 600	11 700	NA4902UU	RNA4902UU	NA4902.2RS	RNA4902.2RS	NA4902LL	RNA4902LL	NA4902.2RS	RNA4902.2RS
NA 4903UU	40	**RNA 4903UU**	23	**IRZ172214**	17	22	30	13	10 300	13 100	NA4903UU	RNA4903UU	NA4903.2RS	RNA4903.2RS	NA4903LL	RNA4903LL	NA4903.2RS	RNA4903.2RS
NA 4904UU	78	**RNA 4904UU**	55	**IRZ202518**	20	25	37	17	17 900	20 500	NA4904UU	RNA4904UU	NA4904.2RS	RNA4904.2RS	NA4904LL	RNA4904LL	NA4904.2RS	RNA4904.2RS
NA 4905UU	93	**RNA 4905UU**	63	**IRZ253018**	25	30	42	17	20 300	25 100	NA4905UU	RNA4905UU	NA4905.2RS	RNA4905.2RS	NA4905LL	RNA4905LL	NA4905.2RS	RNA4905.2RS
NA 4906UU	106	**RNA 4906UU**	71	**IRZ303518**	30	35	47	17	21 600	28 400	NA4906UU	RNA4906UU	NA4906.2RS	RNA4906.2RS	NA4906LL	RNA4906LL	NA4906.2RS	RNA4906.2RS
NA 4907UU	179	**RNA 4907UU**	110	**IRZ354221**	35	42	55	20	30 100	46 300	NA4907UU	RNA4907UU	NA4907.2RS	RNA4907.2RS	NA4907LL	RNA4907LL	NA4907.2RS	RNA4907.2RS
NA 4908UU	245	**RNA 4908UU**	150	**IRZ404823**	40	48	62	22	37 200	58 300	NA4908UU	RNA4908UU	NA4908.2RS	RNA4908.2RS	NA4908LL	RNA4908LL	NA4908.2RS	RNA4908.2RS
NA 4909UU	290	**RNA 4909UU**	190	**IRZ455223**	45	52	68	22	38 800	63 400	NA4909UU	RNA4909UU	NA4909.2RS	RNA4909.2RS	NA4909LL	RNA4909LL	NA4909.2RS	RNA4909.2RS
NA 4910UU	300	**RNA 4910UU**	180	**IRZ505823**	50	58	72	22	41 300	71 100	NA4910UU	RNA4910UU	NA4910.2RS	RNA4910.2RS	NA4910LL	RNA4910LL	NA4910.2RS	RNA4910.2RS



NA69UU(d≦30)



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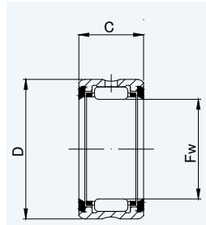
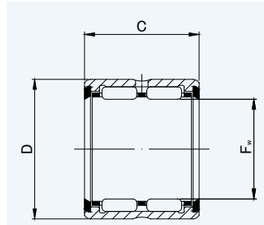


RNA69UU(Fw≦35)



RNA69UU

NA69UU, RNA69UU

DIMENSION TABLE

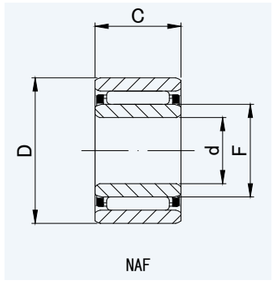
JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating
NA 69UU	g	RNA 69UU	g	IRZ	d	Fw (F)	D	C	Cr N	Cor N
NA 6901UU	46	**RNA 6901UU**	30	**IRZ121623**	12	16	24	22	15 600	20 400
NA 6902UU	63	**RNA 6902UU**	38	**IRZ152024**	15	20	28	23	18 400	27 100
NA 6903UU	69	**RNA 6903UU**	40	**IRZ172224**	17	22	30	23	19 800	30 600
NA 6904UU	140	**RNA 6904UU**	96	**IRZ202531**	20	25	37	30	33 000	44 500
NA 6905UU	162	**RNA 6905UU**	110	**IRZ253031**	25	30	42	30	39 200	58 600
NA 6906UU	185	**RNA 6906UU**	130	**IRZ303531**	30	35	47	30	40 100	63 100
NA 6907UU	320	**RNA 6907UU**	200	**IRZ354237**	35	42	55	36	51 600	92 600
NA 6908UU	440	**RNA 6908UU**	270	**IRZ404841**	40	48	62	40	63 700	116 700
NA 6909UU	510	**RNA 6909UU**	355	**IRZ455241**	45	52	68	40	66 700	126 500
NA 6910UU	530	**RNA 6910UU**	320	**IRZ505841**	50	58	72	40	70 800	142 200

INTERCHANGE TABLE

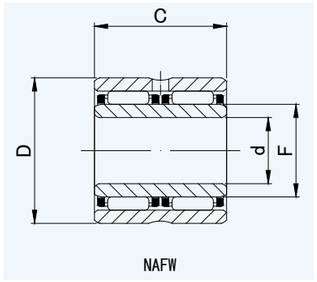
IKO		INA		NTN		TORRINGTON(KOYO)	
WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 69UU	RNA 69UU	—	—	—	—	—	—
NA6901UU	RNA6901UU	—	—	—	—	—	—
NA6902UU	RNA6902UU	—	—	—	—	—	—
NA6903UU	RNA6903UU	—	—	—	—	—	—
NA6904UU	RNA6904UU	—	—	—	—	—	—
NA6905UU	RNA6905UU	—	—	—	—	—	—
NA6906UU	RNA6906UU	—	—	—	—	—	—
NA6907UU	RNA6907UU	—	—	—	—	—	—
NA6908UU	RNA6908UU	—	—	—	—	—	—
NA6909UU	RNA6909UU	—	—	—	—	—	—
NA6910UU	RNA6910UU	—	—	—	—	—	—

INTERCHANGE

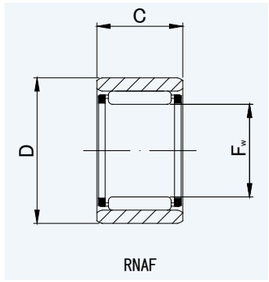
MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



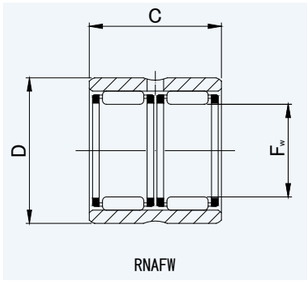
NAF



NAFW



RNAF



RNAFW

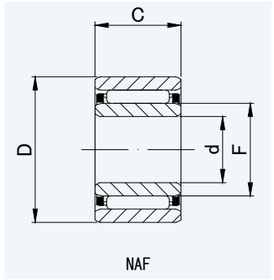
NAF, RNAF

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		IKO		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NAF(W)	g	RNAF(W)	g	IR	d	Fw (F)	D	C	Cr N	Cor N	NAO	RNAO	NAF(W)	RNAF(W)	NAO	RNAO	NAO	RNAO
—	—	**RNAF5108**	3	—	—	5	10	8	2 500	2 000	—	RNAO5X10X8 TN	—	RNAF5108N	—	RNAO-5X10X8 T2	—	—
—	—	**RNAF6138**	5.5	—	—	6	13	8	2 500	2 100	—	RNAO6X13X8 TN	—	RNAF6138N	—	RNAO-6X13X8 T2	—	RNAO6X13X8 TN
—	—	**RNAF7148**	6	—	—	7	14	8	2 900	2 600	—	RNAO7X14X8 TN	—	RNAF7148N	—	RNAO-7X14X8 T2	—	RNAO7X14X8 TN
—	—	**RNAF81510**	8	—	—	8	15	10	3 600	3 600	—	RNAO8X15X10 TN	—	RNAF81510	—	RNAO-8X15X10 T2	—	RNAO8X15X10
—	—	**RNAFW81620**	20	—	—	8	16	20	6 200	7 200	—	—	—	RNAFW81620	—	RNAO-8X16X20ZW T2	—	—
NAF61710	14	**RNAF101710**	10	**IR61010**	6	10	17	10	4 100	4 500	NAO6X17X10 TN	RNAO10X17X10 TN	NAF61710	RNAF101710	NAO-6X17X10 T2	RNAO-10X17X10 T2	NAO6X17X10	RNAO10X17X10
NAF72012	23	**RNAF102012**	19	**IR71012**	7	10	20	12	6 000	6 000	—	—	NAF72012	RNAF102012	NAO-7X20X12	RNAO-10X20X12	—	—
NAF92212	24	**RNAF122212**	19	**IR91212**	9	12	22	12	9 000	8 400	NAO9X22X12 TN	RNAO12X22X12 TN	NAF92212	RNAF122212	NAO-9X22X12	RNAO-12X22X12	—	—
NAF102213	26	**RNAF142213**	18	**IR101413**	10	14	22	13	7 800	9 400	—	—	NAF102213	RNAF142213	NAO-10X22X13	RNAO-14X22X13	NAO10X22X13	RNAO14X22X13
NAFW102220	40	**RNAFW142220**	28	**IR101420**	10	14	22	20	10 800	14 200	—	—	NAFW102220	RNAFW142220	NAO-10X22X20 ZW	RNAO-14X22X20ZW	NAO10X22X20	RNAO14X22X20
NAF102612	36	**RNAF142612**	29	**IR101412**	10	14	26	12	9 800	9 700	—	—	NAF102612	RNAF142612	NAO-10X26X12	RNAO-14X26X12	NAO10X26X12	RNAO14X26X12
—	—	**RNAF152313**	20	—	—	15	23	13	8 200	10 200	—	RNAO15X23X13	—	RNAF152313	—	RNAO-15X23X13	—	RNAO15X23X13
—	—	**RNAFW152320**	31	—	—	15	23	20	11 400	15 400	—	—	—	RNAFW152320	—	RNAO-15X23X20ZW	—	RNAO15X23X20
NAF122413	30	**RNAF162413**	21	**IR121613**	12	16	24	13	8 600	11 000	NAO12X24X13	RNAO16X24X13	NAF122413	RNAF162413	NAO-12X24X13	RNAO-16X24X13	NAO12X24X13	RNAO16X24X13
NAFW122420	45	**RNAFW162420**	32	**IR121620**	12	16	24	20	11 900	16 700	NAO12X24X20	RNAO16X24X20	NAFW122420	RNAFW162420	NAO-12X24X20 ZW	RNAO-16X24X20ZW	NAO12X24X20	RNAO16X24X20
NAF122812	40	**RNAF162812**	32	**IR121612**	12	16	28	12	10 500	10 900	NAO12X28X12	RNAO16X28X12	NAF122812	RNAF162812	NAO-12X28X12	RNAO-16X28X12	NAO12X28X12	RNAO16X28X12
—	—	**RNAF172513**	22	—	—	17	25	13	9 000	11 900	—	RNAO17X25X13	—	RNAF172513	—	RNAO-17X25X13	—	RNAO17X25X13
—	—	**RNAFW172520**	33	—	—	17	25	20	12 400	17 900	—	—	—	RNAFW172520	—	RNAO-17X25X20ZW	—	RNAO17X25X20
—	—	**RNAF182613**	23	—	—	18	26	13	9 300	12 700	—	—	—	RNAF182613	—	RNAO-18X26X13	—	RNAO18X26X13
—	—	**RNAFW182620**	35	—	—	18	26	20	12 800	19 100	—	—	—	RNAFW182620	—	RNAO-18X26X20ZW	—	RNAO18X26X20
—	—	**RNAF183012**	35	—	—	18	30	12	11 800	13 000	—	—	—	RNAF183012	—	RNAO-18X30X12	—	—
—	—	**RNAFW183024**	70	—	—	18	30	24	20 200	26 200	—	RNAO18X30X24	—	RNAFW183024	—	RNAO-18X30X24ZW	—	RNAO18X30X24
NAF152813	37	**RNAF202813**	25	**IR152013**	15	20	28	13	9 600	13 500	NAO15X28X13	RNAO20X28X13	NAF152813	RNAF202813	NAO-15X28X13	RNAO-20X28X13	NAO15X28X13	RNAO20X28X13
NAFW152826	76	**RNAFW202826**	50	**IR152026**	15	20	28	26	16 500	27 100	—	RNAO20X28X26	NAFW152826	RNAFW202826	NAO-15X28X26 ZW	RNAO-20X28X26ZW	NAO15X28X26	RNAO20X28X26
NAF153212	51	**RNAF203212**	37	**IR152012**	15	20	32	12	12 400	14 300	NAO15X32X12	RNAO20X32X12	NAF153212	RNAF203212	NAO-15X32X12	RNAO-20X32X12	NAO15X32X12	RNAO20X32X12
—	—	**RNAFW203224**	75	—	—	20	32	24	21 200	28 600	—	—	—	RNAFW203224	—	RNAO-20X32X24ZW	—	RNAO20X32X24
NAF173013	43	**RNAF223013**	27	**IR172213**	17	22	30	13	10 200	15 200	NAO17X30X13	RNAO22X30X13	NAF173013	RNAF223013	NAO-17X30X13	RNAO-22X30X13	NAO17X30X13	RNAO22X30X13
NAFW173026	85	**RNAFW223026**	54	**IR172226**	17	22	30	26	17 600	30 300	—	—	NAFW173026	RNAFW223026	NAO-17X30X26 ZW	RNAO-22X30X26ZW	NAO17X30X26	RNAO22X30X26
NAF173516	77	**RNAF223516**	59	**IR172216**	17	22	35	16	17 600	20 900	NAO17X35X16	RNAO22X35X16	NAF173516	RNAF223516	NAO-17X35X16	RNAO-22X35X16	NAO17X35X16	RNAO22X35X16
NAFW173532	155	**RNAFW223532**	117	**IR172232**	17	22	35	32	30 200	41 900	—	—	NAFW173532	RNAFW223532	NAO-17X35X32 ZW	RNAO-22X35X32ZW	NAO17X35X32	RNAO22X35X32
NAF203517	75	**RNAF253517**	51	**IR202517**	20	25	35	17	17 300	26 600	NAO20X35X17	RNAO25X35X17	NAF203517	RNAF253517	NAO-20X35X17	RNAO-25X35X17	NAO20X35X17	RNAO25X35X17
NAFW203526	114	**RNAFW253526**	78	**IR202526**	20	25	35	26	22 500	37 200	—	RNAO25X35X26	NAFW203526	RNAFW253526	NAO-20X35X26 ZW	RNAO-25X35X26ZW	NAO20X35X26	RNAO25X35X26
NAF203716	80	**RNAF253716**	57	**IR202516**	20	25	37	16	19 400	24 500	NAO20X37X16	RNAO25X37X16	NAF203716	RNAF253716	NAO-20X37X16	RNAO-25X37X16	NAO20X37X16	RNAO25X37X16
NAFW203732	158	**RNAFW253732**	114	**IR202532**	20	25	37	32	33 200	49 000	—	RNAO25X37X32	NAFW203732	RNAFW253732	NAO-20X37X32 ZW	RNAO-25X37X32ZW	NAO20X37X32	RNAO25X37X32
—	—	**RNAF284016**	63	—	—	28	40	16	20 100	26 500	—	—	—	RNAF284016	—	RNAO-28X40X16	—	RNAO28X40X16
—	—	**RNAFW284032**	125	—	—	28	40	32	34 400	53 000	—	—	—	RNAFW284032	—	RNAO-28X40X32ZW	—	RNAO28X40X32

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



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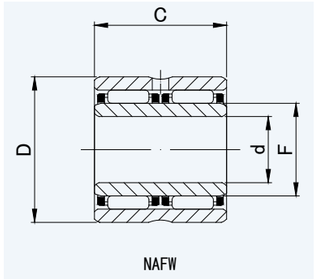

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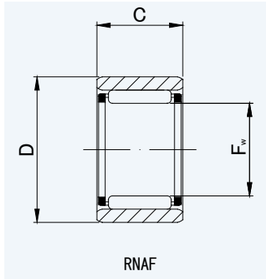

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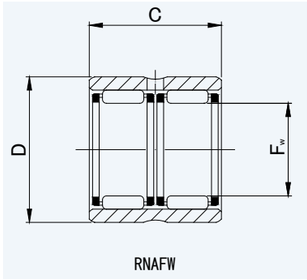


RNAFW

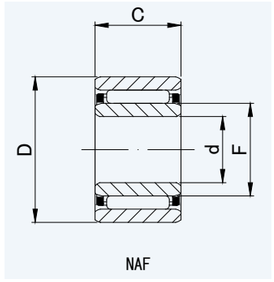
NAF, RNAF

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		IKO		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NAF(W)	g	RNAF(W)	g	IR	d	Fw (F)	D	C	Cr N	Cor N	NAO	RNAO	NAF(W)	RNAF(W)	NAO	RNAO	NAO	RNAO
NAF254017	88	**RNAF304017**	59	**IR253017**	25	30	40	17	18 600	31 100	NAO25X40X17	RNAO30X40X17	NAF254017	RNAF304017	NAO-25X40X17	RNAO-30X40X17	NAO25X40X17	RNAO30X40X17
NAFW254026	136	**RNAFW304026**	91	**IR253026**	25	30	40	26	24 200	43 400	—	RNAO30X40X26	NAFW254026	RNAFW304026	NAO-25X40X26 ZW	RNAO-30X40X26ZW	NAO25X40X26	RNAO30X40X26
NAF254216	94	**RNAF304216**	66	**IR253016**	25	30	42	16	20 800	28 300	NAO25X42X16	RNAO30X42X16	NAF254216	RNAF304216	NAO-25X42X16	RNAO-30X42X16	NAO25X42X16	RNAO30X42X16
NAFW254232	187	**RNAFW304232**	132	**IR253032**	25	30	42	32	35 700	56 800	NAO25X42X32	RNAO30X42X32	NAFW254232	RNAFW304232	NAO-25X42X32 ZW	RNAO-30X42X32ZW	NAO25X42X32	RNAO30X42X32
NAF304517	100	**RNAF354517**	68	**IR303517**	30	35	45	17	20 500	36 900	NAO30X45X17	RNAO35X45X17	NAF304517	RNAF354517	NAO-30X45X17	RNAO-35X45X17	NAO30X45X17	RNAO35X45X17
NAFW304526	155	**RNAFW354526**	103	**IR303526**	30	35	45	26	26 600	51 600	NAO30X45X26	RNAO35X45X26	NAFW304526	RNAFW354526	NAO-30X45X26 ZW	RNAO-35X45X26ZW	NAO30X45X26	RNAO35X45X26
NAF304716	108	**RNAF354716**	76	**IR303516**	30	35	47	16	23 000	33 800	NAO30X47X16	RNAO35X47X16	NAF304716	RNAF354716	NAO-30X47X16	RNAO-35X47X16	NAO30X47X16	RNAO35X47X16
NAFW304732	215	**RNAFW354732**	151	**IR303532**	30	35	47	32	39 500	67 800	—	RNAO35X47X32	NAFW304732	RNAFW354732	NAO-30X47X32 ZW	RNAO-35X47X32ZW	NAO30X47X32	RNAO35X47X32
NAF355017	115	**RNAF405017**	75	**IR354017**	35	40	50	17	22 200	42 700	NAO35X50X17	RNAO40X50X17	NAF355017	RNAF405017	NAO-35X50X17	RNAO-40X50X17	NAO35X50X17	RNAO40X50X17
NAFW355034	230	**RNAFW405034**	152	**IR354034**	35	40	50	34	38 000	85 300	—	RNAO40X50X34	NAFW355034	RNAFW405034	NAO-35X50X34 ZW	RNAO-40X50X34ZW	NAO35X50X34	RNAO40X50X34
NAF355520	188	**RNAF405520**	142	**IR354020**	35	40	55	20	31 500	48 000	NAO35X55X20	RNAO40X55X20	NAF355520	RNAF405520	NAO-35X55X20	RNAO-40X55X20	NAO35X55X20	RNAO40X55X20
NAFW355540	375	**RNAFW405540**	280	**IR354040**	35	40	55	40	53 900	96 000	—	RNAO40X55X40	NAFW355540	RNAFW405540	NAO-35X55X40 ZW	RNAO-40X55X40ZW	NAO35X55X40	RNAO40X55X40
NAF405517	129	**RNAF455517**	84	**IR404517**	40	45	55	17	23 200	47 200	NAO40X55X17	RNAO45X55X17	NAF405517	RNAF455517	NAO-40X55X17	RNAO-45X55X17	NAO40X55X17	RNAO45X55X17
NAFW405534	255	**RNAFW455534**	167	**IR404534**	40	45	55	34	39 900	94 200	—	—	NAFW405534	RNAFW455534	NAO-40X55X34 ZW	RNAO-45X55X34ZW	NAO40X55X34	RNAO45X55X34
NAF406220	236	**RNAF456220**	185	**IR404520**	40	45	62	20	33 200	53 300	—	—	NAF406220	RNAF456220	NAO-40X62X20	RNAO-45X62X20	NAO40X62X20	RNAO45X62X20
NAFW406240	475	**RNAFW456240**	370	**IR404540**	40	45	62	40	57 000	106 900	—	RNAO45X62X40	NAFW406240	RNAFW456240	NAO-40X62X40 ZW	RNAO-45X62X40ZW	NAO40X62X40	RNAO45X62X40
NAF456220	197	**RNAF506220**	139	**IR455020**	45	50	62	20	27 100	59 300	—	RNAO50X62X20	NAF456220	RNAF506220	NAO-45X62X20	RNAO-50X62X20	NAO45X62X20	RNAO50X62X20
NAFW456240	389	**RNAFW506240**	276	**IR455040**	45	50	62	40	46 400	118 700	—	—	NAFW456240	RNAFW506240	NAO-45X62X40 ZW	RNAO-50X62X40ZW	NAO45X62X40	RNAO50X62X40
—	—	**RNAF506520**	170	—	—	50	65	20	35 900	61 100	—	RNAO50X65X20	—	RNAF506520	—	RNAO-50X65X20	—	RNAO50X65X20
—	—	**RNAFW506540**	345	—	—	50	65	40	61 500	122 600	—	RNAO50X65X40	—	RNAFW506540	—	RNAO-50X65X40ZW	—	RNAO50X65X40
NAF506820	230	**RNAF556820**	167	**IR505520**	50	55	68	20	28 500	66 000	NAO50X68X20	RNAO55X68X20	NAF506820	RNAF556820	NAO-50X68X20	RNAO-55X68X20	NAO50X68X20	RNAO55X68X20
NAFW506840	465	**RNAFW556840**	330	**IR505540**	50	55	68	40	48 900	132 400	—	—	NAFW506840	RNAFW556840	NAO-50X68X40 ZW	RNAO-55X68X40ZW	NAO50X68X40	RNAO55X68X40
NAF457220	340	**RNAF557220**	215	**IR455520**	45	55	72	20	37 400	66 400	—	—	NAF457220	RNAF557220	NAO-45X72X20	RNAO-55X72X20	NAO45X72X20	RNAO55X72X20
NAFW457240	685	**RNAFW557240**	435	**IR455540**	45	55	72	40	64 100	132 400	—	—	NAFW457240	RNAFW557240	NAO-45X72X40 ZW	RNAO-55X72X40ZW	NAO45X72X40	RNAO55X72X40
NAF507820	390	**RNAF607820**	255	**IR506020**	50	60	78	20	38 900	71 700	NAO50X78X20	RNAO60X78X20	NAF507820	RNAF607820	NAO-50X78X20	RNAO-60X78X20	NAO50X78X20	RNAO60X78X20
NAFW507840	775	**RNAFW607840**	510	**IR506040**	50	60	78	40	66 700	143 200	—	RNAO60X78X40	NAFW507840	RNAFW607840	NAO-50X78X40 ZW	RNAO-60X78X40ZW	NAO50X78X40	RNAO60X78X40
NAF558530	680	**RNAF658530**	465	**IR556530**	55	65	85	30	59 300	127 500	—	RNAO65X85X30	NAF558530	RNAF658530	NAO-55X85X30	RNAO-65X85X30	NAO55X85X30	RNAO65X85X30
NAFW558560	1 380	**RNAFW658560**	950	**IR556560**	55	65	85	60	102 000	254 000	—	—	NAFW558560	RNAFW658560	NAO-55X85X60 ZW	RNAO-65X85X60ZW	NAO55X85X60	RNAO65X85X60
NAF609030	740	**RNAF709030**	500	**IR607030**	60	70	90	30	61 200	135 300	—	RNAO70X90X30	NAF609030	RNAF709030	NAO-60X90X30	RNAO-70X90X30	NAO60X90X30	RNAO70X90X30
NAFW609060	1 470	**RNAFW709060**	1 000	**IR607060**	60	70	90	60	104 900	271 600	—	—	NAFW609060	RNAFW709060	NAO-60X90X60 ZW	RNAO-70X90X60ZW	NAO60X90X60	RNAO70X90X60
NAF659530	800	**RNAF759530**	530	**IR657530**	65	75	95	30	63 200	144 200	—	—	NAF659530	RNAF759530	NAO-65X95X30	RNAO-75X95X30	NAO65X95X30	RNAO75X95X30
NAFW659560	1 570	**RNAFW759560**	1 050	**IR657560**	65	75	95	60	108 900	289 300	—	—	NAFW659560	RNAFW759560	NAO-65X95X60 ZW	RNAO-75X95X60ZW	NAO65X95X60	RNAO75X95X60
NAF7010030	840	**RNAF8010030**	560	**IR708030**	70	80	100	30	64 900	153 000	NAO70X100X30	RNAO80X100X30	NAF7010030	RNAF8010030	NAO-70X100X30	RNAO-80X100X30	NAO70X100X30	RNAO80X100X30
NAFW7010060	1 670	**RNAFW8010060**	1 120	**IR708060**	70	80	100	60	111 800	306 000	—	—	NAFW7010060	RNAFW8010060	NAO-70X100X60 ZW	RNAO-80X100X60ZW	NAO70X100X60	RNAO80X100X60
NAF7510530	890	**RNAF8510530**	590	**IR758530**	75	85	105	30	66 600	160 800	—	—	NAF7510530	RNAF8510530	NAO-75X105X30	RNAO-85X105X30	—	RNAO85X105X30

MACHINED RING NEEDLE ROLLER BEARINGS
WITH INNER RING
WITHOUT INNER RING



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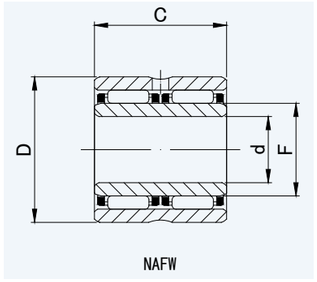

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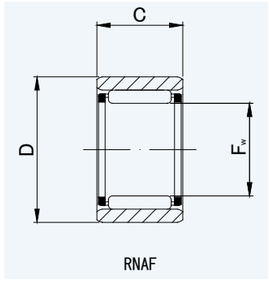

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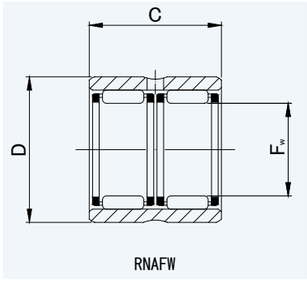


RNAFW

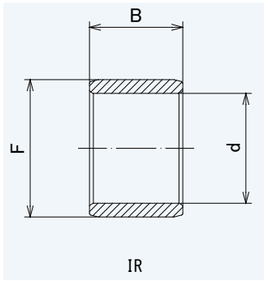
NAF, RNAF

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		IKO		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NAF(W)	g	RNAF(W)	g	IR	d	Fw (F)	D	C	Cr N	Cor N	NAO	RNAO	NAF(W)	RNAF(W)	NAO	RNAO	NAO	RNAO
NAF8011030	930	**RNAF9011030**	620	**IR809030**	80	90	110	30	69 500	173 600	NAO80X110X30	RNAO90X110X30	NAF8011030	RNAF9011030	NAO-80X110X30	RNAO-90X110X30	NAO80X110X30	—
NAF8511530	970	**RNAF9511530**	650	**IR859530**	85	95	115	30	70 900	182 400	—	—	NAF8511530	RNAF9511530	NAO-85X115X30	RNAO-95X115X30	NAO85X115X30	—
NAF9012030	1 040	**RNAF10012030**	690	**IR9010030**	90	100	120	30	72 600	191 200	NAO90X120X30	RNAO100X120X30	NAF9012030	RNAF10012030	NAO-90X120X30	RNAO-100X120X30	NAO90X120X30	RNAO100X120X30

INNER RINGS



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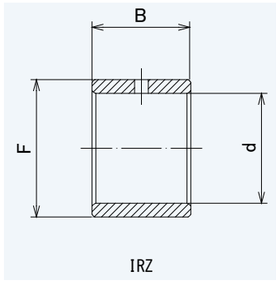


IRZ

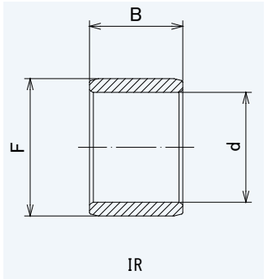
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 5812	3	5	8	12	NK 8/12	—	LRT5812	IR5X8X12	IR5X8X12	JR5X8X12
IR 5816	4	5	8	16	NK 8/16	—	LRT5816	IR5X8X16	IR5X8X16	JR5X8X16
IR 6810	1.7	6	8	10	RNA 496	—	LRT6810	IR6X8X10	IR6X8X10	—
IR 6912	3.2	6	9	12	NK 9/12	—	LRT6912	IR6X9X12	IR6X9X12	JR6X9X12
IR 6916	4.3	6	9	16	NK 9/16	—	LRT6916	IR6X9X16	IR6X9X16	JR6X9X16
IR 61010	4	6	10	10	RNAF 101710	—	LRT61010	IR6X10X10	IR6X10X10	JR6X10X10
IR 7910	1.9	7	9	10	RNA 497	—	LRT7910	IR7X9X10	IR7X9X10	—
IR 71010.5	3.2	7	10	10.5	—	—	IRT710	IR7X10X10.5	IR7X10X10.5	JR7X10X10.5
IR 71012	3.6	7	10	12	NK 10/12	RNAF 102012	LRT71012	IR7X10X12	IR7X10X12	JR7X10X12
IR 71012.5	3.9	7	10	12.5	—	—	IRT712	—	—	—
IR 71015.5	4.8	7	10	15.5	—	—	IRT715	—	—	—
IR 71016	5	7	10	16	NK 10/16	—	LRT71016	IR7X10X16	IR7X10X16	JR7X10X16
IR 81011	2.4	8	10	11	RNA 498	—	LRT81011	IR8X10X11	IR8X10X11	—
IR 81210	4.8	8	12	10	—	—	—	IR8X12X10	IR8X12X10	JR8X12X10
IR 81210.5	5.1	8	12	10.5	—	—	IRT810	IR8X12X10.5	IR8X12X10.5	JR8X12X10.5
IR 81212.5	6	8	12	12.5	—	—	IRT812	IR8X12X12.5	IR8X12X12.5	JR8X12X12.5
IR 81215.5	7.5	8	12	15.5	—	—	IRT815	—	—	—
IR 91211	3.1	9	12	11	RNA 499	—	LRT91211	IR9X12X11	IR9X12X11	—
IR 91212	4.5	9	12	12	NK 12/12	RNAF 122212	LRT91212	IR9X12X12	IR9X12X12	JR9X12X12
IR 91216	6	9	12	16	NK 12/16	—	LRT91216	IR9X12X16	IR9X12X16	JR9X12X16
IR 101312.5	5.2	10	13	12.5	—	—	IRT1012	IR10X13X12.5	IR10X13X12.5	JR10X13X12.5
IR 101412	7	10	14	12	RNAF 142612	—	LRT101412	IR10X14X12	IR10X14X12	JR10X14X12
IR 101412.5	7.2	10	14	12.5	—	—	IRT1012-2	—	—	—
IR 101413	7.5	10	14	13	RNA 4900	RNAF 142213	LRT101413	IR10X14X13	IR10X14X13	JR10X14X13
IRZ 101414	8	10	14	14	RNA 4900UU	—	LRTZ101414	IR10X14X14	IR10X14X14D	JRZ10X14X14JS1
IR 101416	9	10	14	16	NK 14/16	—	LRT101416	IR10X14X16	IR10X14X16	JR10X14X16
IR 101416.5	9.6	10	14	16.5	—	—	IRT1016-2	—	—	—
IR 101420	11.5	10	14	20	NK 14/20	RNAFW 142220	LRT101420	IR10X14X20	IR10X14X20	JR10X14X20
IR 101420.5	11.9	10	14	20.5	—	—	IRT1020-2	—	—	—
IR 101510.5	7.9	10	15	10.5	—	—	IRT1010-1	—	—	—
IR 101515.5	11.7	10	15	15.5	—	—	IRT1015-1	—	IR10X15X15.5	—
IR 101520.5	15.5	10	15	20.5	—	—	IRT1020-1	—	IR10X15X20.5	—
IR 101525.5	19.3	10	15	25.5	—	—	IRT1025-1	—	—	—
IR 121512.5	6.1	12	15	12.5	—	—	IRT1212	IR12X15X12.5	IR12X15X12.5	—
IR 121516	7.8	12	15	16	—	—	—	IR12X15X16	IR12X15X16	—
IR 121516.5	8.1	12	15	16.5	—	—	LRT121516	—	—	JR12X15X16.5
IR 121522.5	11	12	15	22.5	—	—	IRT1222	IR12X15X22.5	—	JR12X15X22.5

INNER RINGS



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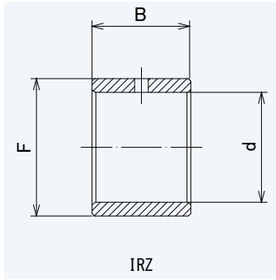


IRZ

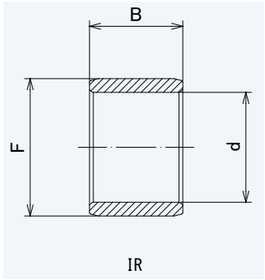
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 121612	8	12	16	12	RNAF 162812	—	LRT121612	IR12X16X12	IR12X16X12	JR12X16X12
IR 121612.5	8.5	12	16	12.5	—	—	IRT1212-1	—	—	—
IR 121613	8.5	12	16	13	RNA 4901	RNAF 162413	LRT121613	IR12X16X13	IR12X16X13	JR12X16X13
IRZ 121614	9.6	12	16	14	RNA 4901UU	—	LRTZ121614	IR12X16X14	IR12X16X14D	JRZ12X16X14JS1
IR 121616	10.5	12	16	16	NK 16/16	—	LRT121616	IR12X16X16	IR12X16X16	JR12X16X16
IR 121616.5	11.2	12	16	16.5	—	—	IRT1216-1	—	—	—
IR 121620	13.5	12	16	20	NK 16/20	RNAFW 162420	LRT121620	IR12X16X20	IR12X16X20	JR12X16X20
IR 121620.5	13.9	12	16	20.5	—	—	IRT1220-1	—	—	—
IR 121622	14.5	12	16	22	RNA 6901	—	LRT121622	IR12X16X22	IR12X16X22	JR12X16X22
IR 121622.5	15.2	12	16	22.5	—	—	IRT1222-1	—	—	—
IRZ 121623	15.5	12	16	23	RNA 6901UU	—	LRTZ121623	—	—	—
IR 121715.5	13.6	12	17	15.5	—	—	IRT1215-2	—	—	—
IR 121720.5	18	12	17	20.5	—	—	IRT1220-2	—	IR12X17X20.5	—
IR 141717	9.5	14	17	17	—	—	LRT141717	IR14X17X17	IR14X17X17	—
IR 151812.5	7.5	15	18	12.5	—	—	IRT1512	IR15X18X12.5	IR15X18X12.5	—
IR 151815.5	9.3	15	18	15.5	—	—	IRT1515	—	—	—
IR 151816.5	9.9	15	18	16.5	—	—	IRT1516	IR15X18X16.5	IR15X18X16.5	JR15X18X16.5
IR 151820.5	12.3	15	18	20.5	—	—	IRT1520	—	IR15X18X20.5	—
IR 151825.5	15.2	15	18	25.5	—	—	IRT1525	—	IR15X18X25.5	—
IR 151916	12.5	15	19	16	NK 19/16	—	LRT151916	IR15X19X16	IR15X19X16	JR15X19X16
IR 151916.5	13.6	15	19	16.5	—	—	IRT1516-1	—	—	—
IR 151920	16	15	19	20	NK 19/20	—	LRT151920	IR15X19X20	IR15X19X20	JR15X19X20
IR 151920.5	12.3	15	19	20.5	—	—	IRT1520-1	—	—	—
IR 152012	12	15	20	12	RNAF 203212	—	LRT152012	IR15X20X12	IR15X20X12	JR15X20X12
IR 152013	13.5	15	20	13	RNA 4902	RNAF 202813	LRT152013	IR15X20X13	IR15X20X13	JR15X20X13
IRZ 152014	14.5	15	20	14	RNA 4902UU	—	LRTZ152014	IR15X20X14	IR15X20X14D	JRZ15X20X14JS1
IR 152015.5	16.4	15	20	15.5	—	—	IRT1515-2	—	—	—
IR 152018	19	15	20	18	RNA 5902	—	—	—	IR15X20X18	—
IR 152020.5	21.5	15	20	20.5	—	—	IRT1520-2	—	IR15X20X20.5	—
IR 152023	24	15	20	23	RNA 6902	—	LRT152023	IR15X20X23	IR15X20X23	JR15X20X23
IRZ 152024	25	15	20	24	RNA 6902UU	—	LRTZ152024	—	—	—
IR 152026	28	15	20	26	RNAFW 202826	—	LRT152026	IR15X20X26	IR15X20X26	JR15X20X26
IR 172016.5	11.1	17	20	16.5	—	—	IRT1716	IR17X20X16.5	IR17X20X16.5	JR17X20X16.5
IR 172020	14	17	20	20	—	—	—	IR17X20X20	IR17X20X20	JR17X20X20
IR 172020.5	13.7	17	20	20.5	—	—	IRT1720	IR17X20X20.5	IR17X20X20.5	JR17X20X20.5
IR 172030.5	20.5	17	20	30.5	—	—	IRT1730	IR17X20X30.5	IR17X20X30.5	JR17X20X30.5
IR 172215.5	18.3	17	22	15.5	—	—	IRT1715-2	—	—	—

INNER RINGS



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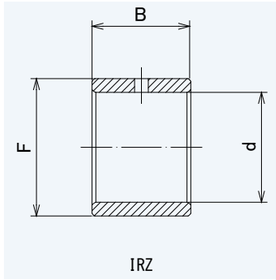


IRZ

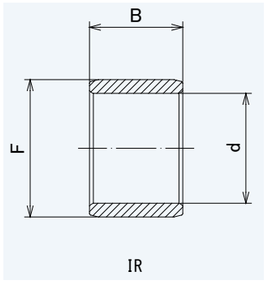
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 172116	14.5	17	21	16	NK 21/16	—	LRT172116	IR17X21X16	IR17X21X16	JR17X21X16
IR 172216.5	19.4	17	22	16.5	—	—	IRT1716-2	—	—	—
IR 172120	18	17	21	20	NK 21/20	—	LRT172120	IR17X21X20	IR17X21X20	JR17X21X20
IR 172213	15.5	17	22	13	RNA 4903	RNAF 223013	LRT172213	IR17X22X13	IR17X22X13	JR17X22X13
IRZ 172214	16.5	17	22	14	RNA 4903UU	—	LRTZ172214	IR17X22X14	IR17X22X14D	JRZ17X22X14JS1
IR 172216	19	17	22	16	RNAF 223516	—	LRT172216	IR17X22X16	IR17X22X16	JR17X22X16
IR 172218	21	17	22	18	RNA 5903	—	—	—	IR17X22X18	—
IR 172223	26.5	17	22	23	RNA 6903	—	LRT172223	IR17X22X23	IR17X22X23	JR17X22X23
IRZ 172224	28	17	22	24	RNA 6903UU	—	LRTZ172224	—	—	—
IR 172225.5	30	17	22	25.5	—	—	IRT1725-2	—	—	—
IR 172226	31	17	22	26	RNAFW 223026	—	LRT172226	IR17X22X26	IR17X22X26	JR17X22X26
IR 172232	38	17	22	32	RNAFW 223532	—	LRT172232	IR17X22X32	IR17X22X32	JR17X22X32
IR 202416	16.5	20	24	16	NK 24/16	—	LRT202416	IR20X24X16	IR20X24X16	JR20X24X16
IR 202416.5	17.5	20	24	16.5	—	—	IRT2016	—	—	—
IR 202420	20.5	20	24	20	NK 24/20	—	LRT202420	IR20X24X20	IR20X24X20	JR20X24X20
IR 202420.5	22	20	24	20.5	—	—	IRT2020	—	—	—
IR 202510.5	14.3	20	25	10.5	—	—	IRT2010-1	—	—	—
IR 202515.5	21	20	25	15.5	—	—	IRT2015-1	—	—	—
IR 202516	22	20	25	16	RNAF 253716	—	LRT202516	IR20X25X16	IR20X25X16	JR20X25X16
IR 202517	23	20	25	17	RNA 4904	RNAF 253517	LRT202517	IR20X25X17	IR20X25X17	JR20X25X17
IRZ 202518	24	20	25	18	RNA 4904UU	—	LRTZ202518	IR20X25X18	IR20X25X18D	JRZ20X25X18JS1
IR 202520	27	20	25	20	—	—	—	IR20X25X20	IR20X25X20	—
IR 202520.5	28	20	25	20.5	—	—	LRT202520	IR20X25X20.5	IR20X25X20.5	JR20X25X20.5
IR 202523	31	20	25	23	RNA 5904	—	—	—	IR20X25X23	—
IR 202525.5	34.5	20	25	25.5	—	—	IRT2025-1	—	—	—
IR 202526	36	20	25	26	RNAFW 253526	—	LRT202526	IR20X25X26	IR20X25X26	JR20X25X26
IR 202526.5	36	20	25	26.5	—	—	IRT2026-1	IR20X25X26.5	IR20X25X26.5	JR20X25X26.5
IR 202530	40.5	20	25	30	RNA 6904	—	LRT202530	IR20X25X30	IR20X25X30	JR20X25X30
IRZ 202531	41.5	20	25	31	RNA 6904UU	—	LRTZ202531	—	—	—
IR 202532	44	20	25	32	RNAFW 253732	—	LRT202532	IR20X25X32	IR20X25X32	JR20X25X32
IR 222616	17.5	22	26	16	NK 26/16	—	LRT222616	IR22X26X16	IR22X26X16	JR22X26X16
IR 222620	24	22	26	20	NK 26/20	—	LRT222620	IR22X26X20	IR22X26X20	JR22X26X20
IR 222817	30.5	22	28	17	RNA 49/22	—	LRT222817	IR22X28X17	IR22X28X17	JR22X28X17
IR 222820.5	37	22	28	20.5	—	—	IRT2220-1	IR22X28X20.5	IR22X28X20.5	JR22X28X20.5
IR 222823	42	22	28	23	RNA 59/22	—	—	—	IR22X28X23	—
IR 222830	55	22	28	30	RNA 69/22	—	LRT222830	IR22X28X30	IR22X28X30	JR22X28X30
IR 252920	25	25	29	20	NK 29/20	—	LRT252920	IR25X29X20	IR25X29X20	JR25X29X20

INNER RINGS



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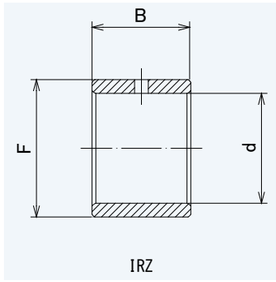


IRZ

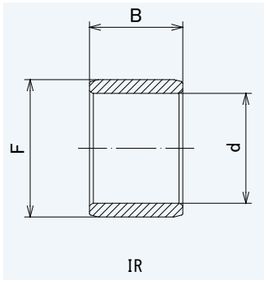
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 252930	38	25	29	30	NK 29/30	—	LRT252930	IR25X29X30	IR25X29X30	JR25X29X30
IR 253015	24.5	25	30	15	—	—	—	—	—	—
IR 253015.5	25.5	25	30	15.5	—	—	IRT2515-1	—	—	—
IR 253016	28	25	30	16	RNAF 304216	—	LRT253016	IR25X30X16	IR25X30X16	JR25X30X16
IR 253017	28.5	25	30	17	RNA 4905	RNAF 304017	LRT253017	IR25X30X17	IR25X30X17	JR25X30X17
IRZ 253018	29.5	25	30	18	RNA 4905UU	—	LRTZ253018	IR25X30X18	IR25X30X18	JRZ25X30X18JS1
IR 253020	33	25	30	20	—	—	—	IR25X30X20	IR25X30X20	JR25X30X20
IR 253020.5	34	25	30	20.5	—	—	LRT253020	IR25X30X20.5	IR25X30X20.5	JR25X30X20.5
IR 253023	38	25	30	23	RNA 5905	—	—	—	IR25X30X23	—
IR 253025.5	42.5	25	30	25.5	—	—	IRT2525-1	—	—	—
IR 253026	44.5	25	30	26	RNAFW 304026	—	LRT253016	IR25X30X26	IR25X30X26	JR25X30X26
IR 253026.5	44	25	30	26.5	—	—	IRT2526-1	IR253026.5	—	JR25X30X26.5
IR 253030	49	25	30	30	RNA 6905	—	LRT253030	IR25X30X30	IR25X30X30	JR25X30X30
IR 253030.5	50.5	25	30	30.5	—	—	IRT2530-1	—	—	—
IRZ 253031	51	25	30	31	RNA 6905UU	—	LRTZ253031	—	—	—
IR 253032	54	25	30	32	RNAFW 304232	—	LRT253032	IR25X30X32	IR25X30X32	JR25X30X32
IR 253038.5	64	25	30	38.5	—	—	IRT2538-1	IR25X30X38.5	—	JR25X30X38.5
IR 283217	24.5	28	32	17	RNA 49/28	—	LRT283217	IR28X32X17	IR28X32X17	JR28X32X17
IR 283220	28.5	28	32	20	NK 32/20	—	LRT283220	IR28X32X20	IR28X32X20	JR28X32X20
IR 283220.5	29.5	28	32	20.5	—	—	IRT2820	—	—	—
IR 283223	34	28	32	23	RNA 59/28	—	—	—	IR28X32X23	—
IR 283230	43	28	32	30	RNA 69/28	NK 32/30	LRT283230	IR28X32X30	IR28X32X30	JR28X32X30
IR 283230.5	44	28	32	30.5	—	—	IRT2830	—	—	—
IR 303516	31.5	30	35	16	RNAF 354716	—	LRT303516	IR30X35X16	IR30X35X16	JR30X35X16
IR 303517	33.5	30	35	17	RNA 4906	RNAF 354517	LRT303517	IR30X35X17	IR30X35X17	JR30X35X17
IRZ 303518	35	30	35	18	RNA 4906UU	—	LRTZ303818	IR30X35X18	IR30X35X18D	JRZ30X35X18JS1
IR 303520	38.5	30	35	20	NK 35/20	—	LRT303520	IR30X35X20	IR30X35X20	JR30X35X20
IR 303520.5	40	30	35	20.5	—	—	IRT3020	IR30X35X20.5	IR30X35X20.5	JR30X35X20.5
IR 303523	44	30	35	23	RNA 5906	—	—	—	IR30X35X23	—
IR 303525.5	51	30	35	25.5	—	—	IRT3025	—	—	—
IR 303526	52	30	35	26	RNAFW 354526	—	LRT303526	IR30X35X26	IR30X35X26	JR30X35X26
IR 303530	59	30	35	30	RNA 6906	NK 35/30	LRT303530	IR30X35X30	IR30X35X30	JR30X35X30
IR 303530.5	60	30	35	30.5	—	—	IRT3030	—	—	—
IRZ 303531	61	30	35	31	RNA 6906UU	—	LRTZ303531	IR30X35X31	—	—
IR 303532	64	30	35	32	RNAFW 354732	—	LRT303532	IR30X35X32	IR30X35X32	JR30X35X32
IR 303820	65	30	38	20	—	—	—	IR30X38X20	IR30X38X20	—
IR 323720	43.5	32	37	20	NK 37/20	—	LRT323720	IR32X37X20	IR32X37X20	JR32X37X20

INNER RINGS



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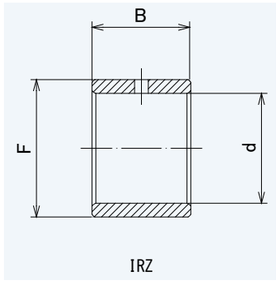


IRZ

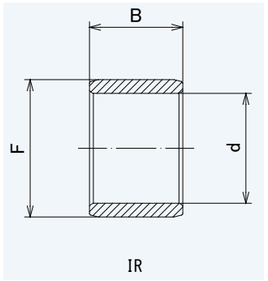
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 323730	63	32	37	30	NK 37/30	—	LRT323730	IR32X37X30	IR32X37X30	JR32X37X30
IR 324020	69	32	40	20	RNA 49/32	—	LRT324020	IR32X40X20	IR32X40X20	JR32X40X20
IR 324027	92	32	40	27	RNA 59/32	—	—	—	IR32X40X27	—
IR 324036	123	32	40	36	RNA 69/32	—	LRT324036	IR32X40X36	IR32X40X36	JR32X40X36
IR 354017	39	35	40	17	RNAF 405017	—	LRT354017	IR35X40X17	IR35X40X17	JR35X40X17
IR 354020	46	35	40	20	NK 40/20	RNAF 405520	LRT354020	IR35X40X20	IR35X40X20	JR35X40X20
IR 354020.5	46.5	35	40	20.5	—	—	IRT3520	IR35X40X20.5	IR35X40X20.5	JR35X40X20.5
IR 354025.5	46	35	40	25.5	—	—	IRT3525	—	—	—
IR 354030	67	35	40	30	NK 40/30	—	LRT354030	IR35X40X30	IR35X40X30	JR35X40X30
IR 354034	78	35	40	34	RNAFW 405034	—	LRT354034	IR35X40X34	IR35X40X34	JR35X40X34
IR 354040	95	35	40	40	RNAFW 405540	—	LRT354040	IR35X40X40	IR35X40X40	JR35X40X40
IR 354220	65	35	42	20	RNA 4907	—	LRT354220	IR35X42X20	IR35X42X20	JR35X42X20
IRZ 354221	67	35	42	21	RNA 4907UU	—	LRTZ354221	IR35X42X21	—	—
IR 354227	80	35	42	27	RNA 5907	—	—	—	IR35X42X27	—
IR 354236	120	35	42	36	RNA 6907	—	LRT354236	IR35X42X36	IR35X42X36	JR35X42X36
IRZ 354237	120	35	42	37	RNA 6907UU	—	LRTZ354237	—	—	—
IR 384320	49.5	38	43	20	NK 43/20	—	LRT384320	IR38X43X20	IR38X43X20	JR38X43X20
IR 384330	72	38	43	30	NK 43/30	—	LRT384330	IR38X43X30	—	—
IR 404517	44.5	40	45	17	RNAF 455517	—	LRT404517	IR40X45X17	IR40X45X17	JR40X45X17
IR 404520	51	40	45	20	NK 45/20	RNAF 456220	LRT404520	IR40X45X20	IR40X45X20	JR40X45X20
IR 404520.5	52.5	40	45	20.5	—	—	IRT4020	IR40X45X20.5	IR40X45X20.5	JR40X45X20.5
IR 404525.5	65.5	40	45	25.5	—	—	IRT4025	—	—	—
IR 404530	77	40	45	30	NK 45/30	—	LRT404530	IR40X45X30	IR40X45X30	JR40X45X30
IR 404530.5	78.5	40	45	30.5	—	—	IRT4030	—	—	—
IR 404534	88	40	45	34	RNAFW 455534	—	LRT404534	IR40X45X34	IR40X45X34	JR40X45X34
IR 404540	105	40	45	40	RNAFW 456240	—	LRT404540	IR40X45X40	IR40X45X40	JR40X45X40
IR 404540.5	104	40	45	40.5	—	—	IRT4040	—	—	—
IR 404822	93	40	48	22	RNA 4908	—	LRT404822	IR40X48X22	IR40X48X22	JR40X48X22
IRZ 404823	95	40	48	23	RNA 4908UU	—	LRTZ404823	IR40X48X23	—	—
IR 404830	123	40	48	30	RNA 5908	—	—	—	IR40X48X30	—
IR 404840	165	40	48	40	RNA 6908	—	LRT404840	IR40X48X40	IR40X48X40	JR40X48X40
IRZ 404841	170	40	48	41	RNA 6908UU	—	LRTZ404841	—	—	—
IR 424720	54	42	47	20	NK 47/20	—	LRT424720	IR42X47X20	IR42X47X20	JR42X47X20
IR 424730	81	42	47	30	NK 47/30	—	LRT424730	IR42X47X30	IR42X47X30	JR42X47X30
IR 455020	58	45	50	20	RNAF 506220	—	LRT455020	IR45X50X20	IR45X50X20	JR45X50X20
IR 455025	71	45	50	25	NK 50/25	—	LRT455025	IR45X50X25	IR45X50X25	JR45X50X25
IR 455025.5	73	45	50	25.5	—	—	IRT4525	IR45X50X25.5	IR45X50X25.5	JR45X50X25.5

INNER RINGS



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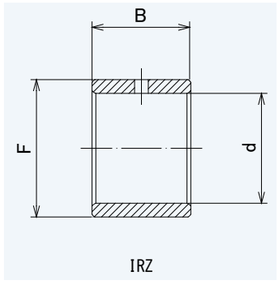


IRZ

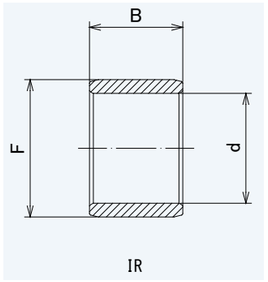
IR, IRZ

DIMENSION TABLE

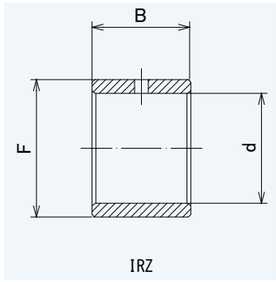
INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 455030.5	87.5	45	50	30.5	—	—	IRT4530	—	—	—
IR 455035	95	45	50	35	NK 50/35	—	LRT455035	IR45X50X35	IR45X50X35	JR45X50X35
IR 455040	115	45	50	40	RNAFW 506240	—	LRT455040	IR45X50X40	IR45X50X40	JR45X50X40
IR 455222	88	45	52	22	RNA 4909	—	LRT455222	IR45X52X22	IR45X52X22	JR45X52X22
IRZ 455223	93	45	52	23	RNA 4909UU	—	LRTZ455223	IR45X52X23	IR45X52X23D	JRZ45X52X23JS1
IR 455230	123	45	52	30	RNA 5909	—	—	—	IR45X52X30	—
IR 455240	165	45	52	40	RNA 6909	—	LRT455240	IR45X52X40	IR45X52X40	JR45X52X40
IRZ 455241	170	45	52	41	RNA 6909UU	—	LRTZ455241	—	—	—
IR 455520	120	45	55	20	RNAF 557220	—	LRT455520	IR45X55X20	IR45X55X20	JR45X55X20
IR 455522	130	45	55	22	—	—	—	IR45X55X22	IR45X55X22	JR45X55X22
IR 455540	245	45	55	40	RNAFW 557240	—	LRT455540	IR45X55X40	IR45X55X40	JR45X55X40
IR 505520	63	50	55	20	RNAF 556820	—	LRT505520	IR50X55X20	IR50X55X20	JR50X55X20
IR 505525	77	50	55	25	NK 55/25	—	LRT505525	IR50X55X25	IR50X55X25	JR50X55X25
IR 505535	110	50	55	35	NK 55/35	—	LRT505535	IR50X55X35	IR50X55X35	JR50X55X35
IR 505540	130	50	55	40	RNAFW 556840	—	LRT505540	IR50X55X40	IR50X55X40	JR50X55X40
IR 505822	116	50	58	22	RNA 4910	—	LRT505822	IR50X58X22	IR50X58X22	JR50X58X22
IRZ 505823	118	50	58	23	RNA 4910UU	—	LRTZ505823	IR50X58X23	IR50X58X23D	JRZ50X58X23JS1
IR 505830	159	50	58	30	RNA 5910	—	—	—	IR50X58X30	—
IR 505840	210	50	58	40	RNA 6910	—	LRT505840	IR50X58X40	IR50X58X40	JR50X58X40
IRZ 505841	215	50	58	41	RNA 6910UU	—	LRTZ505841	—	—	—
IR 506020	135	50	60	20	RNAF 607820	—	LRT506020	IR50X60X20	IR50X60X20	JR50X60X20
IR 506025	163	50	60	25	—	—	—	IR50X60X25	IR50X60X25	JR50X60X25
IR 506040	265	50	60	40	RNAFW 607840	—	LRT506040	IR50X60X40	IR50X60X40	JR50X60X40
IR 556025	88	55	60	25	NK 60/25	—	LRT556025	IR55X60X25	IR55X60X25	JR55X60X25
IR 556035	120	55	60	35	NK 60/35	—	LRT556035	IR55X60X35	IR55X60X35	JR55X60X35
IR 556325	145	55	63	25	RNA 4911	—	LRT556325	IR55X63X25	IR55X63X25	JR55X63X25
IR 556334	192	55	63	34	RNA 5911	—	—	—	IR55X63X34	—
IR 556345	255	55	63	45	RNA 6911	—	LRT556345	IR55X63X45	IR55X63X45	JR55X63X45
IR 556530	220	55	65	30	RNAF 658530	—	LRT556530	IR55X65X30	IR55X65X30	JR55X65X30
IR 556560	435	55	65	60	RNAFW 658560	—	LRT556560	IR55X65X60	IR55X65X60	JR55X65X60
IR 606825	150	60	68	25	RNA 4912	NK 68/25	LRT606825	IR60X68X25	IR60X68X25	JR60X68X25
IR 606834	206	60	68	34	RNA 5912	—	—	—	IR60X68X34	—
IR 606835	210	60	68	35	NK 68/35	—	LRT606835	IR60X68X35	IR60X68X35	JR60X68X35
IR 606845	275	60	68	45	RNA 6912	—	LRT606845	IR60X68X45	IR60X68X45	JR60X68X45
IR 607025	195	60	70	25	—	—	—	IR60X70X25	IR60X70X25	JR60X70X25
IR 607030	240	60	70	30	RNAF 709030	—	LRT607030	IR60X70X30	IR60X70X30	JR60X70X30
IR 607060	480	60	70	60	RNAFW 709060	—	LRT607060	IR60X70X60	IR60X70X60	JR60X70X60

INNER RINGS



IR



IRZ

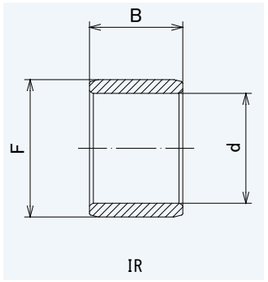
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 657225	145	65	72	25	RNA 4913	—	LRT657225	IR65X72X25	IR65X72X25	JR65X72X25
IR 657234	193	65	72	34	RNA 5913	—	—	—	IR65X72X34	—
IR 657245	255	65	72	45	RNA 6913	—	LRT657245	IR65X72X45	IR65X72X45	JR65X72X45
IR 657335	235	65	73	35	NK 73/35	—	LRT657335	IR65X73X35	IR65X73X35	JR65X73X35
IR 657530	260	65	75	30	RNAF 759530	—	LRT657530	IR65X75X30	IR65X75X30	JR65X75X30
IR 657560	520	65	75	60	RNAFW 759560	—	LRT657560	IR65X75X60	IR65X75X60	JR65X75X60
IR 708025	225	70	80	25	NK 80/25	—	LRT708025	IR70X80X25	IR70X80X25	JR70X80X25
IR 708030	275	70	80	30	RNA 4914	RNAF 8010030	LRT708030	IR70X80X30	IR70X80X30	JR70X80X30
IR 708035	310	70	80	35	NK 80/35	—	LRT708035	IR70X80X35	IR70X80X35	JR70X80X35
IR 708040	358	70	80	40	RNA 5914	—	—	—	IR70X80X40	—
IR 708054	490	70	80	54	RNA 6914	—	LRT708054	IR70X80X54	IR70X80X54	JR70X80X54
IR 708060	560	70	80	60	RNAFW 8010060	—	LRT708060	IR70X80X60	IR70X80X60	JR70X80X60
IR 758525	240	75	85	25	NK 85/25	—	LRT758525	IR75X85X25	IR75X85X25	JR75X85X25
IR 758530	290	75	85	30	RNA 4915	RNAF 8510530	LRT758530	IR75X85X30	IR75X85X30	JR75X85X30
IR 758535	335	75	85	35	NK 85/35	—	LRT758535	IR75X85X35	IR75X85X35	JR75X85X35
IR 758540	385	75	85	40	RNA 5915	—	—	—	IR75X85X40	—
IR 758554	520	75	85	54	RNA 6915	—	LRT758554	IR75X85X54	IR75X85X54	JR75X85X54
IR 809025	255	80	90	25	NK 90/25	—	LRT809025	IR80X90X25	IR80X90X25	JR80X90X25
IR 809030	310	80	90	30	RNA 4916	RNAF 9011030	LRT809030	IR80X90X30	IR80X90X30	JR80X90X30
IR 809035	355	80	90	35	NK 90/35	—	LRT809035	IR80X90X35	IR80X90X35	JR80X90X35
IR 809040	408	80	90	40	RNA 5916	—	—	—	IR80X90X40	—
IR 809054	550	80	90	54	RNA 6916	—	LRT809054	IR80X90X54	IR80X90X54	JR80X90X54
IR 859526	280	85	95	26	NK 95/26	—	LRT859526	IR85X95X26	IR85X95X26	JR85X95X26
IR 859530	330	85	95	30	RNAF 9511530	—	LRT859530	IR85X95X30	IR85X95X30	JR85X95X30
IR 859536	390	85	95	36	NK 95/36	—	LRT859536	IR85X95X36	IR85X95X36	JR85X95X36
IR 8510035	575	85	100	35	RNA 4917	—	LRT8510035	IR85X100X35	IR85X100X35	JR85X100X35
IR 8510046	760	85	100	46	RNA 5917	—	—	—	IR85X100X46	—
IR 8510063	1 040	85	100	63	RNA 6917	—	LRT8510063	IR85X100X63	IR85X100X63	JR85X100X63
IR 9010026	295	90	100	26	NK 100/26	—	LRT9010026	IR90X100X26	IR90X100X26	JR90X100X26
IR 9010030	355	90	100	30	RNAF 10012030	—	LRT9010030	IR90X100X30	IR90X100X30	JR90X100X30
IR 9010036	415	90	100	36	NK 100/36	—	LRT9010036	IR90X100X36	IR90X100X36	JR90X100X36
IR 9010535	610	90	105	35	RNA 4918	—	LRT9010535	IR90X105X35	IR90X105X35	JR90X105X35
IR 9010546	800	90	105	46	RNA 5918	—	—	—	IR90X105X46	—
IR 9010563	1 100	90	105	63	RNA 6918	—	LRT9010563	IR90X105X63	IR90X105X63	JR90X105X63
IR 9510526	315	95	105	26	NK 105/26	—	LRT9510526	IR95X105X26	IR95X105X26	JR95X105X26
IR 9510536	430	95	105	36	NK 105/36	—	LRT9510536	IR95X105X36	IR95X105X36	JR95X105X36
IR 9511035	650	95	110	35	RNA 4919	—	LRT9511035	IR95X110X35	IR95X110X35	JR95X110X35

INNER RINGS



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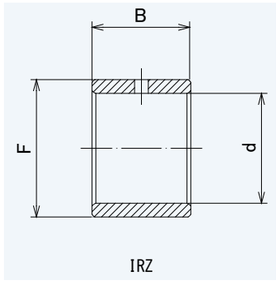


IRZ

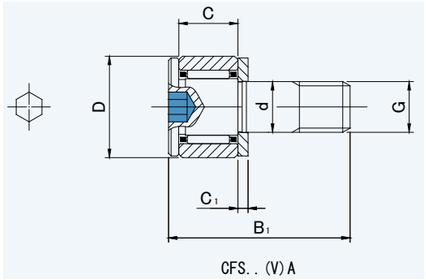
IR, IRZ

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER		IKO	INA	NTN	TORRINGTON(KOYO)
IR IRZ	g	d	F	B			LRT / IRT LRTZ	IR	IR	JR JRZ
IR 9511046	850	95	110	46	RNA 5919	—	—	—	IR95X110X46	—
IR 9511063	1 160	95	110	63	RNA 6919	—	LRT9511063	IR95X110X63	IR95X110X63	JR95X110X63
IR 10011030	380	100	110	30	NK 110/30	—	LRT10011030	IR100X110X30	IR100X110X30	JR100X110X30
IR 10011040	500	100	110	40	NK 110/40	—	LRT10011040	IR100X110X40	IR100X110X40	JR100X110X40
IR 10011540	700	100	115	40	RNA 4920	—	LRT10011540	IR100X115X40	IR100X115X40	JR100X115X40
IR 11012030	410	110	120	30	RNA 4822	—	LRT11012030	IR110X120X30	IR110X120X30	JR110X120X30
IR 11012540	840	110	125	40	RNA 4922	—	LRT11012540	IR110X125X40	IR110X125X40	JR110X125X40
IR 12013030	450	120	130	30	RNA 4824	—	LRT12013030	IR120X130X30	IR120X130X30	JR120X130X30
IR 12013545	1 030	120	135	45	RNA 4924	—	LRT12013545	IR120X135X45	IR120X135X45	JR120X135X45
IR 13014535	860	130	145	35	RNA 4826	—	LRT13014535	IR130X145X35	IR130X145X35	JR130X145X35
IR 13015050	1 670	130	150	50	RNA 4926	—	LRT13015050	IR130X150X50	IR130X150X50	JR130X150X50
IR 14015535	930	140	155	35	RNA 4828	—	LRT14015535	IR140X155X35	IR140X155X35	JR140X155X35
IR 14016050	1 790	140	160	50	RNA 4928	—	LRT14016050	IR140X160X50	IR140X160X50	JR140X160X50
IR 15016540	1 130	150	165	40	RNA 4830	—	LRT15016540	IR150X165X40	IR150X165X40	JR150X165X40
IR 16017540	1 200	160	175	40	RNA 4832	—	LRT16017540	IR160X175X40	IR160X175X40	JR160X175X40

CAM FOLLOWERS
MINIATURE TYPE
HEXAGON SOCKET ON STUD HEAD



CFS. . (V) A

CFS..A

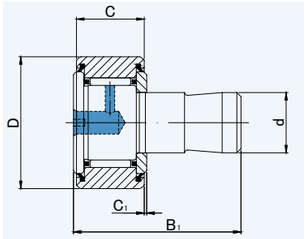
DIMENSION TABLE

JNS NUMBER CYLINDRICAL OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating
CFS	g	d	D	C	G	B1	C1	Cr N	Cor N
CFS 2.5A	**1**	2.5	5	3	M2.5×0.45	9.5	0.7	410	335
CFS 2.5VA	**1**	2.5	5	3	M2.5×0.45	9.5	0.7	1 000	1 080
CFS 3A	**2**	3	6	4	M3×0.5	11.5	0.7	630	610
CFS 3VA	**2**	3	6	4	M3×0.5	11.5	0.7	1 370	1 770
CFS 4A	**4**	4	8	5	M4×0.7	15	1	1 080	1 080
CFS 4VA	**4**	4	8	5	M4×0.7	15	1	2 350	3 040
CFS 5A	**7**	5	10	6	M5×0.8	18	1	1 570	1 860
CFS 5VA	**7**	5	10	6	M5×0.8	18	1	3 140	4 710
CFS 6A	**13**	6	12	7	M6×1	21.5	1.2	2 060	2 160
CFS 6VA	**13**	6	12	7	M6×1	21.5	1.2	4 610	6 270

INTERCHANGE TABLE

INA	IKO	NTN	MCGILL
CYLINDRICAL OUTER RING	CYLINDRICAL OUTER RING	CYLINDRICAL OUTER RING	CYLINDRICAL OUTER RING
—	CFS	KRM	—
—	CFS2.5	KRM5XT2H/3A	—
—	CFS2.5V	KRMV5XT2H/3A	—
—	CFS3	KRM6XT2H/3A	—
—	CFS3V	KRMV6XT2H/3A	—
—	CFS4	KRM8XT2H/3A	—
—	CFS4V	KRMV8XT2H/3A	—
—	CFS5	KRM10XT2H/3A	—
—	CFS5V	KRMV10XT2H/3A	—
—	CFS6	KRM12XT2H/3A	—
—	CFS6V	KRMV12XT2H/3A	—

CAM FOLLOWERS
EASY MOUNTING TYPE
SCREWDRIVER SLOT HEAD



CF-SFU

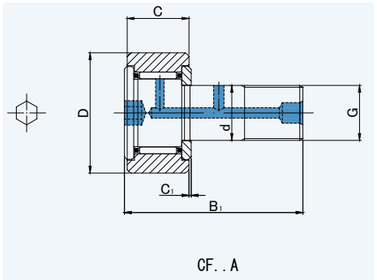
CF-SFU, R

DIMENSION TABLE

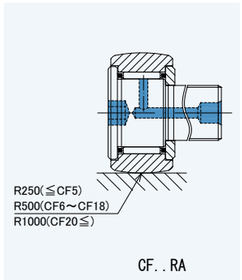
INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)					Basic dynamic load rating	Basic static load rating	INA		IKO		NTN		MCGILL	
										CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF-SFU	CF-SFU..R	g	d	D	C	B1	C1	Cr N	Cor N	—	—	CF-SFU	—	KRX	KRX	—	—
CF-SFU- 6	**CF-SFU- 6R**	**19**	6	16	11	32	0.6	3 630	3 630	—	—	CF-SFU- 6	—	KRX6X16X32-2	KRX6X16X32-4	—	—
CF-SFU- 6V	**CF-SFU- 6VR**	**19**	6	16	11	32	0.6	6 960	8 530	—	—	—	—	—	—	—	—
CF-SFU- 8	**CF-SFU- 8R**	**28.5**	8	19	11	32	0.6	4 310	4 710	—	—	CF-SFU- 8	—	KRX8X19X32-7	KRX8X19X32-9	—	—
CF-SFU- 8V	**CF-SFU- 8VR**	**28.5**	8	19	11	32	0.6	8 130	11 170	—	—	—	—	—	—	—	—
CF-SFU-10	**CF-SFU-10R**	**43**	10	22	12	33	0.6	5 390	6 860	—	—	CF-SFU-10	—	KRX10X22X33-1	KRX10X22X33-3	—	—
CF-SFU-10V	**CF-SFU-10VR**	**43**	10	22	12	33	0.6	9 510	14 500	—	—	—	—	—	—	—	—
CF-SFU-10-1	**CF-SFU-10-1R**	**58.5**	10	26	12	33	0.6	5 390	6 860	—	—	CF-SFU-10-1	—	KRX10X26X33-2	KRX10X26X33-4	—	—
CF-SFU-10-1V	**CF-SFU-10-1VR**	**58.5**	10	26	12	33	0.6	9 510	14 500	—	—	—	—	—	—	—	—
CF-SFU-12	**CF-SFU-12R**	**93**	12	30	14	35	0.6	7 940	9 800	—	—	CF-SFU-12	—	KRX12X30X35	KRX12X30X35-3	—	—
CF-SFU-12V	**CF-SFU-12VR**	**93**	12	30	14	35	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CF-SFU-12-1	**CF-SFU-12-1R**	**103**	12	32	14	35	0.6	7 940	9 800	—	—	CF-SFU-12-1	—	KRX12X32X35-1	KRX12X32X35-3	—	—
CF-SFU-12-1V	**CF-SFU-12-1VR**	**103**	12	32	14	35	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CF-SFU-16	**CF-SFU-16R**	**163.5**	16	35	18	44.5	0.8	12 050	18 330	—	—	CF-SFU-16	—	KRX16X35X44.5-3	KRX16X35X44.5-1	—	—
CF-SFU-16V	**CF-SFU-16VR**	**163.5**	16	35	18	44.5	0.8	20 680	37 630	—	—	—	—	—	—	—	—
CF-SFU-18	**CF-SFU-18R**	**235**	18	40	20	46.5	0.8	14 700	25 200	—	—	CF-SFU-18	—	KRX18X40X46.5-4	KRX18X40X46.5-6	—	—
CF-SFU-18V	**CF-SFU-18VR**	**235**	18	40	20	46.5	0.8	25 280	51 350	—	—	—	—	—	—	—	—
CF-SFU-20	**CF-SFU-20R**	**436**	20	52	24	50.5	0.8	20 680	34 600	—	—	CF-SFU-20	—	KRX20X47X50.5-3	KRX20X47X50.5-1	—	—
CF-SFU-20V	**CF-SFU-20VR**	**436**	20	52	24	50.5	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CF-SFU-20-1	**CF-SFU-20-1R**	**361**	20	47	24	50.5	0.8	20 680	34 600	—	—	CF-SFU-20-1	—	KRX20X52X50.5-1	KRX20X52X50.5-3	—	—
CF-SFU-20-1V	**CF-SFU-20-1VR**	**361**	20	47	24	50.5	0.8	33 120	64 480	—	—	—	—	—	—	—	—

CAM FOLLOWERS
HEXAGON SOCKET ON STUD HEAD



CF. . A



CF. . RA

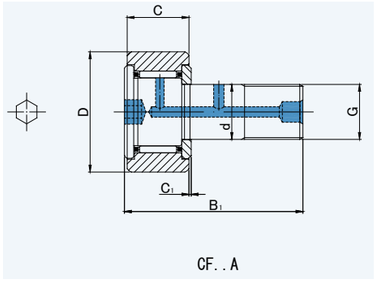
CF..A, RA

DIMENSION TABLE

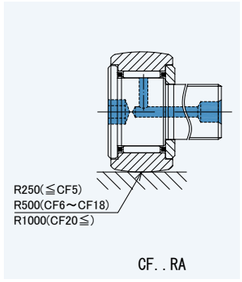
INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF..A	CF..RA	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-XSK	KR-SK	KR-XH	KR-H	CF-B	CF-BR	MCFR-BX	MCFR-B
CF 3A	**CF 3RA**	**4.5**	3	10	7	M3×0.5	17	0.5	1 470	1 180	—	—	KR10T2XH/3AS	KR10T2H/3AS	CF3B	CF3BR	—	—
CF 3VA	**CF 3RVA**	**4.5**	3	10	7	M3×0.5	17	0.5	2 800	2 500	—	—	KRV10T2XH/3AS	KRV10T2H/3AS	—	—	—	—
CF 4A	**CF 4RA**	**7.5**	4	12	8	M4×0.7	20	0.5	2 060	2 050	—	—	KR12T2XH/3AS	KR12T2H/3AS	CF4B	CF4BR	—	—
CF 4VA	**CF 4RVA**	**7.5**	4	12	8	M4×0.7	20	0.5	4 000	4 300	—	—	KRV12T2XH/3AS	KRV12T2H/3AS	—	—	—	—
CF 5A	**CF 5RA**	**10.5**	5	13	9	M5×0.8	23	0.5	3 140	2 770	—	—	KR13T2XH/3AS	KR13T2H/3AS	CF5B	CF5BR	MCFR-13BX	MCFR-13B
CF 5VA	**CF 5VRA**	**10.5**	5	13	9	M5×0.8	23	0.5	5 100	5 500	—	—	KRV13T2XH/3AS	KRV13T2H/3AS	—	—	MCF-13BX	MCF-13B
CF 6A	**CF 6RA**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630	KR16X-SK	KR16-SK	KR16XH	KR16H	CF6B	CF6BR	MCFR-16BX	MCFR-16B
CF 6VA	**CF 6VRA**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530	KRV16X-SK	KRV16-SK	KRV16XH/3AS	KRV16H/3AS	CF6VB	CF6VBR	MCF-16BX	MCF-16B
CF 8A	**CF 8RA**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710	KR19X-SK	KR19-SK	KR19XH	KR19H	CF8B	CF8BR	MCFR-19BX	MCFR-19B
CF 8VA	**CF 8VRA**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170	KRV19X-SK	KRV19-SK	KRV19XH/3AS	KRV19H/3AS	CF8VB	CF8VBR	MCF-19BX	MCF-19B
CF10A	**CF10RA**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR22XH	KR22H	CF10B	CF10BR	MCFR-22BXA	MCFR-22BA
CF10VA	**CF10VRA**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV22XH/3AS	KRV22H/3AS	CF10VB	CF10VBR	MCF-22BXA	MCF-22BA
CF10AK	**CF10RAK**	**45**	10	22	12	M10×1	36	0.6	5 390	6 860	KR22X-SK	KR22-SK	—	—	CF10BM	CF10BRM	MCFR-22BX	MCFR-22B
CF10VAK	**CF10VRAK**	**45**	10	22	12	M10×1	36	0.6	9 510	14 500	KRV22X-SK	KRV22-SK	—	—	CF10VBM	CF10VBRM	MCF-22BX	MCF-22B
CF10-1A	**CF10-1RA**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR26XH	KR26H	CF10-1B	CF10-1BR	MCFR-26BXA	MCFR-26BA
CF10-1VA	**CF10-1VRA**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV26XH/3AS	KRV26H/3AS	CF10-1VB	CF10-1VBR	MCF-26BXA	MCF-26BA
CF10-1AK	**CF10-1RAK**	**60**	10	26	12	M10×1	36	0.6	5 390	6 860	KR26X-SK	KR26-SK	—	—	CF10-1BM	CF10-1BRM	MCFR-26BX	MCFR-26B
CF10-1VAK	**CF10-1VRAK**	**60**	10	26	12	M10×1	36	0.6	9 510	14 500	KRV26X-SK	KRV26-SK	—	—	CF10-1VBM	CF10-1VBRM	MCF-26BX	MCF-26B
CF12A	**CF12RA**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	KR30X-SK	KR30-SK	KR30XH	KR30H	CF12B	CF12BR	MCFR-30BX	MCFR-30B
CF12VA	**CF12VRA**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	KRV30X-SK	KRV30-SK	KRV30XH/3AS	KRV30H/3AS	CF12VB	CF12VBR	MCF-30BX	MCF-30B
CF12-1A	**CF12-1RA**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	KR32X-SK	KR32-SK	KR32XH	KR32H	CF12-1B	CF12-1BR	MCFR-32BX	MCFR-32B
CF12-1VA	**CF12-1VRA**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	KRV32X-SK	KRV32-SK	KRV32XH/3AS	KRV32H/3AS	CF12-1VB	CF12-1VBR	MCF-32BX	MCF-32B
CF16A	**CF16RA**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	KR35X-SK	KR35-SK	KR35XH	KR35H	CF16B	CF16BR	MCFR-35BX	MCFR-35B
CF16VA	**CF16VRA**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	KRV35X-SK	KRV35-SK	KRV35XH/3AS	KRV35H/3AS	CF16VB	CF16VBR	MCF-35BX	MCF-35B
CF18A	**CF18RA**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	KR40X-SK	KR40-SK	KR40XH	KR40H	CF18B	CF18BR	MCFR-40BXA	MCFR-40BA
CF18VA	**CF18VRA**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	KRV40X-SK	KRV40-SK	KRV40XH/3AS	KRV40H/3AS	CF18VB	CF18VBR	MCF-40BXA	MCF-40BA
CF20A	**CF20RA**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	KR52X-SK	KR52-SK	KR52XH	KR52H	CF20B	CF20BR	MCFR-52BXA	MCFR-52BA
CF20VA	**CF20VRA**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	KRV52X-SK	KRV52-SK	KRV52XH/3AS	KRV52H/3AS	CF20VB	CF20VBR	MCF-52BXA	MCF-52BA
CF20-1A	**CF20-1RA**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	KR47X-SK	KR47-SK	KR47XH	KR47H	CF20-1B	CF20-1BR	MCFR-47BXA	MCFR-47BA
CF20-1VA	**CF20-1VRA**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	KRV47X-SK	KRV47-SK	KRV47XH/3AS	KRV47H/3AS	CF20-1VB	CF20-1VBR	MCF-47BXA	MCF-47BA
CF24A	**CF24RA**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	KR62X-SK	KR62-SK	KR62XH	KR62H	CF24B	CF24BR	MCFR-62BXA	MCFR-62BA
CF24VA	**CF24VRA**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	KRV62X-SK	KRV62-SK	KRV62XH/3AS	KRV62H/3AS	CF24VB	CF24VBR	MCF-62BXA	MCF-62BA
CF24-1A	**CF24-1RA**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	KR72X-SK	KR72-SK	KR72XH	KR72H	CF24-1B	CF24-1BR	MCFR-72BXA	MCFR-72BA
CF24-1VA	**CF24-1VRA**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	KRV72X-SK	KRV72-SK	KRV72XH/3AS	KRV72H/3AS	CF24-1VB	CF24-1VBR	MCF-72BXA	MCF-72BA

Stud diameter (d) 3 to 10mm : No grease refilling hole is provided (except "K" type)



CF. . A



CF. . RA

CF..A, RA

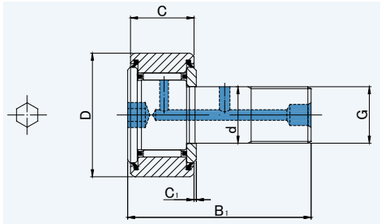
DIMENSION TABLE

INTERCHANGE TABLE

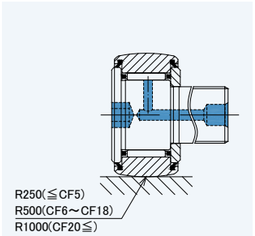
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF..A	CF..RA	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-XSK	KR-SK	KR-XH	KR-H	CF-B	CF-BR	MCFR-BX	MCFR-B
CF30A	**CF30RA**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	KR80X-SK	KR80-SK	KR80XH	KR80H	CF30B	CF30BR	MCFR-80BX	MCFR-80B
CF30VA	**CF30VRA**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	KRV80X-SK	KRV80-SK	KRV80XH/3AS	KRV80H/3AS	CF30VB	CF30VBR	MCF-80BX	MCF-80B
CF30-1A	**CF30-1RA**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	KR85X-SK	KR85-SK	—	—	CF30-1B	CF30-1BR	MCFR-85BX	MCFR-85B
CF30-1VA	**CF30-1VRA**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	KRV85X-SK	KRV85-SK	—	—	CF30-1VB	CF30-1VBR	MCF-85BX	MCF-85B
CF30-2A	**CF30-2RA**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	KR90X-SK	KR90-SK	KR90XH	KR90H	CF30-2B	CF30-2BR	MCFR-90BX	MCFR-90B
CF30-2VA	**CF30-2VRA**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	KRV90X-SK	KRV90-SK	KRV90XH/3AS	KRV90H/3AS	CF30-2VB	CF30-2VBR	MCF-90BX	MCF-90B

Stud diameter (d) 3 to 10mm : No grease refilling hole is provided (except "K" type)

INTERCHANGE



CF. . UUA



CF. . UURA

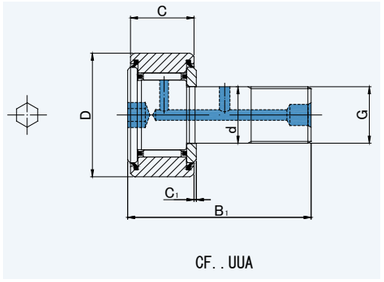
CF..UUA, UURA

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF..UUA	CF..UURA	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-XSKPP	KR-SKPP	KR-LLXH	KR-LLH	CF-BUU	CF-BUUR	MCFR-SBX	MCFR-SB
CF 3UUA	**CF 3UURA**	**4.5**	3	10	7	M3×0.5	17	0.5	1 470	1 180	—	—	KR10LLT2XH/3AS	KR10LLT2H/3AS	CF3BUU	CF3BUUR	—	—
CF 3VUUA	**CF 3VUURA**	**4.5**	3	10	7	M3×0.5	17	0.5	2 800	2 500	—	—	KRV10LLT2XH/3AS	KRV10LLT2H/3AS	—	—	—	—
CF 4UUA	**CF 4UURA**	**7.5**	4	12	8	M4×0.7	20	0.5	2 060	2 050	—	—	KR12LLT2XH/3AS	KR12LLT2H/3AS	CF4BUU	CF4BUUR	—	—
CF 4VUUA	**CF 4VUURA**	**7.5**	4	12	8	M4×0.7	20	0.5	4 000	4 300	—	—	KRV12LLT2XH/3AS	KRV12LLT2H/3AS	—	—	—	—
CF 5UUA	**CF 5UURA**	**10.5**	5	13	9	M5×0.8	23	0.5	3 140	2 770	—	—	KR13LLT2XH/3AS	KR13LLT2H/3AS	CF5BUU	CF5BUUR	MCFR-13SBX	MCFR-13SB
CF 5VUUA	**CF 5VUURA**	**10.5**	5	13	9	M5×0.8	23	0.5	5 100	5 500	—	—	KRV13LLT2XH/3AS	KRV13LLT2H/3AS	—	—	MCF-13SBX	MCF-13SB
CF 6UUA	**CF 6UURA**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630	KR16X-SK-PP	KR16-SK-PP	KR16XLLH	KR16LLH	CF6BUU	CF6BUUR	MCFR-16SBX	MCFR-16SB
CF 6VUUA	**CF 6VUURA**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530	KRV16X-SK-PP	KRV16-SK-PP	KRV16XLLH/3AS	KRV16LLH/3AS	CF6VBUU	CF6VBUUR	MCF-16SBX	MCF-16SB
CF 8UUA	**CF 8UURA**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710	KR19X-SK-PP	KR19-SK-PP	KR19XLLH	KR19LLH	CF8BUU	CF8BUUR	MCFR-19SBX	MCFR-19SB
CF 8VUUA	**CF 8VUURA**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170	KRV19X-SK-PP	KRV19-SK-PP	KRV19XLLH/3AS	KRV19LLH/3AS	CF8VBUU	CF8VBUUR	MCF-19SBX	MCF-19SB
CF10UUA	**CF10UURA**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR22XLLH	KR22LLH	CF10BUU	CF10BUUR	MCFR-22SBXA	MCFR-22SBA
CF10VUUA	**CF10VUURA**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV22XLLH/3AS	KRV22LLH/3AS	CF10VBUU	CF10VBUUR	MCF-22SBXA	MCF-22SBA
CF10UUAK	**CF10UURAK**	**45**	10	22	12	M10×1	36	0.6	5 390	6 860	KR22X-SK-PP	KR22-SK-PP	—	—	CF10BUUM	CF10BUURM	MCFR-22SBX	MCFR-22SB
CF10VUUAK	**CF10VUURAK**	**45**	10	22	12	M10×1	36	0.6	9 510	14 500	KRV22X-SK-PP	KRV22-SK-PP	—	—	CF10VBUUM	CF10VBUURM	MCF-22SBX	MCF-22SB
CF10-1UUA	**CF10-1UURA**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR26XLLH	KR26LLH	CF10-1BUU	CF10-1BUUR	MCFR-26SBXA	MCFR-26SBA
CF10-1VUUA	**CF10-1VUURA**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV26XLLH/3AS	KRV26LLH/3AS	CF10-1VBUU	CF10-1VBUUR	MCF-26SBXA	MCF-26SBA
CF10-1UUAK	**CF10-1UURAK**	**60**	10	26	12	M10×1	36	0.6	5 390	6 860	KR26X-SK-PP	KR26-SK-PP	—	—	CF10-1BUUM	CF10-1BUURM	MCFR-26SBX	MCFR-26SB
CF10-1VUUAK	**CF10-1VUURAK**	**60**	10	26	12	M10×1	36	0.6	9 510	14 500	KRV26X-SK-PP	KRV26-SK-PP	—	—	CF10-1VBUUM	CF10-1VBUURM	MCF-26SBX	MCF-26SB
CF12UUA	**CF12UURA**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	KR30X-SK-PP	KR30-SK-PP	KR30XLLH	KR30LLH	CF12BUU	CF12BUUR	MCFR-30SBX	MCFR-30SB
CF12VUUA	**CF12VUURA**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	KRV30X-SK-PP	KRV30-SK-PP	KRV30XLLH/3AS	KRV30LLH/3AS	CF12VBUU	CF12VBUUR	MCF-30SBX	MCF-30SB
CF12-1UUA	**CF12-1UURA**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	KR32X-SK-PP	KR32-SK-PP	KR32XLLH	KR32LLH	CF12-1BUU	CF12-1BUUR	MCFR-32SBX	MCFR-32SB
CF12-1VUUA	**CF12-1VUURA**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	KRV32X-SK-PP	KRV32-SK-PP	KRV32XLLH/3AS	KRV32LLH/3AS	CF12-1VBUU	CF12-1VBUUR	MCF-32SBX	MCF-32SB
CF16UUA	**CF16UURA**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	KR35X-SK-PP	KR35-SK-PP	KR35XLLH	KR35LLH	CF16BUU	CF16BUUR	MCFR-35SBX	MCFR-35SB
CF16VUUA	**CF16VUURA**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	KRV35X-SK-PP	KRV35-SK-PP	KRV35XLLH/3AS	KRV35LLH/3AS	CF16VBUU	CF16VBUUR	MCF-35SBX	MCF-35SB
CF18UUA	**CF18UURA**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	KR40X-SK-PP	KR40-SK-PP	KR40XLLH	KR40LLH	CF18BUU	CF18BUUR	MCFR-40SBXA	MCFR-40SBA
CF18VUUA	**CF18VUURA**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	KRV40X-SK-PP	KRV40-SK-PP	KRV40XLLH/3AS	KRV40LLH/3AS	CF18VBUU	CF18VBUUR	MCF-40SBXA	MCF-40SBA
CF20UUA	**CF20UURA**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	KR52X-SK-PP	KR52-SK-PP	KR52XLLH	KR52LLH	CF20BUU	CF20BUUR	MCFR-52SBXA	MCFR-52SBA
CF20VUUA	**CF20VUURA**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	KRV52X-SK-PP	KRV52-SK-PP	KRV52XLLH/3AS	KRV52LLH/3AS	CF20VBUU	CF20VBUUR	MCF-52SBXA	MCF-52SBA
CF20-1UUA	**CF20-1UURA**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	KR47X-SK-PP	KR47-SK-PP	KR47XLLH	KR47LLH	CF20-1BUU	CF20-1BUUR	MCFR-47SBXA	MCFR-47SBA
CF20-1VUUA	**CF20-1VUURA**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	KRV47X-SK-PP	KRV47-SK-PP	KRV47XLLH/3AS	KRV47LLH/3AS	CF20-1VBUU	CF20-1VBUUR	MCF-47SBXA	MCF-47SBA
CF24UUA	**CF24UURA**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	KR62X-SK-PP	KR62-SK-PP	KR62XLLH	KR62LLH	CF24BUU	CF24BUUR	MCFR-62SBXA	MCFR-62SBA
CF24VUUA	**CF24VUURA**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	KRV62X-SK-PP	KRV62-SK-PP	KRV62XLLH/3AS	KRV62LLH/3AS	CF24VBUU	CF24VBUUR	MCF-62SBXA	MCF-62SBA
CF24-1UUA	**CF24-1UURA**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	KR72X-SK-PP	KR72-SK-PP	KR72XLLH	KR72LLH	CF24-1BUU	CF24-1BUUR	MCFR-72SBXA	MCFR-72SBA
CF24-1VUUA	**CF24-1VUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	KRV72X-SK-PP	KRV72-SK-PP	KRV72XLLH/3AS	KRV72LLH/3AS	CF24-1VBUU	CF24-1VBUUR	MCF-72SBXA	MCF-72SBA
CF30UUA	**CF30UURA**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	KR80X-SK-PP	KR80-SK-PP	KR80XLLH	KR80LLH	CF30BUU	CF30BUUR	MCFR-80SBX	MCFR-80SB

Stud diameter (d) 3 to 10mm : No grease refilling hole is provided (except "K" type)



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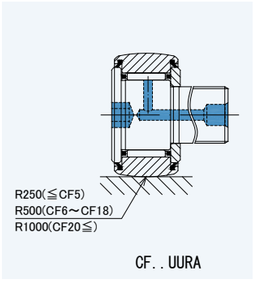


CF. . UURA

CF..UUA, UURA

DIMENSION TABLE

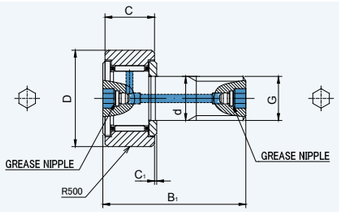
INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF..UUA	CF..UURA	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-XSKPP	KR-SKPP	KR-LLXH	KR-LLH	CF-BUU	CF-BUUR	MCFR-SBX	MCFR-SB
CF30VUUA	**CF30VUURA**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	KRV80X-SK-PP	KRV80-SK-PP	KRV80XLLH/3AS	KRV80LLH/3AS	CF30VBUU	CF30VBUUR	MCF-80SBX	MCF-80SB
CF30-1UUA	**CF30-1UURA**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	KR85X-SK-PP	KR85-SK-PP	—	—	CF30-1BUU	CF30-1BUUR	MCFR-85SBX	MCFR-85SB
CF30-1VUUA	**CF30-1VUURA**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	KRV85X-SK-PP	KRV85-SK-PP	—	—	CF30-1VBUU	CF30-1VBUUR	MCF-85SBX	MCF-85SB
CF30-2UUA	**CF30-2UURA**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	KR90X-SK-PP	KR90-SK-PP	KR90XLLH	KR90LLH	CF30-2BUU	CF30-2BUUR	MCFR-90SBX	MCFR-90SB
CF30-2VUUA	**CF30-2VUURA**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	KRV90X-SK-PP	KRV90-SK-PP	KRV90XLLH/3AS	KRV90LLH/3AS	CF30-2VBUU	CF30-2VBUUR	MCF-90SBX	MCF-90SB

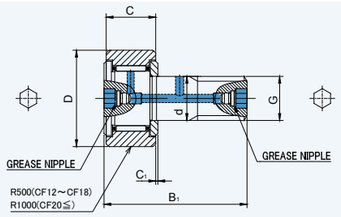
Stud diameter (d) 3 to 10mm : No grease refilling hole is provided (except "K" type)

INTERCHANGE

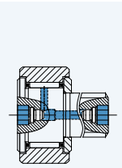
CAM FOLLOWERS
HEXAGON SOCKET ON BOTH SIDES GREASE NIPPLE INSTALLED

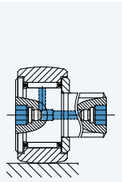


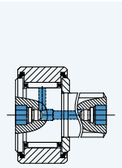
CF. . AB (CF10ABK, CF10-1ABK)

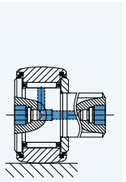


CF. . AB (CF12≦)


CF. . AB


CF. . RAB


CF. . UUAB


CF. . UURAB

CF..AB, RAB, UUAB, URAB

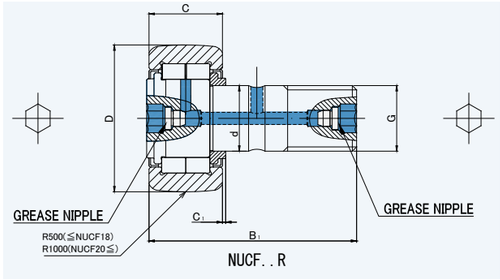
DIMENSION TABLE

INTERCHANGE TABLE

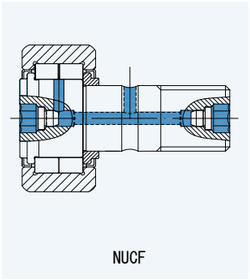
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA				NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CF..AB	CF..RAB	CF..UUAB	CF..UURAB	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-X	KR	KR-PPX	KR-PP	—	—	—	—	—	—
CF10ABK	**CF10RABK**	**CF10UUABK**	**CF10UURABK**	**45**	10	22	12	M10×1	36	0.6	4 700	1 670	KR22X	KR22	KR22PPX	KR22PP	—	—	—	—	—	—
CF10VABK	**CF10VRABK**	**CF10VUUABK**	**CF10VUURABK**	**45**	10	22	12	M10×1	36	0.6	4 700	1 670	KRV22X	KRV22	KRV22PPX	KRV22PP	—	—	—	—	—	—
CF10-1ABK	**CF10-1RABK**	**CF10-1UUABK**	**CF10-1UURABK**	**60**	10	26	12	M10×1	36	0.6	5 490	2 060	KR26X	KR26	KR26PPX	KR26PP	—	—	—	—	—	—
CF10-1VABK	**CF10-1VRABK**	**CF10-1VUUABK**	**CF10-1VUURABK**	**60**	10	26	12	M10×1	36	0.6	5 490	2 060	KRV26X	KRV26	KRV26PPX	KRV26PP	—	—	—	—	—	—
CF12AB	**CF12RAB**	**CF12UUAB**	**CF12UURAB**	**95**	12	30	14	M12×1.5	40	0.6	7 060	2 450	KR30X	KR30	KR30PPX	KR30PP	—	—	—	—	—	—
CF12VAB	**CF12VRAB**	**CF12VUUAB**	**CF12VUURAB**	**95**	12	30	14	M12×1.5	40	0.6	7 060	2 450	KRV30X	KRV30	KRV30PPX	KRV30PP	—	—	—	—	—	—
CF12-1AB	**CF12-1RAB**	**CF12-1UUAB**	**CF12-1UURAB**	**105**	12	32	14	M12×1.5	40	0.6	7 450	2 740	KR32X	KR32	KR32PPX	KR32PP	—	—	—	—	—	—
CF12-1VAB	**CF12-1VRAB**	**CF12-1VUUAB**	**CF12-1VUURAB**	**105**	12	32	14	M12×1.5	40	0.6	7 450	2 740	KRV32X	KRV32	KRV32PPX	KRV32PP	—	—	—	—	—	—
CF16AB	**CF16RAB**	**CF16UUAB**	**CF16UURAB**	**170**	16	35	18	M16×1.5	52	0.8	11 200	3 140	KR35X	KR35	KR35PPX	KR35PP	—	—	—	—	—	—
CF16VAB	**CF16VRAB**	**CF16VUUAB**	**CF16VUURAB**	**170**	16	35	18	M16×1.5	52	0.8	11 200	3 140	KRV35X	KRV35	KRV35PPX	KRV35PP	—	—	—	—	—	—
CF18AB	**CF18RAB**	**CF18UUAB**	**CF18URAB**	**250**	18	40	20	M18×1.5	58	0.8	14 400	3 720	KR40X	KR40	KR40PPX	KR40PP	—	—	—	—	—	—
CF18VAB	**CF18VRAB**	**CF18VUUAB**	**CF18VUURAB**	**250**	18	40	20	M18×1.5	58	0.8	14 400	3 720	KRV40X	KRV40	KRV40PPX	KRV40PP	—	—	—	—	—	—
CF20AB	**CF20RAB**	**CF20UUAB**	**CF20UURAB**	**460**	20	52	24	M20×1.5	66	0.8	23 200	8 230	KR52X	KR52	KR52PPX	KR52PP	—	—	—	—	—	—
CF20VAB	**CF20VRAB**	**CF20VUUAB**	**CF20VUURAB**	**460**	20	52	24	M20×1.5	66	0.8	23 200	8 230	KRV52X	KRV52	KRV52PPX	KRV52PP	—	—	—	—	—	—
CF20-1AB	**CF20-1RAB**	**CF20-1UUAB**	**CF20-1UURAB**	**385**	20	47	24	M20×1.5	66	0.8	21 000	7 150	KR47X	KR47	KR47PPX	KR47PP	—	—	—	—	—	—
CF20-1VAB	**CF20-1VRAB**	**CF20-1VUUAB**	**CF20-1VUURAB**	**385**	20	47	24	M20×1.5	66	0.8	21 000	7 150	KRV47X	KRV47	KRV47PPX	KRV47PP	—	—	—	—	—	—
CF24AB	**CF24RAB**	**CF24UUAB**	**CF24UURAB**	**815**	24	62	29	M24×1.5	80	0.8	34 200	10 500	KR62X	KR62	KR62PPX	KR62PP	—	—	—	—	—	—
CF24VAB	**CF24VRAB**	**CF24VUUAB**	**CF24VUURAB**	**815**	24	62	29	M24×1.5	80	0.8	34 200	10 500	KRV62X	KRV62	KRV62PPX	KRV62PP	—	—	—	—	—	—
CF24-1AB	**CF24-1RAB**	**CF24-1UUAB**	**CF24-1UURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	39 800	12 900	KR72X	KR72	KR72PPX	KR72PP	—	—	—	—	—	—
CF24-1VAB	**CF24-1VRAB**	**CF24-1VUUAB**	**CF24-1VUURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	39 800	12 900	KRV72X	KRV72	KRV72PPX	KRV72PP	—	—	—	—	—	—
CF30AB	**CF30RAB**	**CF30UUAB**	**CF30URAB**	**1 870**	30	80	35	M30×1.5	100	1	52 600	14 900	KR80X	KR80	KR80PPX	KR80PP	—	—	—	—	—	—
CF30VAB	**CF30VRAB**	**CF30VUUAB**	**CF30VUURAB**	**1 870**	30	80	35	M30×1.5	100	1	52 600	14 900	KRV80X	KRV80	KRV80PPX	KRV80PP	—	—	—	—	—	—
CF30-1AB	**CF30-1RAB**	**CF30-1UUAB**	**CF30-1UURAB**	**2 030**	30	85	35	M30×1.5	100	1	56 000	16 100	—	—	—	—	—	—	—	—	—	—
CF30-1VAB	**CF30-1VRAB**	**CF30-1VUUAB**	**CF30-1VUURAB**	**2 030**	30	85	35	M30×1.5	100	1	56 000	16 100	—	—	—	—	—	—	—	—	—	—
CF30-2AB	**CF30-2RAB**	**CF30-2UUAB**	**CF30-2UURAB**	**2 220**	30	90	35	M30×1.5	100	1	59 300	17 300	KR90X	KR90	KR90PPX	KR90PP	—	—	—	—	—	—
CF30-2VAB	**CF30-2VRAB**	**CF30-2VUUAB**	**CF30-2VUURAB**	**2 220**	30	90	35	M30×1.5	100	1	59 300	17 300	KRV90X	KRV90	KRV90PPX	KRV90PP	—	—	—	—	—	—

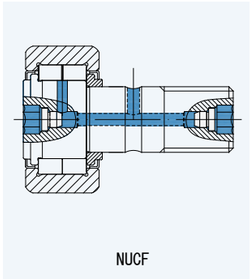
CAM FOLLOWERS

FULL COMPLEMENT DOUBLE ROW
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



NUCF. . R


NUCF


NUCF

NUCF..AB, RAB

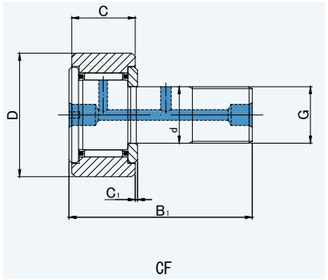
DIMENSION TABLE

INTERCHANGE TABLE

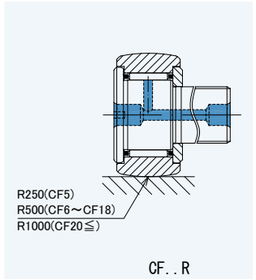
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
NUCF..AB	NUCF..RAB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	NUKR	NUKR..X	NUKR	—	NUCF..R	MCFD..X	MCFD
NUCF16AB	**NUCF16RAB**	**165**	16	35	18	M16x1.5	32.5	0.8	22 300	25 700	—	NUKR35	NUKR35XH	NUKR35H	—	NUCF16BR	MCFD-35X	MCFD-35
NUCF18AB	**NUCF18RAB**	**242**	18	40	20	M18x1.5	36.5	0.8	24 100	29 100	—	NUKR40	NUKR40XH	NUKR40H	—	NUCF18BR	MCFD-40X	MCFD-40
NUCF20-1AB	**NUCF20-1RAB**	**380**	20	47	24	M20x1.5	40.5	0.8	38 500	48 000	—	NUKR47	NUKR47XH	NUKR47H	—	NUCF20-1BR	MCFD-47X	MCFD-47
NUCF20AB	**NUCF20RAB**	**450**	20	52	24	M20x1.5	40.5	0.8	42 500	57 500	—	NUKR52	NUKR52XH	NUKR52H	—	NUCF20BR	MCFD-52X	MCFD-52
NUCF24AB	**NUCF24RAB**	**795**	24	62	28	M24x1.5	49.5	1.3	56 500	72 500	—	NUKR62	NUKR62XH	NUKR62H	—	NUCF24BR	MCFD-62X	MCFD-62
NUCF24-1AB	**NUCF24-1RAB**	**1 010**	24	72	28	M24x1.5	49.5	1.3	62 000	85 500	—	NUKR72	NUKR72XH	NUKR72H	—	NUCF24-1BR	MCFD-72X	MCFD-72
NUCF30AB	**NUCF30RAB**	**1 540**	30	80	35	M30x1.5	63	1	101 000	151 000	—	NUKR80	NUKR80XH	NUKR80H	—	NUCF30BR	MCFD-80X	MCFD-80
NUCF30-2AB	**NUCF30-2RAB**	**1 960**	30	90	35	M30x1.5	63	1	101 000	151 000	—	NUKR90	NUKR90XH	NUKR90H	—	NUCF30-2BR	MCFD-90X	MCFD-90

INTERCHANGE

CAM FOLLOWERS
SCREWDRIVER SLOT HEAD



CF



CF..R

CF, R

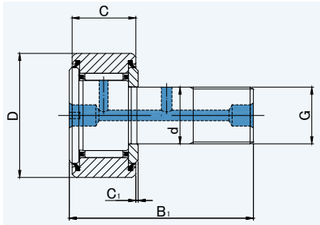
DIMENSION TABLE

INTERCHANGE TABLE

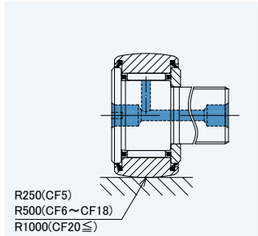
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF	CF..R	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-X	KR	KR-X	KR	CF	CF..R	MCFR-X	MCFR
CF5	**CF5R**	**10.5**	5	13	9	M5×0.8	23	0.5	3 140	2 770	—	—	—	—	CF5	CF5R	MCFR-13X	MCFR-13
CF5V	**CF5VR**	**10.5**	5	13	9	M5×0.8	23	0.5	5 100	5 500	—	—	—	—	CF5V	CF5VR	MCF-13X	MCF-13
CF6	**CF6R**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630	KR16X	KR16	KR16X	KR16	CF6	CF6R	MCFR-16X	MCFR-16
CF6V	**CF6VR**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530	KRV16X	KRV16	KRV16X	KRV16	CF6V	CF6VR	MCF-16X	MCF-16
CF8	**CF8R**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710	KR19X	KR19	KR19X	KR19	CF8	CF8R	MCFR-19X	MCFR-19
CF8V	**CF8VR**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170	KRV19X	KRV19	KRV19X	KRV19	CF8V	CF8VR	MCF-19X	MCF-19
CF10	**CF10R**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR22X	KR22	CF10	CF10R	MCFR-22XA	MCFR-22A
CF10V	**CF10VR**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV22X	KRV22	CF10V	CF10VR	MCF-22XA	MCF-22A
CF10K	**CF10RK**	**45**	10	22	12	M10×1	36	0.6	5 390	6 860	—	—	—	—	CF10M	CF10RM	MCFR-22X	MCFR-22
CF10VK	**CF10VRK**	**45**	10	22	12	M10×1	36	0.6	9 510	14 500	—	—	—	—	CF10VM	CF10VRM	MCF-22X	MCF-22
CF10-1	**CF10-1R**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR26X	KR26	CF10-1	CF10-1R	MCFR-26XA	MCFR-26A
CF10-1V	**CF10-1VR**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV26X	KRV26	CF10-1V	CF10-1VR	MCF-26XA	MCF-26A
CF10-1K	**CF10-1RK**	**60**	10	26	12	M10×1	36	0.6	5 390	6 860	—	—	—	—	CF10-1M	CF10-1RM	MCFR-26X	MCFR-26
CF10-1VK	**CF10-1VRK**	**60**	10	26	12	M10×1	36	0.6	9 510	14 500	—	—	—	—	CF10-1VM	CF10-1VRM	MCF-26X	MCF-26
CF12	**CF12R**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	KR30X	KR30	CF12	CF12R	MCFR-30X	MCFR-30
CF12V	**CF12VR**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	KRV30X	KRV30	CF12V	CF12VR	MCF-30X	MCF-30
CF12-1	**CF12-1R**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	KR32X	KR32	CF12-1	CF12-1R	MCFR-32X	MCFR-32
CF12-1V	**CF12-1VR**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	KRV32X	KRV32	CF12-1V	CF12-1VR	MCF-32X	MCF-32
CF16	**CF16R**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	KR35X	KR35	CF16	CF16R	MCFR-35X	MCFR-35
CF16V	**CF16VR**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	KRV35X	KRV35	CF16V	CF16VR	MCF-35X	MCF-35
CF18	**CF18R**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	KR40X	KR40	CF18	CF18R	MCFR-40XA	MCFR-40A
CF18V	**CF18VR**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	KRV40X	KRV40	CF18V	CF18VR	MCF-40XA	MCF-40A
CF20	**CF20R**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	KR52X	KR52	CF20	CF20R	MCFR-52XA	MCFR-52A
CF20V	**CF20VR**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	KRV52X	KRV52	CF20V	CF20VR	MCF-52XA	MCF-52A
CF20-1	**CF20-1R**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	KR47X	KR47	CF20-1	CF20-1R	MCFR-47XA	MCFR-47A
CF20-1V	**CF20-1VR**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	KRV47X	KRV47	CF20-1V	CF20-1VR	MCF-47XA	MCF-47A
CF24	**CF24R**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	—	—	KR62X	KR62	CF24	CF24R	MCFR-62XA	MCFR-62A
CF24V	**CF24VR**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	KRV62X	KRV62	CF24V	CF24VR	MCF-62XA	MCF-62A
CF24-1	**CF24-1R**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	—	—	KR72X	KR72	CF24-1	CF24-1R	MCFR-72XA	MCFR-72A
CF24-1V	**CF24-1VR**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	KRV72X	KRV72	CF24-1V	CF24-1VR	MCF-72XA	MCF-72A
CF30	**CF30R**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	KR80X	KR80	CF30	CF30R	MCFR-80X	MCFR-80
CF30V	**CF30VR**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	KRV80X	KRV80	CF30V	CF30VR	MCF-80X	MCF-80
CF30-1	**CF30-1R**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	KR85X	KR85	CF30-1	CF30-1R	MCFR-85X	MCFR-85
CF30-1V	**CF30-1VR**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	KRV85X	KRV85	CF30-1V	CF30-1VR	MCF-85X	MCF-85
CF30-2	**CF30-2R**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	KR90X	KR90	CF30-2	CF30-2R	MCFR-90X	MCFR-90
CF30-2V	**CF30-2VR**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	KRV90X	KRV90	CF30-2V	CF30-2VR	MCF-90X	MCF-90

Stud diameter (d) 5 to 10mm : Without oil hole in the thread side.(except "K" type)

CAM FOLLOWERS
SCREWDRIVER SLOT HEAD



CF. . UU



CF. . UUR

CF..UU, UUR

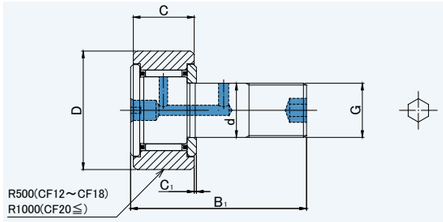
DIMENSION TABLE

INTERCHANGE TABLE

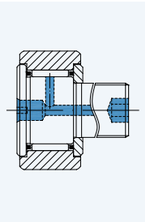
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
CF..UU	CF..UUR	g	d	D	C	G	B1	C1	Cr N	Cor N	KR-PPX	KR-PP	KR-LLX	KR-LL	CF	CF..R	MCFR-SX	MCFR-S
CF5UU	**CF5UUR**	**10.5**	5	13	9	M5×0.8	23	0.5	3 140	2 770	—	—	—	—	CF5UU	CF5UUR	MCFR-13SX	MCFR-13S
CF5VUU	**CF5VUUR**	**10.5**	5	13	9	M5×0.8	23	0.5	5 100	5 500	—	—	—	—	CF5VUU	CF5VUUR	MCF-13SX	MCF-13S
CF6UU	**CF6UUR**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630	KR16PPX	KR16PP	KR16XLL	KR16LL	CF6UU	CF6UUR	MCFR-16SX	MCFR-16S
CF6VUU	**CF6VUUR**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530	KRV16PPX	KRV16PP	KRV16XLL	KRV16LL	CF6VUU	CF6VUUR	MCF-16SX	MCF-16S
CF8UU	**CF8UUR**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710	KR19PPX	KR19PP	KR19XLL	KR19LL	CF8UU	CF8UUR	MCFR-19SX	MCFR-19S
CF8VUU	**CF8VUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170	KRV19PPX	KRV19PP	KRV19XLL	KRV19LL	CF8VUU	CF8VUUR	MCF-19SX	MCF-19S
CF10UU	**CF10UUR**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR22XLL	KR22LL	CF10UU	CF10UUR	MCFR-22SXA	MCFR-22SA
CF10VUU	**CF10VUUR**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV22XLL	KRV22LL	CF10VUU	CF10VUUR	MCF-22SXA	MCF-22SA
CF10UUK	**CF10UURK**	**45**	10	22	12	M10×1	36	0.6	5 390	6 860	—	—	—	—	CF10UUM	CF10UURM	MCFR-22SX	MCFR-22S
CF10VUUK	**CF10VUURK**	**45**	10	22	12	M10×1	36	0.6	9 510	14 500	—	—	—	—	CF10VUUM	CF10VUURM	MCF-22SX	MCF-22S
CF10-1UU	**CF10-1UUR**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860	—	—	KR26XLL	KR26LL	CF10-1UU	CF10-1UUR	MCFR-26SXA	MCFR-26SA
CF10-1VUU	**CF10-1VUUR**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRV26XLL	KRV26LL	CF10-1VUU	CF10-1VUUR	MCF-26SXA	MCF-26SA
CF10-1UUK	**CF10-1UURK**	**60**	10	26	12	M10×1	36	0.6	5 390	6 860	—	—	—	—	CF10-1UUM	CF10-1UURM	MCFR-26SX	MCFR-26S
CF10-1VUUK	**CF10-1VUURK**	**60**	10	26	12	M10×1	36	0.6	9 510	14 500	—	—	—	—	CF10-1VUUM	CF10-1VUURM	MCF-26SX	MCF-26S
CF12UU	**CF12UUR**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	KR30XLL	KR30LL	CF12UU	CF12UUR	MCFR-30SX	MCFR-30S
CF12VUU	**CF12VUUR**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	KRV30XLL	KRV30LL	CF12VUU	CF12VUUR	MCF-30SX	MCF-30S
CF12-1UU	**CF12-1UUR**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	KR32XLL	KR32LL	CF12-1UU	CF12-1UUR	MCFR-32SX	MCFR-32S
CF12-1VUU	**CF12-1VUUR**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	KRV32XLL	KRV32LL	CF12-1VUU	CF12-1VUUR	MCF-32SX	MCF-32S
CF16UU	**CF16UUR**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	KR35XLL	KR35LL	CF16UU	CF16UUR	MCFR-35SX	MCFR-35S
CF16VUU	**CF16VUUR**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	KRV35XLL	KRV35LL	CF16VUU	CF16VUUR	MCF-35SX	MCF-35S
CF18UU	**CF18UUR**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	KR40XLL	KR40LL	CF18UU	CF18UUR	MCFR-40SXA	MCFR-40SA
CF18VUU	**CF18VUUR**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	KRV40XLL	KRV40LL	CF18VUU	CF18VUUR	MCF-40SXA	MCF-40SA
CF20UU	**CF20UUR**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	KR52XLL	KR52LL	CF20UU	CF20UUR	MCFR-52SXA	MCFR-52SA
CF20VUU	**CF20VUUR**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	KRV52XLL	KRV52LL	CF20VUU	CF20VUUR	MCF-52SXA	MCF-52SA
CF20-1UU	**CF20-1UUR**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	KR47XLL	KR47LL	CF20-1UU	CF20-1UUR	MCFR-47SXA	MCFR-47SA
CF20-1VUU	**CF20-1VUUR**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	KRV47XLL	KRV47LL	CF20-1VUU	CF20-1VUUR	MCF-47SXA	MCF-47SA
CF24UU	**CF24UUR**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	—	—	KR62XLL	KR62LL	CF24UU	CF24UUR	MCFR-62SXA	MCFR-62SA
CF24VUU	**CF24VUUR**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	KRV62XLL	KRV62LL	CF24VUU	CF24VUUR	MCF-62SXA	MCF-62SA
CF24-1UU	**CF24-1UUR**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	—	—	KR72XLL	KR72LL	CF24-1UU	CF24-1UUR	MCFR-72SXA	MCFR-72SA
CF24-1VUU	**CF24-1VUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	KRV72XLL	KRV72LL	CF24-1VUU	CF24-1VUUR	MCF-72SXA	MCF-72SA
CF30UU	**CF30UUR**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	KR80XLL	KR80LL	CF30UU	CF30UUR	MCFR-80SX	MCFR-80S
CF30VUU	**CF30VUUR**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	KRV80XLL	KRV80LL	CF30VUU	CF30VUUR	MCF-80SX	MCF-80S
CF30-1UU	**CF30-1UUR**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	KR85XLL	KR85LL	CF30-1UU	CF30-1UUR	MCFR-85SX	MCFR-85S
CF30-1VUU	**CF30-1VUUR**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	KRV85XLL	KRV85LL	CF30-1VUU	CF30-1VUUR	MCF-85SX	MCF-85S
CF30-2UU	**CF30-2UUR**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	KR90XLL	KR90LL	CF30-2UU	CF30-2UUR	MCFR-90SX	MCFR-90S
CF30-2VUU	**CF30-2VUUR**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	KRV90XLL	KRV90LL	CF30-2VUU	CF30-2VUUR	MCF-90SX	MCF-90S

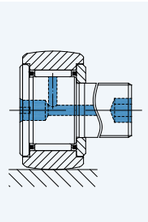
Stud diameter (d) 5 to 10mm : Without oil hole in the thread side.(except "K" type)

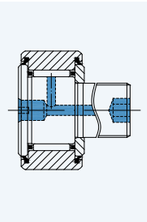
CAM FOLLOWERS
HEXAGON SOCKET ON THREAD SIDE SCREWDRIVER SLOT HEAD

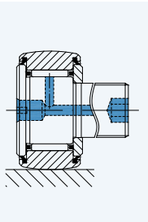


CF. . B


CF. . B


CF. . RB


CF. . UUB


CF. . UURB

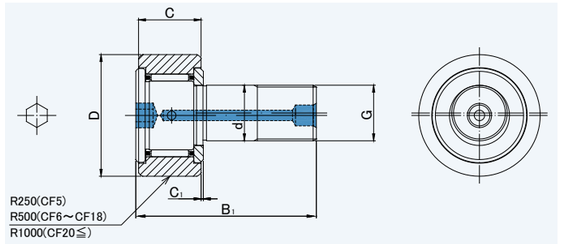
CF..B, RB, UUB, UURB

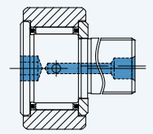
DIMENSION TABLE

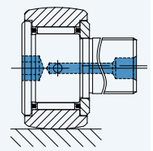
INTERCHANGE TABLE

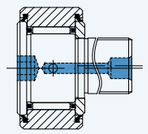
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CF..B	CF..RB	CF..UUB	CF..UURB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CF12B	**CF12RB**	**CF12UUB**	**CF12UURB**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	—	—	—	—	—	—
CF12VB	**CF12VRB**	**CF12VUUB**	**CF12VUURB**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CF12-1B	**CF12-1RB**	**CF12-1UUB**	**CF12-1UURB**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	—	—	—	—	—	—
CF12-1VB	**CF12-1VRB**	**CF12-1VUUB**	**CF12-1VUURB**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CF16B	**CF16RB**	**CF16UUB**	**CF16UURB**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	—	—	—	—	—	—
CF16VB	**CF16VRB**	**CF16VUUB**	**CF16VUURB**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	—	—	—	—	—	—
CF18B	**CF18RB**	**CF18UUB**	**CF18UURB**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	—	—	—	—	—	—
CF18VB	**CF18VRB**	**CF18VUUB**	**CF18VUURB**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	—	—	—	—	—	—
CF20B	**CF20RB**	**CF20UUB**	**CF20UURB**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	—	—	—	—	—	—
CF20VB	**CF20VRB**	**CF20VUUB**	**CF20VUURB**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CF20-1B	**CF20-1RB**	**CF20-1UUB**	**CF20-1UURB**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	—	—	—	—	—	—
CF20-1VB	**CF20-1VRB**	**CF20-1VUUB**	**CF20-1VUURB**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CF24B	**CF24RB**	**CF24UUB**	**CF24UURB**	**815**	24	62	29	M20×1.5	80	0.8	30 480	52 630	—	—	—	—	—	—	—	—
CF24VB	**CF24VRB**	**CF24VUUB**	**CF24VUURB**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—
CF24-1B	**CF24-1RB**	**CF24-1UUB**	**CF24-1UURB**	**1 140**	24	72	29	M20×1.5	80	0.8	30 480	52 630	—	—	—	—	—	—	—	—
CF24-1VB	**CF24-1VRB**	**CF24-1VUUB**	**CF24-1VUURB**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—
CF30B	**CF30RB**	**CF30UUB**	**CF30UURB**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CF30VB	**CF30VRB**	**CF30VUUB**	**CF30VUURB**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—
CF30-1B	**CF30-1RB**	**CF30-1UUB**	**CF30-1UURB**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CF30-1VB	**CF30-1VRB**	**CF30-1VUUB**	**CF30-1VUURB**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—
CF30-2B	**CF30-2RB**	**CF30-2UUB**	**CF30-2UURB**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CF30-2VB	**CF30-2VRB**	**CF30-2VUUB**	**CF30-2VUURB**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—

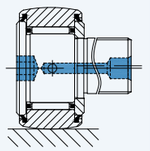
CAM FOLLOWERS
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON STUD HEAD




CFH. . A


CFH. . RA


CFH. . UUA


CFH. . UURA

CFH..A, RA, UUA, UURA

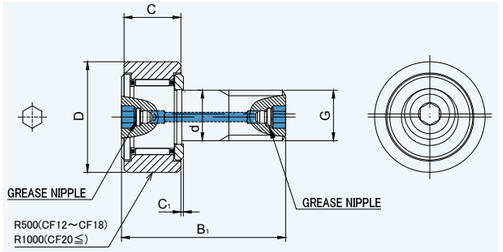
DIMENSION TABLE

INTERCHANGE TABLE

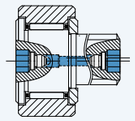
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO				MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH..A	CFH..RA	CFH..UUA	CFH..UURA	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	CFES-B	CFES-BR	CFES-BUU	CFES-BUUR	—	—
CFH5A	**CFH5RA**	**CFH5UUA**	**CFH5UURA**	**10.5**	5	13	9	M5×0.8	23	0.5	3 140	2 770		—	—	—	—	—	—	—	—	—	—
CFH5VA	**CFH5VRA**	**CFH5VUUA**	**CFH5VUURA**	**10.5**	5	13	9	M5×0.8	23	0.5	5 100	5 500		—	—	—	—	—	—	—	—	—	—
CFH6A	**CFH6RA**	**CFH6UUA**	**CFH6UURA**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630		—	—	—	—	CFES6B	CFES6BR	CFES6BUU	CFES6BUUR	—	—
CFH6VA	**CFH6VRA**	**CFH6VUUA**	**CFH6VUURA**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530		—	—	—	—	—	—	—	—	—	—
CFH8A	**CFH8RA**	**CFH8UUA**	**CFH8UURA**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710		—	—	—	—	CFES8B	CFES8BR	CFES8BUU	CFES8BUUR	—	—
CFH8VA	**CFH8VRA**	**CFH8VUUA**	**CFH8VUURA**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170		—	—	—	—	—	—	—	—	—	—
CFH10A	**CFH10RA**	**CFH10UUA**	**CFH10UURA**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860		—	—	—	—	CFES10B	CFES10BR	CFES10BUU	CFES10BUUR	—	—
CFH10VA	**CFH10VRA**	**CFH10VUUA**	**CFH10VUURA**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500		—	—	—	—	—	—	—	—	—	—
CFH10-1A	**CFH10-1RA**	**CFH10-1UUA**	**CFH10-1UURA**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860		—	—	—	—	CFES10-1B	CFES10-1BR	CFES10-1BUU	CFES10-1BUUR	—	—
CFH10-1VA	**CFH10-1VRA**	**CFH10-1VUUA**	**CFH10-1VUURA**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500		—	—	—	—	—	—	—	—	—	—
CFH12A	**CFH12RA**	**CFH12UUA**	**CFH12UURA**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800		—	—	—	—	CFES12B	CFES12BR	CFES12BUU	CFES12BUUR	—	—
CFH12VA	**CFH12VRA**	**CFH12VUUA**	**CFH12VUURA**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700		—	—	—	—	—	—	—	—	—	—
CFH12-1A	**CFH12-1RA**	**CFH12-1UUA**	**CFH12-1UURA**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800		—	—	—	—	CFES12-1B	CFES12-1BR	CFES12-1BUU	CFES12-1BUUR	—	—
CFH12-1VA	**CFH12-1VRA**	**CFH12-1VUUA**	**CFH12-1VUURA**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700		—	—	—	—	—	—	—	—	—	—
CFH16A	**CFH16RA**	**CFH16UUA**	**CFH16UURA**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330		—	—	—	—	CFES16B	CFES16BR	CFES16BUU	CFES16BUUR	—	—
CFH16VA	**CFH16VRA**	**CFH16VUUA**	**CFH16VUURA**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630		—	—	—	—	—	—	—	—	—	—
CFH18A	**CFH18RA**	**CFH18UUA**	**CFH18UURA**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200		—	—	—	—	CFES18B	CFES18BR	CFES18BUU	CFES18BUUR	—	—
CFH18VA	**CFH18VRA**	**CFH18VUUA**	**CFH18VUURA**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350		—	—	—	—	—	—	—	—	—	—
CFH20A	**CFH20RA**	**CFH20UUA**	**CFH20UURA**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600		—	—	—	—	—	—	—	—	—	—
CFH20VA	**CFH20VRA**	**CFH20VUUA**	**CFH20VUURA**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480		—	—	—	—	—	—	—	—	—	—
CFH20-1A	**CFH20-1RA**	**CFH20-1UUA**	**CFH20-1UURA**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600		—	—	—	—	—	—	—	—	—	—
CFH20-1VA	**CFH20-1VRA**	**CFH20-1VUUA**	**CFH20-1VUURA**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480		—	—	—	—	—	—	—	—	—	—
CFH24A	**CFH24RA**	**CFH24UUA**	**CFH24UURA**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630		—	—	—	—	—	—	—	—	—	—
CFH24VA	**CFH24VRA**	**CFH24VUUA**	**CFH24VUURA**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020		—	—	—	—	—	—	—	—	—	—
CFH24-1A	**CFH24-1RA**	**CFH24-1UUA**	**CFH24-1UURA**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630		—	—	—	—	—	—	—	—	—	—
CFH24-1VA	**CFH24-1VRA**	**CFH24-1VUUA**	**CFH24-1VUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020		—	—	—	—	—	—	—	—	—	—
CFH30A	**CFH30RA**	**CFH30UUA**	**CFH30UURA**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060		—	—	—	—	—	—	—	—	—	—
CFH30VA	**CFH30VRA**	**CFH30VUUA**	**CFH30VUURA**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060		—	—	—	—	—	—	—	—	—	—
CFH30-1A	**CFH30-1RA**	**CFH30-1UUA**	**CFH30-1UURA**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060		—	—	—	—	—	—	—	—	—	—
CFH30-1VA	**CFH30-1VRA**	**CFH30-1VUUA**	**CFH30-1VUURA**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060		—	—	—	—	—	—	—	—	—	—
CFH30-2A	**CFH30-2RA**	**CFH30-2UUA**	**CFH30-2UURA**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060		—	—	—	—	—	—	—	—	—	—
CFH30-2VA	**CFH30-2VRA**	**CFH30-2VUUA**	**CFH30-2VUURA**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060		—	—	—	—	—	—	—	—	—	—

Stud diameter (d) 5 to 10mm : No grease refilling hole is provided

CAM FOLLOWERS
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED



CFH. . AB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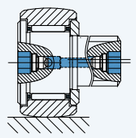
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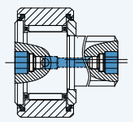
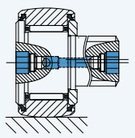

CFH. . UUAB


CFH. . UURAB

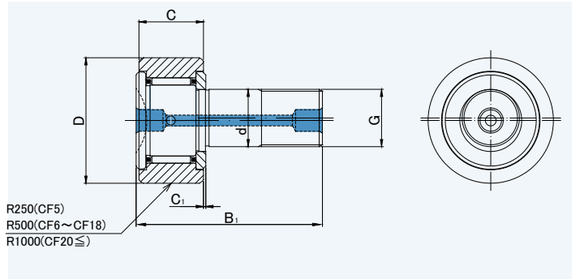
CFH..AB, RAB, UUAB, URAB

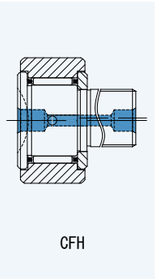
DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH..AB	CFH..RAB	CFH..UUAB	CFH..UURAB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFH12AB	**CFH12RAB**	**CFH12UUAB**	**CFH12UURAB**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	—	—	—	—	—	—
CFH12VAB	**CFH12VRAB**	**CFH12VUUAB**	**CFH12VUURAB**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CFH12-1AB	**CFH12-1RAB**	**CFH12-1UUAB**	**CFH12-1UURAB**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	—	—	—	—	—	—
CFH12-1VAB	**CFH12-1VRAB**	**CFH12-1VUUAB**	**CFH12-1VUURAB**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CFH16AB	**CFH16RAB**	**CFH16UUAB**	**CFH16UURAB**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	—	—	—	—	—	—
CFH16VAB	**CFH16VRAB**	**CFH16VUUAB**	**CFH16VUURAB**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	—	—	—	—	—	—
CFH18AB	**CFH18RAB**	**CFH18UUAB**	**CFH18UURAB**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	—	—	—	—	—	—
CFH18VAB	**CFH18VRAB**	**CFH18VUUAB**	**CFH18VUURAB**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	—	—	—	—	—	—
CFH20AB	**CFH20RAB**	**CFH20UUAB**	**CFH20UURAB**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	—	—	—	—	—	—
CFH20VAB	**CFH20VRAB**	**CFH20VUUAB**	**CFH20VUURAB**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CFH20-1AB	**CFH20-1RAB**	**CFH20-1UUAB**	**CFH20-1UURAB**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	—	—	—	—	—	—
CFH20-1VAB	**CFH20-1VRAB**	**CFH20-1VUUAB**	**CFH20-1VUURAB**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CFH24AB	**CFH24RAB**	**CFH24UUAB**	**CFH24UURAB**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	—	—	—	—	—	—	—	—
CFH24VAB	**CFH24VRAB**	**CFH24VUUAB**	**CFH24VUURAB**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—
CFH24-1AB	**CFH24-1RAB**	**CFH24-1UUAB**	**CFH24-1UURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	—	—	—	—	—	—	—	—
CFH24-1VAB	**CFH24-1VRAB**	**CFH24-1VUUAB**	**CFH24-1VUURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—
CFH30AB	**CFH30RAB**	**CFH30UUAB**	**CFH30UURAB**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CFH30VAB	**CFH30VRAB**	**CFH30VUUAB**	**CFH30VUURAB**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—
CFH30-1AB	**CFH30-1RAB**	**CFH30-1UUAB**	**CFH30-1UURAB**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CFH30-1VAB	**CFH30-1VRAB**	**CFH30-1VUUAB**	**CFH30-1VUURAB**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—
CFH30-2AB	**CFH30-2RAB**	**CFH30-2UUAB**	**CFH30-2UURAB**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CFH30-2VAB	**CFH30-2VRAB**	**CFH30-2VUUAB**	**CFH30-2VUURAB**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—

CAM FOLLOWERS
SOLID ECCENTRIC TYPE
SCREWDRIVER SLOT HEAD

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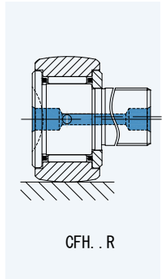
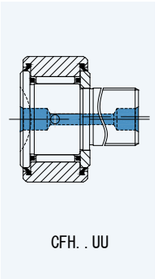
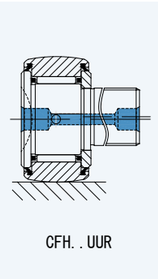

CFH. . R


CFH. . UU


CFH. . UUR

CFH, R, UU, UUR

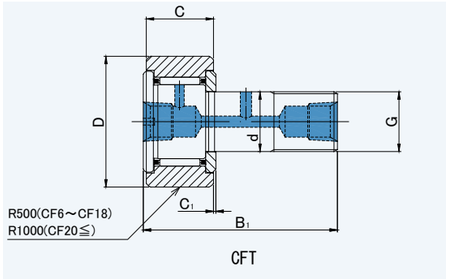
DIMENSION TABLE

INTERCHANGE TABLE

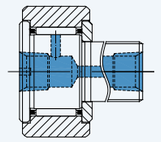
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN				IKO				MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH	CFH..R	CFH..UU	CFH..UUR	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	KRU..X	KRU	KRU..LLX	KRU..LL	CFES	CFES..R	CFES-UU	CFES-UUR	—	—
CFH5	**CFH5R**	**CFH5UU**	**CFH5UUR**	**10.5**	5	13	9	M5×0.8	23	0.5	3 140	2 770	—	—	—	—	—	—	—	—	—	—	—	—
CFH5V	**CFH5VR**	**CFH5VUU**	**CFH5VUUR**	**10.5**	5	13	9	M5×0.8	23	0.5	5 100	5 500	—	—	—	—	—	—	—	—	—	—	—	—
CFH6	**CFH6R**	**CFH6UU**	**CFH6UUR**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630	—	—	KRU16X	KRU16	KRU16LLX/3AS	KRU16LL/3AS/3AS	CFES6	CFES6R	CFES6UU	CFES6UUR	—	—
CFH6V	**CFH6VR**	**CFH6VUU**	**CFH6VUUR**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530	—	—	—	—	—	—	—	—	—	—	—	—
CFH8	**CFH8R**	**CFH8UU**	**CFH8UUR**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710	—	—	KRU19X	KRU19	KRU19LLX/3AS	KRU19LL/3AS/3AS	CFES8	CFES8R	CFES8UU	CFES8UUR	—	—
CFH8V	**CFH8VR**	**CFH8VUU**	**CFH8VUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170	—	—	—	—	—	—	—	—	—	—	—	—
CFH10	**CFH10R**	**CFH10UU**	**CFH10UUR**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860	—	—	KRU22X	KRU22	KRU22LLX/3AS	KRU22LL/3AS/3AS	CFES10	CFES10R	CFES10UU	CFES10UUR	—	—
CFH10V	**CFH10VR**	**CFH10VUU**	**CFH10VUUR**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500	—	—	—	—	—	—	—	—	—	—	—	—
CFH10-1	**CFH10-1R**	**CFH10-1UU**	**CFH10-1UUR**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860	—	—	KRU26X	KRU26	KRU26LLX/3AS	KRU26LL/3AS/3AS	CFES10-1	CFES10-1R	CFES10-1UU	CFES10-1UUR	—	—
CFH10-1V	**CFH10-1VR**	**CFH10-1VUU**	**CFH10-1VUUR**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500	—	—	—	—	—	—	—	—	—	—	—	—
CFH12	**CFH12R**	**CFH12UU**	**CFH12UUR**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	KRU30X	KRU30	KRU30LLX/3AS	KRU30LL/3AS/3AS	CFES12	CFES12R	CFES12UU	CFES12UUR	—	—
CFH12V	**CFH12VR**	**CFH12VUU**	**CFH12VUUR**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—	—	—	—	—
CFH12-1	**CFH12-1R**	**CFH12-1UU**	**CFH12-1UUR**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	KRU32X	KRU32	KRU32LLX/3AS	KRU32LL/3AS/3AS	CFES12-1	CFES12-1R	CFES12-1UU	CFES12-1UUR	—	—
CFH12-1V	**CFH12-1VR**	**CFH12-1VUU**	**CFH12-1VUUR**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—	—	—	—	—
CFH16	**CFH16R**	**CFH16UU**	**CFH16UUR**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	KRU35X	KRU35	KRU35LLX/3AS	KRU35LL/3AS/3AS	CFES16	CFES16R	CFES16UU	CFES16UUR	—	—
CFH16V	**CFH16VR**	**CFH16VUU**	**CFH16VUUR**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	—	—	—	—	—	—	—	—	—	—
CFH18	**CFH18R**	**CFH18UU**	**CFH18UUR**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	KRU40X	KRU40	KRU40LLX/3AS	KRU40LL/3AS/3AS	CFES18	CFES18R	CFES18UU	CFES18UUR	—	—
CFH18V	**CFH18VR**	**CFH18VUU**	**CFH18VUUR**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	—	—	—	—	—	—	—	—	—	—
CFH20	**CFH20R**	**CFH20UU**	**CFH20UUR**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	KRU52X	KRU52	KRU52LLX/3AS	KRU52LL/3AS/3AS	—	—	—	—	—	—
CFH20V	**CFH20VR**	**CFH20VUU**	**CFH20VUUR**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—	—	—	—	—
CFH20-1	**CFH20-1R**	**CFH20-1UU**	**CFH20-1UUR**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	KRU47X	KRU47	KRU47LLX/3AS	KRU47LL/3AS/3AS	—	—	—	—	—	—
CFH20-1V	**CFH20-1VR**	**CFH20-1VUU**	**CFH20-1VUUR**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—	—	—	—	—
CFH24	**CFH24R**	**CFH24UU**	**CFH24UUR**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	—	—	KRU62X	KRU62	KRU62LLX/3AS	KRU62LL/3AS/3AS	—	—	—	—	—	—
CFH24V	**CFH24VR**	**CFH24VUU**	**CFH24VUUR**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—	—	—	—	—
CFH24-1	**CFH24-1R**	**CFH24-1UU**	**CFH24-1UUR**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	—	—	KRU72X	KRU72	KRU72LLX/3AS	KRU72LL/3AS/3AS	—	—	—	—	—	—
CFH24-1V	**CFH24-1VR**	**CFH24-1VUU**	**CFH24-1VUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—	—	—	—	—
CFH30	**CFH30R**	**CFH30UU**	**CFH30UUR**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	KRU80X	KRU80	KRU80LLX/3AS	KRU80LL/3AS/3AS	—	—	—	—	—	—
CFH30V	**CFH30VR**	**CFH30VUU**	**CFH30VUUR**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	–	—	—	—	—	—	—
CFH30-1	**CFH30-1R**	**CFH30-1UU**	**CFH30-1UUR**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	–	—	—	—	—	—	—
CFH30-1V	**CFH30-1VR**	**CFH30-1VUU**	**CFH30-1VUUR**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	–	—	—	—	—	—	—
CFH30-2	**CFH30-2R**	**CFH30-2UU**	**CFH30-2UUR**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	KRU90X	KRU90	KRU90LLX/3AS	KRU90LL/3AS/3AS	—	—	—	—	—	—
CFH30-2V	**CFH30-2VR**	**CFH30-2VUU**	**CFH30-2VUUR**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	–	—	—	—	—	—	—

Stud diameter (d) 5 to 10mm : Without oil hole in the thread side.

CAM FOLLOWERS
TAP HOLE FOR PIPING
SCREWDRIVER SLOT HEAD



CFT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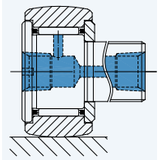
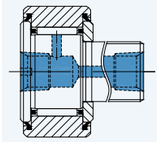
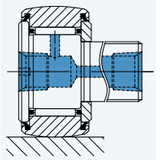

CFT. . R


CFT. . UU


CFT. . UUR

CFT, R, UU, UUR

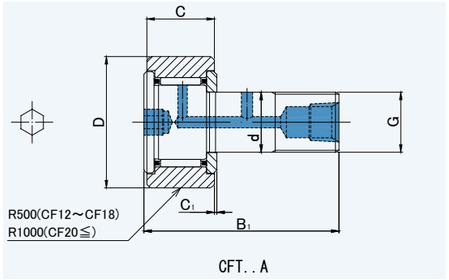
DIMENSION TABLE

INTERCHANGE TABLE

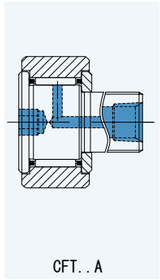
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN				IKO				MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFT	CFT..R	CFT..UU	CFT..UUR	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	KRT-X	KRT	KRT-XLL	KRT-LL	—	—	CF-FU1	CF-RU1	—	—
CFT6	**CFT6R**	**CFT6UU**	**CFT6UUR**	**18.5**	6	16	11	M6×1	28	0.6	3 630	3 630	—	—	KRT16X	KRT16	KRT16XLL	KRT16LL	—	—	CF-FU1-6	CF-RU1-6	—	—
CFT6V	**CFT6VR**	**CFT6VUU**	**CFT6VUUR**	**18.5**	6	16	11	M6×1	28	0.6	6 960	8 530	—	—	KRVT16X	KRVT16	KRVT16XLL	KRVT16LL	—	—	—	—	—	—
CFT8	**CFT8R**	**CFT8UU**	**CFT8UUR**	**28.5**	8	19	11	M8×1.25	32	0.6	4 310	4 710	—	—	KRT19X	KRT19	KRT19XLL	KRT19LL	—	—	CF-FU1-8	CF-RU1-8	—	—
CFT8V	**CFT8VR**	**CFT8VUU**	**CFT8VUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	8 130	11 170	—	—	KRVT19X	KRVT19	KRVT19XLL	KRVT19LL	—	—	—	—	—	—
CFT10	**CFT10R**	**CFT10UU**	**CFT10UUR**	**45**	10	22	12	M10×1.25	36	0.6	5 390	6 860	—	—	KRT22X	KRT22	KRT22XLL	KRT22LL	—	—	CF-FU1-10	CF-RU1-10	—	—
CFT10V	**CFT10VR**	**CFT10VUU**	**CFT10VUUR**	**45**	10	22	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRVT22X	KRVT22	KRVT22XLL	KRVT22LL	—	—	—	—	—	—
CFT10-1	**CFT10-1R**	**CFT10-1UU**	**CFT10-1UUR**	**60**	10	26	12	M10×1.25	36	0.6	5 390	6 860	—	—	KRT26X	KRT26	KRT26XLL	KRT26LL	—	—	CF-FU1-10-1	CF-RU1-10-1	—	—
CFT10-1V	**CFT10-1VR**	**CFT10-1VUU**	**CFT10-1VUUR**	**60**	10	26	12	M10×1.25	36	0.6	9 510	14 500	—	—	KRVT26X	KRVT26	KRVT26XLL	KRVT26LL	—	—	—	—	—	—
CFT12	**CFT12R**	**CFT12UU**	**CFT12UUR**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	KRT30X	KRT30	KRT30XLL	KRT30LL	—	—	CF-FU1-12	CF-RU1-12	—	—
CFT12V	**CFT12VR**	**CFT12VUU**	**CFT12VUUR**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	KRVT30X	KRVT30	KRVT30XLL	KRVT30LL	—	—	—	—	—	—
CFT12-1	**CFT12-1R**	**CFT12-1UU**	**CFT12-1UUR**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	KRT32X	KRT32	KRT32XLL	KRT32LL	—	—	CF-FU1-12-1	CF-RU1-12-1	—	—
CFT12-1V	**CFT12-1VR**	**CFT12-1VUU**	**CFT12-1VUUR**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	KRVT32X	KRVT32	KRVT32XLL	KRVT32LL	—	—	—	—	—	—
CFT16	**CFT16R**	**CFT16UU**	**CFT16UUR**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	KRT35X	KRT35	KRT35XLL	KRT35LL	—	—	CF-FU1-16	CF-RU1-16	—	—
CFT16V	**CFT16VR**	**CFT16VUU**	**CFT16VUUR**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	KRVT35X	KRVT35	KRVT35XLL	KRVT35LL	—	—	—	—	—	—
CFT18	**CFT18R**	**CFT18UU**	**CFT18UUR**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	KRT40X	KRT40	KRT40XLL	KRT40LL	—	—	CF-FU1-18	CF-RU1-18	—	—
CFT18V	**CFT18VR**	**CFT18VUU**	**CFT18VUUR**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	KRVT40X	KRVT40	KRVT40XLL	KRVT40LL	—	—	—	—	—	—
CFT20	**CFT20R**	**CFT20UU**	**CFT20UUR**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	KRT52X	KRT52	KRT52XLL	KRT52LL	—	—	CF-FU1-20	CF-RU1-20	—	—
CFT20V	**CFT20VR**	**CFT20VUU**	**CFT20VUUR**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	KRVT52X	KRVT52	KRVT52XLL	KRVT52LL	—	—	—	—	—	—
CFT20-1	**CFT20-1R**	**CFT20-1UU**	**CFT20-1UUR**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	KRT47X	KRT47	KRT47XLL	KRT47LL	—	—	CF-FU1-20-1	CF-RU1-20-1	—	—
CFT20-1V	**CFT20-1VR**	**CFT20-1VUU**	**CFT20-1VUUR**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	KRVT47X	KRVT47	KRVT47XLL	KRVT47LL	—	—	—	—	—	—
CFT24	**CFT24R**	**CFT24UU**	**CFT24UUR**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	—	—	KRT62X	KRT62	KRT62XLL	KRT62LL	—	—	CF-FU1-24	CF-RU1-24	—	—
CFT24V	**CFT24VR**	**CFT24VUU**	**CFT24VUUR**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	KRVT62X	KRVT62	KRVT62XLL	KRVT62LL	—	—	—	—	—	—
CFT24-1	**CFT24-1R**	**CFT24-1UU**	**CFT24-1UUR**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	—	—	KRT72X	KRT72	KRT72XLL	KRT72LL	—	—	CF-FU1-24-1	CF-RU1-24-1	—	—
CFT24-1V	**CFT24-1VR**	**CFT24-1VUU**	**CFT24-1VUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	KRVT72X	KRVT72	KRVT72XLL	KRVT72LL	—	—	—	—	—	—
CFT30	**CFT30R**	**CFT30UU**	**CFT30UUR**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	KRT80X	KRT80	KRT80XLL	KRT80LL	—	—	CF-FU1-30	CF-RU1-30	—	—
CFT30V	**CFT30VR**	**CFT30VUU**	**CFT30VUUR**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	KRVT80X	KRVT80	KRVT80XLL	KRVT80LL	—	—	—	—	—	—
CFT30-1	**CFT30-1R**	**CFT30-1UU**	**CFT30-1UUR**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	KRT85X	KRT85	KRT85XLL	KRT85LL	—	—	CF-FU1-30-1	CF-RU1-30-1	—	—
CFT30-1V	**CFT30-1VR**	**CFT30-1VUU**	**CFT30-1VUUR**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—	—	—	—	—
CFT30-2	**CFT30-2R**	**CFT30-2UU**	**CFT30-2UUR**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	KRT90X	KRT90	KRT90XLL	KRT90LL	—	—	CF-FU1-30-2	CF-RU1-30-2	—	—
CFT30-2V	**CFT30-2VR**	**CFT30-2VUU**	**CFT30-2VUUR**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	KRVT90X	KRVT90	KRVT90XLL	KRVT90LL	—	—	—	—	—	—

Stud diameter (d) 6 to 10mm : Without oil hole in the thread side.

CAM FOLLOWERS
TAP HOLE FOR PIPING
HEXAGON SOCKET ON STUD HEAD



CFT. . A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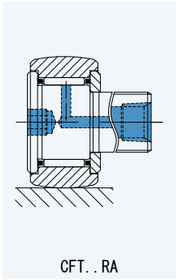
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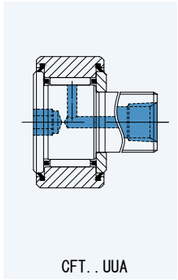
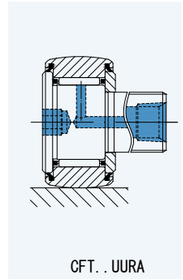

CFT. . UUA

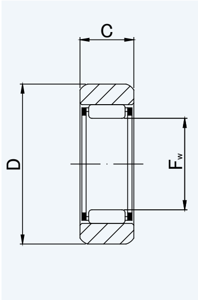

CFT. . UURA

CFT..A, RA, UUA, UURA

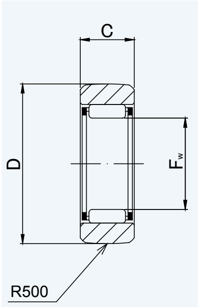
DIMENSION TABLE

INTERCHANGE TABLE

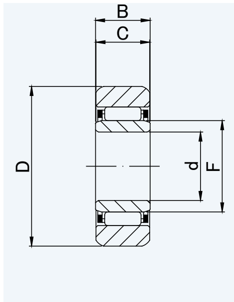
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFT..A	CFT..RA	CFT..UUA	CFT..UURA	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFT12A	**CFT12RA**	**CFT12UUA**	**CFT12UURA**	**95**	12	30	14	M12×1.5	40	0.6	7 940	9 800	—	—	—	—	—	—	—	—
CFT12VA	**CFT12VRA**	**CFT12VUUA**	**CFT12VUURA**	**95**	12	30	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CFT12-1A	**CFT12-1RA**	**CFT12-1UUA**	**CFT12-1UURA**	**105**	12	32	14	M12×1.5	40	0.6	7 940	9 800	—	—	—	—	—	—	—	—
CFT12-1VA	**CFT12-1VRA**	**CFT12-1VUUA**	**CFT12-1VUURA**	**105**	12	32	14	M12×1.5	40	0.6	13 430	19 700	—	—	—	—	—	—	—	—
CFT16A	**CFT16RA**	**CFT16UUA**	**CFT16UURA**	**170**	16	35	18	M16×1.5	52	0.8	12 050	18 330	—	—	—	—	—	—	—	—
CFT16VA	**CFT16VRA**	**CFT16VUUA**	**CFT16VUURA**	**170**	16	35	18	M16×1.5	52	0.8	20 680	37 630	—	—	—	—	—	—	—	—
CFT18A	**CFT18RA**	**CFT18UUA**	**CFT18UURA**	**250**	18	40	20	M18×1.5	58	0.8	14 700	25 200	—	—	—	—	—	—	—	—
CFT18VA	**CFT18VRA**	**CFT18VUUA**	**CFT18VUURA**	**250**	18	40	20	M18×1.5	58	0.8	25 280	51 350	—	—	—	—	—	—	—	—
CFT20A	**CFT20RA**	**CFT20UUA**	**CFT20UURA**	**460**	20	52	24	M20×1.5	66	0.8	20 680	34 600	—	—	—	—	—	—	—	—
CFT20VA	**CFT20VRA**	**CFT20VUUA**	**CFT20VUURA**	**460**	20	52	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CFT20-1A	**CFT20-1RA**	**CFT20-1UUA**	**CFT20-1UURA**	**385**	20	47	24	M20×1.5	66	0.8	20 680	34 600	—	—	—	—	—	—	—	—
CFT20-1VA	**CFT20-1VRA**	**CFT20-1VUUA**	**CFT20-1VUURA**	**385**	20	47	24	M20×1.5	66	0.8	33 120	64 480	—	—	—	—	—	—	—	—
CFT24A	**CFT24RA**	**CFT24UUA**	**CFT24UURA**	**815**	24	62	29	M24×1.5	80	0.8	30 480	52 630	—	—	—	—	—	—	—	—
CFT24VA	**CFT24VRA**	**CFT24VUUA**	**CFT24VUURA**	**815**	24	62	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—
CFT24-1A	**CFT24-1RA**	**CFT24-1UUA**	**CFT24-1UURA**	**1 140**	24	72	29	M24×1.5	80	0.8	30 480	52 630	—	—	—	—	—	—	—	—
CFT24-1VA	**CFT24-1VRA**	**CFT24-1VUUA**	**CFT24-1VUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	46 550	92 020	—	—	—	—	—	—	—	—
CFT30A	**CFT30RA**	**CFT30UUA**	**CFT30UURA**	**1 870**	30	80	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CFT30VA	**CFT30VRA**	**CFT30VUUA**	**CFT30VUURA**	**1 870**	30	80	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—
CFT30-1A	**CFT30-1RA**	**CFT30-1UUA**	**CFT30-1UURA**	**2 030**	30	85	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CFT30-1VA	**CFT30-1VRA**	**CFT30-1VUUA**	**CFT30-1VUURA**	**2 030**	30	85	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—
CFT30-2A	**CFT30-2RA**	**CFT30-2UUA**	**CFT30-2UURA**	**2 220**	30	90	35	M30×1.5	100	1	45 370	85 060	—	—	—	—	—	—	—	—
CFT30-2VA	**CFT30-2VRA**	**CFT30-2VUUA**	**CFT30-2VUURA**	**2 220**	30	90	35	M30×1.5	100	1	67 620	144 060	—	—	—	—	—	—	—	—



RNAST



RNAST. . R



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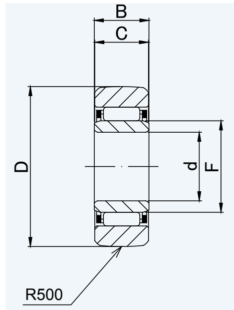


NAST. . R

RNAST,RNAST..R,NAST,NAST..R

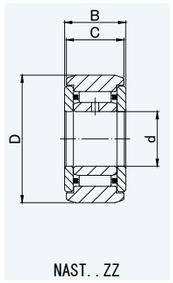
DIMENSION TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Weight	JNS NUMBER CYLINDRICAL OUTER RING WITH INNER RING	JNS NUMBER CROWNED OUTER RING WITH INNER RING	Weight	Dimensions(mm)					Basic dynamic load rating	Basic static load rating
RNAST	RNAST..R	g	NAST	NAST..R	g	Fw (F)	D	d	C	B	Cr N	Cor N
RNAST5	**RNAST5R**	**8.9**	—	—	—	7	16	—	7.8	—	2 740	2 390
RNAST6	**RNAST6R**	**13.9**	**NAST6**	**NAST6R**	**17.8**	10	19	6	9.8	10	4 120	4 550
RNAST8	**RNAST8R**	**23.5**	**NAST8**	**NAST8R**	**28**	12	24	8	9.8	10	5 680	5 890
RNAST10	**RNAST10R**	**42.5**	**NAST10**	**NAST10R**	**50**	14	30	10	11.8	12	9 700	9 670
RNAST12	**RNAST12R**	**49.5**	**NAST12**	**NAST12R**	**58**	16	32	12	11.8	12	10 400	10 900
RNAST15	**RNAST15R**	**50**	**NAST15**	**NAST15R**	**62**	20	35	15	11.8	12	12 300	14 300
RNAST17	**RNAST17R**	**90**	**NAST17**	**NAST17R**	**110**	22	40	17	15.8	16	17 400	20 900
RNAST20	**RNAST20R**	**135**	**NAST20**	**NAST20R**	**155**	25	47	20	15.8	16	19 200	24 500
RNAST25	**RNAST25R**	**152**	**NAST25**	**NAST25R**	**180**	30	52	25	15.8	16	20 700	28 400
RNAST30	**RNAST30R**	**255**	**NAST30**	**NAST30R**	**320**	38	62	30	19.8	20	30 300	45 400
RNAST35	**RNAST35R**	**375**	**NAST35**	**NAST35R**	**440**	42	72	35	19.8	20	32 200	50 600
RNAST40	**RNAST40R**	**420**	**NAST40**	**NAST40R**	**530**	50	80	40	19.8	20	35 700	61 100
RNAST45	**RNAST45R**	**460**	**NAST45**	**NAST45R**	**580**	55	85	45	19.8	20	37 100	66 400
RNAST50	**RNAST50R**	**500**	**NAST50**	**NAST50R**	**635**	60	90	50	19.8	20	38 700	71 800

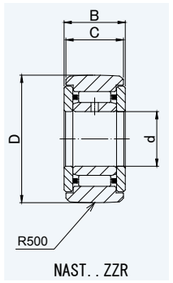
INTERCHANGE TABLE

JNS	INA				NTN				IKO				TORRINGTON(KOYO)			
	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITH INNER RING	CROWNED OUTER RING WITH INNER RING	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITH INNER RING	CROWNED OUTER RING WITH INNER RING	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITH INNER RING	CROWNED OUTER RING WITH INNER RING	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITH INNER RING	CROWNED OUTER RING WITH INNER RING
RNAST	RSTO-X	RSTO	STO-X	STO	RNAB-X	RNAB	NAB-X	NAB	RNAST	RNAST-R	NAST	NAST-R	RSTO-DZ	RSTO	STO-DZ	STO
RNAST5	RSTO5TNX	RSTO5TN	—	—	RNAB2/5XT2	RNAB2/5T2	—	—	RNAST5	RNAST5R	—	—	RSTO5TN	RSTO5TN	—	—
RNAST6	RSTO6TNX	RSTO6TN	STO6TNX	STO6TN	RNAB2/6XT2	RNAB2/6T2	NAB2/6XT2	NAB2/6T2	RNAST6	RNAST6R	NAST6	NAST6R	RSTO6DZ	RSTO6	STO6DZ	STO6TN
RNAST8	RSTO8TNX	RSTO8TN	STO8TNX	STO8TN	RNAB2/8X	RNAB2/8	NAB2/8X	NAB2/8	RNAST8	RNAST8R	NAST8	NAST8R	RSTO8DZ	RSTO8	STO8DZ	STO8TN
RNAST10	RSTO10X	RSTO10	STO10X	STO10	RNAB200X	RNAB200	NAB200X	NAB200	RNAST10	RNAST10R	NAST10	NAST10R	RSTO10DZ	RSTO10	STO10DZ	STO10
RNAST12	RSTO12X	RSTO12	STO12X	STO12	RNAB201X	RNAB201	NAB201X	NAB201	RNAST12	RNAST12R	NAST12	NAST12R	RSTO12DZ	RSTO12	STO12DZ	STO12
RNAST15	RSTO15X	RSTO15	STO15X	STO15	RNAB202X	RNAB202	NAB202X	NAB202	RNAST15	RNAST15R	NAST15	NAST15R	RSTO15DZ	RSTO15	STO15DZ	STO15
RNAST17	RSTO17X	RSTO17	STO17X	STO17	RNAB203X	RNAB203	NAB203X	NAB203	RNAST17	RNAST17R	NAST17	NAST17R	RSTO17DZ	RSTO17	STO17DZ	STO17
RNAST20	RSTO20X	RSTO20	STO20X	STO20	RNAB204X	RNAB204	NAB204X	NAB204	RNAST20	RNAST20R	NAST20	NAST20R	RSTO20DZ	RSTO20	STO20DZ	STO20
RNAST25	RSTO25X	RSTO25	STO25X	STO25	RNAB205X	RNAB205	NAB205X	NAB205	RNAST25	RNAST25R	NAST25	NAST25R	RSTO25DZ	RSTO25	STO25DZ	STO25
RNAST30	RSTO30X	RSTO30	STO30X	STO30	RNAB206X	RNAB206	NAB206X	NAB206	RNAST30	RNAST30R	NAST30	NAST30R	RSTO30DZ	RSTO30	STO30DZ	STO30
RNAST35	RSTO35X	RSTO35	STO35X	STO35	RNAB207X	RNAB207	NAB207X	NAB207	RNAST35	RNAST35R	NAST35	NAST35R	RSTO35DZ	RSTO35	STO35DZ	STO35
RNAST40	RSTO40X	RSTO40	STO40X	STO40	RNAB208X	RNAB208	NAB208X	NAB208	RNAST40	RNAST40R	NAST40	NAST40R	RSTO40DZ	RSTO40	STO40DZ	STO40
RNAST45	RSTO45X	RSTO45	STO45X	STO45	RNAB209X	RNAB209	NAB209X	NAB209	RNAST45	RNAST45R	NAST45	NAST45R	RSTO45DZ	RSTO45	STO45DZ	STO45
RNAST50	RSTO50X	RSTO50	STO50X	STO50	RNAB210X	RNAB210	NAB210X	NAB210	RNAST50	RNAST50R	NAST50	NAST50R	RSTO50DZ	RSTO50	STO50DZ	STO50

INTERCHANGE



NAST. . ZZ



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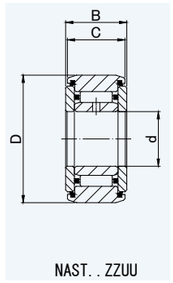
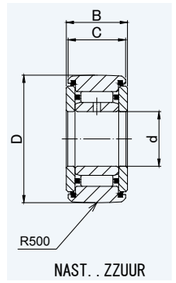


NAST. . ZZUU



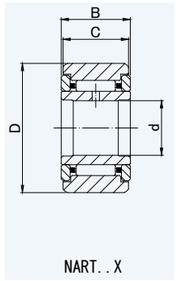
NAST. . ZZUUR

NAST..ZZ, ZZR, ZZUU, ZZUUR

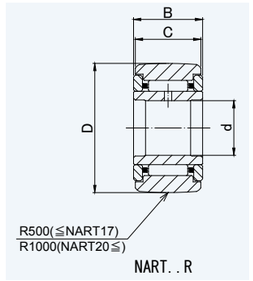
DIMENSION TABLE

INTERCHANGE TABLE

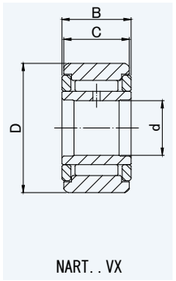
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		NTN		IKO				TORRINGTON(KOYO)			
											CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS
NAST..ZZ	NAST..ZZR	NAST..ZZUU	NAST..ZZUUR	g	d	D	B	C	Cr N	Cor N	—	—	—	—	NAST..ZZ	NAST..ZZR	NAST..ZZUU	NAST..ZZUUR	STO-ZZ.DZ	STO-ZZ	—	—
NAST6ZZ	**NAST6ZZR**	**NAST6ZZUU**	**NAST6ZZUUR**	**24.5**	6	19	14	13.8	4 120	4 550	—	—	—	—	NAST6ZZ	NAST6ZZR	NAST6ZZUU	NAST6ZZUUR	STO6ZZ.DZ	STO6ZZ	—	—
NAST8ZZ	**NAST8ZZR**	**NAST8ZZUU**	**NAST8ZZUUR**	**39**	8	24	14	13.8	5 680	5 890	—	—	—	—	NAST8ZZ	NAST8ZZR	NAST8ZZUU	NAST8ZZUUR	STO8ZZ.DZ	STO8ZZ	—	—
NAST10ZZ	**NAST10ZZR**	**NAST10ZZUU**	**NAST10ZZUUR**	**65**	10	30	16	15.8	9 700	9 670	—	—	—	—	NAST10ZZ	NAST10ZZR	NAST10ZZUU	NAST10ZZUUR	STO10ZZ.DZ	STO10ZZ	—	—
NAST12ZZ	**NAST12ZZR**	**NAST12ZZUU**	**NAST12ZZUUR**	**75**	12	32	16	15.8	10 400	10 900	—	—	—	—	NAST12ZZ	NAST12ZZR	NAST12ZZUU	NAST12ZZUUR	STO12ZZ.DZ	STO12ZZ	—	—
NAST15ZZ	**NAST15ZZR**	**NAST15ZZUU**	**NAST15ZZUUR**	**83**	15	35	16	15.8	12 300	14 300	—	—	—	—	NAST15ZZ	NAST15ZZR	NAST15ZZUU	NAST15ZZUUR	STO15ZZ.DZ	STO15ZZ	—	—
NAST17ZZ	**NAST17ZZR**	**NAST17ZZUU**	**NAST17ZZUUR**	**135**	17	40	20	19.8	17 400	20 900	—	—	—	—	NAST17ZZ	NAST17ZZR	NAST17ZZUU	NAST17ZZUUR	STO17ZZ.DZ	STO17ZZ	—	—
NAST20ZZ	**NAST20ZZR**	**NAST20ZZUU**	**NAST20ZZUUR**	**195**	20	47	20	19.8	19 200	24 500	—	—	—	—	NAST20ZZ	NAST20ZZR	NAST20ZZUU	NAST20ZZUUR	STO20ZZ.DZ	STO20ZZ	—	—
NAST25ZZ	**NAST25ZZR**	**NAST25ZZUU**	**NAST25ZZUUR**	**225**	25	52	20	19.8	20 700	28 400	—	—	—	—	NAST25ZZ	NAST25ZZR	NAST25ZZUU	NAST25ZZUUR	STO25ZZ.DZ	STO25ZZ	—	—
NAST30ZZ	**NAST30ZZR**	**NAST30ZZUU**	**NAST30ZZUUR**	**400**	30	62	25	24.8	30 300	45 400	—	—	—	—	NAST30ZZ	NAST30ZZR	NAST30ZZUU	NAST30ZZUUR	STO30ZZ.DZ	STO30ZZ	—	—
NAST35ZZ	**NAST35ZZR**	**NAST35ZZUU**	**NAST35ZZUUR**	**550**	35	72	25	24.8	32 200	50 600	—	—	—	—	NAST35ZZ	NAST35ZZR	NAST35ZZUU	NAST35ZZUUR	STO35ZZ.DZ	STO35ZZ	—	—
NAST40ZZ	**NAST40ZZR**	**NAST40ZZUU**	**NAST40ZZUUR**	**710**	40	80	26	25.8	35 700	61 100	—	—	—	—	NAST40ZZ	NAST40ZZR	NAST40ZZUU	NAST40ZZUUR	STO40ZZ.DZ	STO40ZZ	—	—
NAST45ZZ	**NAST45ZZR**	**NAST45ZZUU**	**NAST45ZZUUR**	**760**	45	85	26	25.8	37 100	66 400	—	—	—	—	NAST45ZZ	NAST45ZZR	NAST45ZZUU	NAST45ZZUUR	STO45ZZ.DZ	STO45ZZ	—	—
NAST50ZZ	**NAST50ZZR**	**NAST50ZZUU**	**NAST50ZZUUR**	**830**	50	90	26	25.8	38 700	71 800	—	—	—	—	NAST50ZZ	NAST50ZZR	NAST50ZZUU	NAST50ZZUUR	STO50ZZ.DZ	STO50ZZ	—	—



NART. . X



NART. . R



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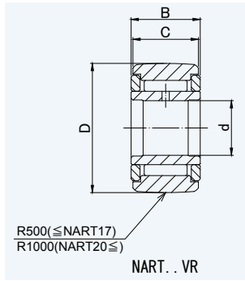


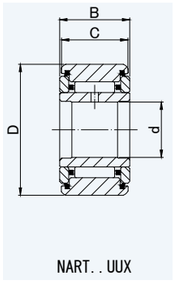
NART. . VR

NART..X, R

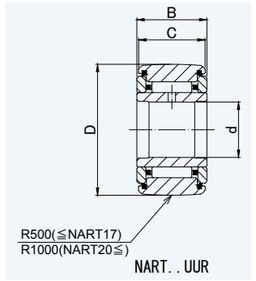
DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
									CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
NART..X	NART..R	g	d	D	B	C	Cr N	Cor N	NATR-X	NATR	NATR-X	NATR	—	NART-R	MCYRR-X	MCYRR
NART5X	**NART5R**	**14.5**	5	16	12	11	3 620	3 720	NATR5X	NATR5	NATR5X	NATR5	—	NART5R	MCYRR5X	MCYRR5
NART5VX	**NART5VR**	**15.1**	5	16	12	11	6 760	8 340	NATV5X	NATV5	NATV5X	NATV5	—	NART5VR	MCYR5X	MCYR5
NART6X	**NART6R**	**20.5**	6	19	12	11	4 200	4 700	NATR6X	NATR6	NATR6X	NATR6	—	NART6R	MCYRR6X	MCYRR6
NART6VX	**NART6VR**	**21.5**	6	19	12	11	7 640	10 300	NATV6X	NATV6	NATV6X	NATV6	—	NART6VR	MCYR6X	MCYR6
NART8X	**NART8R**	**41.5**	8	24	15	14	6 600	7 300	NATR8X	NATR8	NATR8X	NATR8	—	NART8R	MCYRR8X	MCYRR8
NART8VX	**NART8VR**	**42.5**	8	24	15	14	11 800	15 600	NATV8X	NATV8	NATV8X	NATV8	—	NART8VR	MCYR8X	MCYR8
NART10X	**NART10R**	**64.5**	10	30	15	14	8 600	8 300	NATR10X	NATR10	NATR10X	NATR10	—	NART10R	MCYRR10X	MCYRR10
NART10VX	**NART10VR**	**66.5**	10	30	15	14	15 600	18 100	NATV10X	NATV10	NATV10X	NATV10	—	NART10VR	MCYR10X	MCYR10
NART12X	**NART12R**	**71**	12	32	15	14	9 100	9 200	NATR12X	NATR12	NATR12X	NATR12	—	NART12R	MCYRR12X	MCYRR12
NART12VX	**NART12VR**	**73**	12	32	15	14	16 800	20 500	NATV12X	NATV12	NATV12X	NATV12	—	NART12VR	MCYR12X	MCYR12
NART15X	**NART15R**	**102**	15	35	19	18	14 400	17 600	NATR15X	NATR15	NATR15X	NATR15	—	NART15R	MCYRR15X	MCYRR15
NART15VX	**NART15VR**	**106**	15	35	19	18	25 100	36 400	NATV15X	NATV15	NATV15X	NATV15	—	NART15VR	MCYR15X	MCYR15
NART17X	**NART17R**	**149**	17	40	21	20	18 600	22 500	NATR17X	NATR17	NATR17X	NATR17	—	NART17R	MCYRR17X	MCYRR17
NART17VX	**NART17VR**	**155**	17	40	21	20	32 000	46 200	NATV17X	NATV17	NATV17X	NATV17	—	NART17VR	MCYR17X	MCYR17
NART20X	**NART20R**	**250**	20	47	25	24	24 100	32 700	NATR20X	NATR20	NATR20X	NATR20	—	NART20R	MCYRR20X	MCYRR20
NART20VX	**NART20VR**	**255**	20	47	25	24	41 700	67 300	NATV20X	NATV20	NATV20X	NATV20	—	NART20VR	MCYR20X	MCYR20
NART25X	**NART25R**	**285**	25	52	25	24	25 800	37 500	NATR25X	NATR25	NATR25X	NATR25	—	NART25R	MCYRR25X	MCYRR25
NART25VX	**NART25VR**	**295**	25	52	25	24	45 500	79 000	NATV25X	NATV25	NATV25X	NATV25	—	NART25VR	MCYR25X	MCYR25
NART30X	**NART30R**	**470**	30	62	29	28	36 200	56 900	NATR30X	NATR30	NATR30X	NATR30	—	NART30R	MCYRR30X	MCYRR30
NART30VX	**NART30VR**	**485**	30	62	29	28	59 800	110 400	NATV30X	NATV30	NATV30X	NATV30	—	NART30VR	MCYR30X	MCYR30
NART35X	**NART35R**	**640**	35	72	29	28	38 200	62 800	NATR35X	NATR35	NATR35X	NATR35	—	NART35R	MCYRR35X	MCYRR35
NART35VX	**NART35VR**	**655**	35	72	29	28	63 000	121 500	NATV35X	NATV35	NATV35X	NATV35	—	NART35VR	MCYR35X	MCYR35
NART40X	**NART40R**	**845**	40	80	32	30	46 200	84 700	NATR40X	NATR40	NATR40X	NATR40	—	NART40R	MCYRR40X	MCYRR40
NART40VX	**NART40VR**	**865**	40	80	32	30	76 200	164 200	NATV40X	NATV40	NATV40X	NATV40	—	NART40VR	MCYR40X	MCYR40
NART45X	**NART45R**	**915**	45	85	32	30	49 300	95 200	NATR45X	NATR45	NATR45X	NATR45	—	NART45R	MCYRR45X	MCYRR45
NART45VX	**NART45VR**	**935**	45	85	32	30	80 200	181 100	NATV45X	NATV45	NATV45X	NATV45	—	NART45VR	MCYR45X	MCYR45
NART50X	**NART50R**	**980**	50	90	32	30	51 100	102 300	NATR50X	NATR50	NATR50X	NATR50	—	NART50R	MCYRR50X	MCYRR50
NART50VX	**NART50VR**	**1 010**	50	90	32	30	84 100	198 000	NATV50X	NATV50	NATV50X	NATV50	—	NART50VR	MCYR50X	MCYR50



NART. . UUX



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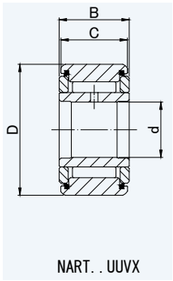

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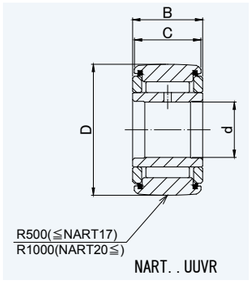


NART. . UUVR

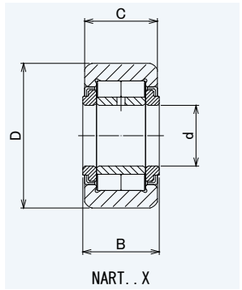
NART..UUX, UUR

DIMENSION TABLE

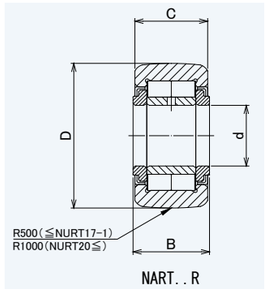
INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
									CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
NART..UUX	NART..UUR	g	d	D	B	C	Cr N	Cor N	NATR-PPX	NATR-PP	NATR-XLL	NATR-LL	—	NART-UUR	MCYRR-SX	MCYRR-S
NART5UUX	**NART5UUR**	**14.5**	5	16	12	11	3 620	3 720	NATR5PPX	NATR5PP	NATR5XLL	NATR5LL	—	NART5UUR	MCYRR5SX	MCYRR5S
NART5UUVX	**NART5UUVR**	**15.1**	5	16	12	11	6 760	8 340	NATV5PPX	NATV5PP	NATV5XLL	NATV5LL	—	NART5VUUR	MCYR5SX	MCYR5S
NART6UUX	**NART6UUR**	**20.5**	6	19	12	11	4 200	4 700	NATR6PPX	NATR6PP	NATR6XLL	NATR6LL	—	NART6UUR	MCYRR6SX	MCYRR6S
NART6UUVX	**NART6UUVR**	**21.5**	6	19	12	11	7 640	10 300	NATV6PPX	NATV6PP	NATV6XLL	NATV6LL	—	NART6VUUR	MCYR6SX	MCYR6S
NART8UUX	**NART8UUR**	**41.5**	8	24	15	14	6 600	7 300	NATR8PPX	NATR8PP	NATR8XLL	NATR8LL	—	NART8UUR	MCYRR8SX	MCYRR8S
NART8UUVX	**NART8UUVR**	**42.5**	8	24	15	14	11 800	15 600	NATV8PPX	NATV8PP	NATV8XLL	NATV8LL	—	NART8VUUR	MCYR8SX	MCYR8S
NART10UUX	**NART10UUR**	**64.5**	10	30	15	14	8 600	8 300	NATR10PPX	NATR10PP	NATR10XLL	NATR10LL	—	NART10UUR	MCYRR10SX	MCYRR10S
NART10UUVX	**NART10UUVR**	**66.5**	10	30	15	14	15 600	18 100	NATV10PPX	NATV10PP	NATV10XLL	NATV10LL	—	NART10VUUR	MCYR10SX	MCYR10S
NART12UUX	**NART12UUR**	**71**	12	32	15	14	9 100	9 200	NATR12PPX	NATR12PP	NATR12XLL	NATR12LL	—	NART12UUR	MCYRR12SX	MCYRR12S
NART12UUVX	**NART12UUVR**	**73**	12	32	15	14	16 800	20 500	NATV12PPX	NATV12PP	NATV12XLL	NATV12LL	—	NART12VUUR	MCYR12SX	MCYR12S
NART15UUX	**NART15UUR**	**102**	15	35	19	18	14 400	17 600	NATR15PPX	NATR15PP	NATR15XLL	NATR15LL	—	NART15UUR	MCYRR15SX	MCYRR15S
NART15UUVX	**NART15UUVR**	**106**	15	35	19	18	25 100	36 400	NATV15PPX	NATV15PP	NATV15XLL	NATV15LL	—	NART15VUUR	MCYR15SX	MCYR15S
NART17UUX	**NART17UUR**	**149**	17	40	21	20	18 600	22 500	NATR17PPX	NATR17PP	NATR17XLL	NATR17LL	—	NART17UUR	MCYRR17SX	MCYRR17S
NART17UUVX	**NART17UUVR**	**155**	17	40	21	20	32 000	46 200	NATV17PPX	NATV17PP	NATV17XLL	NATV17LL	—	NART17VUUR	MCYR17SX	MCYR17S
NART20UUX	**NART20UUR**	**250**	20	47	25	24	24 100	32 700	NATR20PPX	NATR20PP	NATR20XLL	NATR20LL	—	NART20UUR	MCYRR20SX	MCYRR20S
NART20UUVX	**NART20UUVR**	**255**	20	47	25	24	41 700	67 300	NATV20PPX	NATV20PP	NATV20XLL	NATV20LL	—	NART20VUUR	MCYR20SX	MCYR20S
NART25UUX	**NART25UUR**	**285**	25	52	25	24	25 800	37 500	NATR25PPX	NATR25PP	NATR25XLL	NATR25LL	—	NART25UUR	MCYRR25SX	MCYRR25S
NART25UUVX	**NART25UUVR**	**295**	25	52	25	24	45 500	79 000	NATV25PPX	NATV25PP	NATV25XLL	NATV25LL	—	NART25VUUR	MCYR25SX	MCYR25S
NART30UUX	**NART30UUR**	**470**	30	62	29	28	36 200	56 900	NATR30PPX	NATR30PP	NATR30XLL	NATR30LL	—	NART30UUR	MCYRR30SX	MCYRR30S
NART30UUVX	**NART30UUVR**	**485**	30	62	29	28	59 800	110 400	NATV30PPX	NATV30PP	NATV30XLL	NATV30LL	—	NART30VUUR	MCYR30SX	MCYR30S
NART35UUX	**NART35UUR**	**640**	35	72	29	28	38 200	62 800	NATR35PPX	NATR35PP	NATR35XLL	NATR35LL	—	NART35UUR	MCYRR35SX	MCYRR35S
NART35UUVX	**NART35UUVR**	**655**	35	72	29	28	63 000	121 500	NATV35PPX	NATV35PP	NATV35XLL	NATV35LL	—	NART35VUUR	MCYR35SX	MCYR35S
NART40UUX	**NART40UUR**	**845**	40	80	32	30	46 200	84 700	NATR40PPX	NATR40PP	NATR40XLL	NATR40LL	—	NART40UUR	MCYRR40SX	MCYRR40S
NART40UUVX	**NART40UUVR**	**865**	40	80	32	30	76 200	164 200	NATV40PPX	NATV40PP	NATV40XLL	NATV40LL	—	NART40VUUR	MCYR40SX	MCYR40S
NART45UUX	**NART45UUR**	**915**	45	85	32	30	49 300	95 200	NATR45PPX	NATR45PP	NATR45XLL	NATR45LL	—	NART45UUR	MCYRR45SX	MCYRR45S
NART45UUVX	**NART45UUVR**	**935**	45	85	32	30	80 200	181 100	NATV45PPX	NATV45PP	NATV45XLL	NATV45LL	—	NART45VUUR	MCYR45SX	MCYR45S
NART50UUX	**NART50UUR**	**980**	50	90	32	30	51 100	102 300	NATR50PPX	NATR50PP	NATR50XLL	NATR50LL	—	NART50UUR	MCYRR50SX	MCYRR50S
NART50UUVX	**NART50UUVR**	**1 010**	50	90	32	30	84 100	198 000	NATV50PPX	NATV50PP	NATV50XLL	NATV50LL	—	NART50VUUR	MCYR50SX	MCYR50S

HEAVY DUTY TYPE ROLLER FOLLOWERS
NON SEPARABLE WITH INNER RING



NART. . X



NART. . R

NURT..X, R

DIMENSION TABLE

INTERCHANGE TABLE

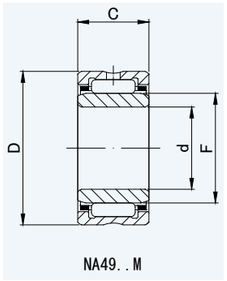
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	Mass (Approx.)	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
									CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING	CYLINDRICAL OUTER RING	CROWNED OUTER RING
NURT..X	NURT..R	g	d	D	B	C	Cr N	Cor N	—	NUTR	NUTR-X	NUTR	NURT	NURT-R	MCYRD-X	MCYRD
NURT15X	**NURT15R**	**100**	15	35	19	18	22 300	25 700	—	NUTR15	NUTR202X	NUTR202	NURT15	NURT15R	MCYRD-15X	MCYRD-15
NURT15-1X	**NURT15-1R**	**160**	15	42	19	18	22 300	25 700	—	NUTR15 42	NUTR302X	NUTR302	NURT15-1	NURT15-1R	—	—
NURT17X	**NURT17R**	**147**	17	40	21	20	24 100	29 100	—	NUTR17	NUTR203X	NUTR203	NURT17	NURT17R	MCYRD-17X	MCYRD-17
NURT17-1X	**NURT17-1R**	**222**	17	47	21	20	24 100	29 100	—	NUTR17 47	NUTR303X	NUTR303	NURT17-1	NURT17-1R	—	—
NURT20X	**NURT20R**	**245**	20	47	25	24	38 500	48 000	—	NUTR20	NUTR204X	NUTR204	NURT20	NURT20R	MCYRD-20X	MCYRD-20
NURT20-1X	**NURT20-1R**	**321**	20	52	25	24	38 500	48 000	—	NUTR20 52	NUTR304X	NUTR304	NURT20-1	NURT20-1R	—	—
NURT25X	**NURT25R**	**281**	25	52	25	24	42 500	57 500	—	NUTR25	NUTR205X	NUTR205	NURT25	NURT25R	MCYRD-25X	MCYRD-25
NURT25-1X	**NURT25-1R**	**450**	25	62	25	24	42 500	57 500	—	NUTR25 62	NUTR305X	NUTR305	NURT25-1	NURT25-1R	—	—
NURT30X	**NURT30R**	**466**	30	62	29	28	56 500	72 500	—	NUTR30	NUTR206X	NUTR206	NURT30	NURT30R	MCYRD-30X	MCYRD-30
NURT30-1X	**NURT30-1R**	**697**	30	72	29	28	56 500	72 500	—	NUTR30 72	NUTR306X	NUTR306	NURT30-1	NURT30-1R	—	—
NURT35X	**NURT35R**	**630**	35	72	29	28	62 000	85 500	—	NUTR35	NUTR207X	NUTR207	NURT35	NURT35R	MCYRD-35X	MCYRD-35
NURT35-1X	**NURT35-1R**	**840**	35	80	29	28	62 000	85 500	—	NUTR35 80	NUTR307X	NUTR307	NURT35-1	NURT35-1R	—	—
NURT40X	**NURT40R**	**817**	40	80	32	30	87 000	125 000	—	NUTR40	NUTR208X	NUTR208	NURT40	NURT40R	MCYRD-40X	MCYRD-40
NURT40-1X	**NURT40-1R**	**1 130**	40	90	32	30	87 000	125 000	—	NUTR40 90	NUTR308X	NUTR308	NURT40-1	NURT40-1R	—	—
NURT45X	**NURT45R**	**883**	45	85	32	30	92 000	137 000	—	NUTR45	NUTR209X	NUTR209	NURT45	NURT45R	MCYRD-45X	MCYRD-45
NURT45-1X	**NURT45-1R**	**1 400**	45	100	32	30	92 000	137 000	—	NUTR45 100	NUTR309X	NUTR309	NURT45-1	NURT45-1R	—	—
NURT50X	**NURT50R**	**950**	50	90	32	30	96 500	150 000	—	NUTR50	NUTR210X	NUTR210	NURT50	NURT50R	MCYRD-50X	MCYRD-50
NURT50-1X	**NURT50-1R**	**1 690**	50	110	32	30	96 500	150 000	—	NUTR50 110	NUTR310X	NUTR310	NURT50-1	NURT50-1R	—	—

INTERCHANGE TABLE

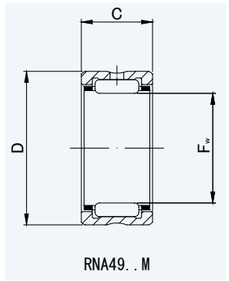
STAINLESS STEEL

MACHINED RING NEEDLE ROLLER BEARINGS STAINLESS STEEL

WITH INNER RING
WITHOUT INNER RING



NA49. . M



RNA49. . M

NA49M, RNA49M

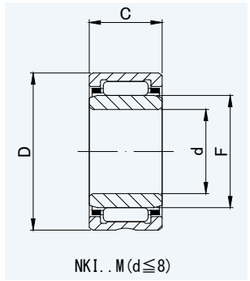
DIMENSION TABLE

INTERCHANGE TABLE

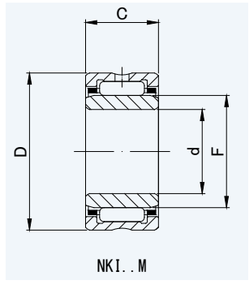
JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NA 49M	g	RNA 49M	g	IR..M	d	Fw (F)	D	C	Cr N	Cor N	—	—	—	—	—	—	—	—
NA495M	7.3	**RNA495M**	5.9	**IR5710M**	5	7	13	10	2 700	2 400	—	—	—	—	—	—	—	—
NA496M	9.1	**RNA496M**	7.3	**IR6810M**	6	8	15	10	3 500	3 100	—	—	—	—	—	—	—	—
NA497M	11.2	**RNA497M**	9.3	**IR7910M**	7	9	17	10	4 100	3 300	—	—	—	—	—	—	—	—
NA498M	15	**RNA498M**	12.6	**IR81011M**	8	10	19	11	5 700	4 600	—	—	—	—	—	—	—	—
NA499M	16.7	**RNA499M**	13.6	**IR91211M**	9	12	20	11	6 000	5 700	—	—	—	—	—	—	—	—
NA4900M	24	**RNA4900M**	16.5	**IR101413M**	10	14	22	13	8 400	9 200	—	—	—	—	—	—	—	—
NA4901M	26.5	**RNA4901M**	18.1	**IR121613M**	12	16	24	13	8 900	10 200	—	—	—	—	—	—	—	—
NA4902M	35	**RNA4902M**	21.5	**IR152013M**	15	20	28	13	10 000	12 600	—	—	—	—	—	—	—	—
NA4903M	39	**RNA4903M**	23.5	**IR172213M**	17	22	30	13	10 800	14 300	—	—	—	—	—	—	—	—
NA4904M	78.5	**RNA4904M**	55.5	**IR202517M**	20	25	37	17	19 300	23 000	—	—	—	—	—	—	—	—
NA49/22M	87	**RNA49/22M**	56.5	**IR222817M**	22	28	39	17	19 600	26 400	—	—	—	—	—	—	—	—
NA4905M	92.5	**RNA4905M**	64	**IR253017M**	25	30	42	17	21 800	28 200	—	—	—	—	—	—	—	—

MACHINED RING NEEDLE ROLLER BEARINGS STAINLESS STEEL

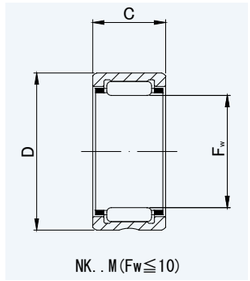
WITH INNER RING
WITHOUT INNER RING



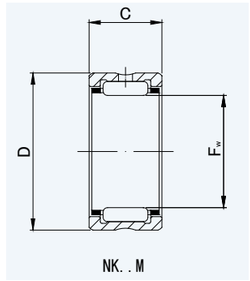
NKI. . M(d≦8)



NKI. . M



NK. . M(Fw≦10)



NK. . M

NKI..M, NK..M

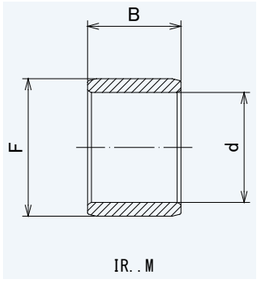
DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	JNS NUMBER WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER Assembled INNER RING	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	IKO		INA		NTN		TORRINGTON(KOYO)	
											WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING	WITH INNER RING	WITHOUT INNER RING
NKI..M	g	NK..M	g	IR..M	d	Fw (F)	D	C	Cr N	Cor N	—	—	—	—	—	—	—	—
—	—	**NK5/10M**	3.4	—	—	5	10	10	2 200	1 700	—	—	—	—	—	—	—	—
—	—	**NK5/12M**	4.2	—	—	5	10	12	2 800	2 400	—	—	—	—	—	—	—	—
—	—	**NK6/10M**	5.3	—	—	6	12	10	2 400	2 100	—	—	—	—	—	—	—	—
—	—	**NK6/12M**	6.4	—	—	6	12	12	3 100	2 900	—	—	—	—	—	—	—	—
—	—	**NK7/10M**	6.9	—	—	7	14	10	3 300	2 700	—	—	—	—	—	—	—	—
—	—	**NK7/12M**	8.3	—	—	7	14	12	4 200	3 700	—	—	—	—	—	—	—	—
NKI 5/12M	11.9	**NK8/12M**	9	**IR5812M**	5	8	15	12	4 600	4 300	—	—	—	—	—	—	—	—
NKI 5/16M	16.7	**NK8/16M**	13	**IR5816M**	5	8	15	16	6 500	6 700	—	—	—	—	—	—	—	—
NKI 6/12M	13	**NK9/12M**	10	**IR6912M**	6	9	16	12	5 000	4 800	—	—	—	—	—	—	—	—
NKI 6/16M	17.5	**NK9/16M**	13.2	**IR6916M**	6	9	16	16	6 900	7 500	—	—	—	—	—	—	—	—
NKI 7/12M	14.3	**NK10/12M**	10.7	**IR71012M**	7	10	17	12	5 400	5 500	—	—	—	—	—	—	—	—
NKI 7/16M	19.2	**NK10/16M**	14.3	**IR71016M**	7	10	17	16	7 500	8 400	—	—	—	—	—	—	—	—
NKI 9/12M	16.7	**NK12/12M**	12.2	**IR91212M**	9	12	19	12	6 000	6 700	—	—	—	—	—	—	—	—
NKI 9/16M	22.5	**NK12/16M**	16.3	**IR91216M**	9	12	19	16	8 400	10 300	—	—	—	—	—	—	—	—
NKI 10/16M	30	**NK14/16M**	21	**IR101416M**	10	14	22	16	10 800	12 600	—	—	—	—	—	—	—	—
NKI 10/20M	38	**NK14/20M**	26.5	**IR101420M**	10	14	22	20	13 600	17 000	—	—	—	—	—	—	—	—
—	—	**NK15/16M**	22.5	—	—	15	23	16	11 400	13 700	—	—	—	—	—	—	—	—
—	—	**NK15/20M**	28	—	—	15	23	20	14 300	18 500	—	—	—	—	—	—	—	—
NKI 12/16M	33.5	**NK16/16M**	23	**IR121616M**	12	16	24	16	11 300	13 800	—	—	—	—	—	—	—	—
NKI 12/20M	42.5	**NK16/20M**	29	**IR121620M**	12	16	24	20	14 300	18 700	—	—	—	—	—	—	—	—
—	—	**NK17/16M**	24.5	—	—	17	25	16	11 700	14 900	—	—	—	—	—	—	—	—
—	—	**NK17/20M**	30.5	—	—	17	25	20	14 900	20 300	—	—	—	—	—	—	—	—
—	—	**NK18/16M**	25.5	—	—	18	26	16	12 300	16 100	—	—	—	—	—	—	—	—
—	—	**NK18/20M**	32	—	—	18	26	20	15 600	21 700	—	—	—	—	—	—	—	—
NKI 15/16M	39.5	**NK19/16M**	27	**IR151916M**	15	19	27	16	12 800	17 200	—	—	—	—	—	—	—	—
NKI 15/20M	50	**NK19/20M**	34	**IR151920M**	15	19	27	20	16 200	23 200	—	—	—	—	—	—	—	—

NK type of 10mm or less inscribed circle diameter (Fw) is without oil hole.
NKI type of 8mm or less inscribed circle diameter (d) is without oil hole.

INNER RINGS STAINLESS STEEL



IR. . M

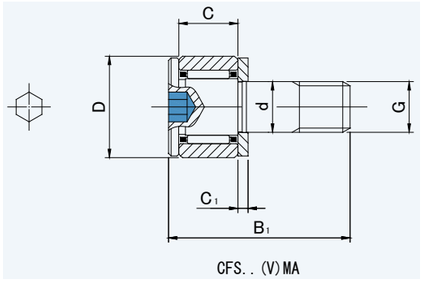
IR..M

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER WITH INNER RING	Mass (Approx.)	Dimensions(mm)			JNS USABLE BEARING NUMBER	IKO	INA	NTN	TORRINGTON(KOYO)
IR	g	d	F	B		—	—	—	—
IR5710M	1.4	5	7	10	RNA495M	—	—	—	—
IR5812M	3	5	8	12	NK8/12M	—	—	—	—
IR5816M	4	5	8	16	NK8/16M	—	—	—	—
IR6810M	1.7	6	8	10	RNA496M	—	—	—	—
IR6912M	3.2	6	9	12	NK9/12M	—	—	—	—
IR6916M	4.3	6	9	16	NK9/16M	—	—	—	—
IR61010M	4	6	10	10	—	—	—	—	—
IR7910M	1.9	7	9	10	RNA497M	—	—	—	—
IR71012M	3.6	7	10	12	NK10/12M	—	—	—	—
IR71016M	5	7	10	16	NK10/16M	—	—	—	—
IR81011M	2.4	8	10	11	RNA498M	—	—	—	—
IR81210M	4.8	8	12	10	—	—	—	—	—
IR91211M	3.1	9	12	11	RNA499M	—	—	—	—
IR91212M	4.5	9	12	12	NK12/12M	—	—	—	—
IR91216M	6	9	12	16	NK12/16M	—	—	—	—
IR101412M	7	10	14	12	—	—	—	—	—
IR101413M	7.5	10	14	13	RNA4900M	—	—	—	—
IR101416M	9	10	14	16	NK14/16M	—	—	—	—
IR101420M	11.5	10	14	20	NK14/20M	—	—	—	—
IR121612M	8	12	16	12	—	—	—	—	—
IR121613M	8.5	12	16	13	RNA4901M	—	—	—	—
IR121616M	10.5	12	16	16	NK16/16M	—	—	—	—
IR121620M	13.5	12	16	20	NK16/20M	—	—	—	—
IR151916M	12.5	15	19	16	NK19/16M	—	—	—	—
IR151920M	16	15	19	20	NK19/20M	—	—	—	—
IR152012M	12	15	20	12	—	—	—	—	—
IR152013M	13.5	15	20	13	RNA4902M	—	—	—	—
IR172213M	15.5	17	22	13	RNA4903M	—	—	—	—
IR172216M	19	17	22	16	—	—	—	—	—
IR202516M	22	20	25	16	—	—	—	—	—
IR202517M	23	20	25	17	RNA4904M	—	—	—	—
IR253016M	28	25	30	16	—	—	—	—	—
IR253017M	28.5	25	30	17	RNA4905M	—	—	—	—
IR 303820M	65	30	38	20	—	—	—	—	—
IR 354220M	65	35	42	20	—	—	—	—	—
IR 506020M	135	50	60	20	—	—	—	—	—

CAM FOLLOWERS STAINLESS STEEL
MINIATURE TYPE
HEXAGON SOCKET ON STUD HEAD



CFS. . (V) MA

CFS..MA

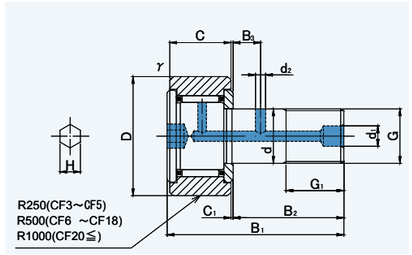
DIMENSION TABLE

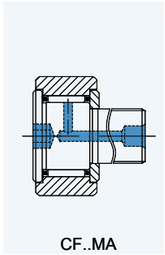
INTERCHANGE TABLE

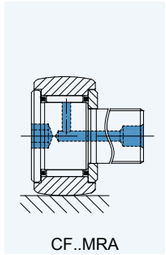
JNS NUMBER CYLINDRICAL OUTER RING	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA	IKO	NTN	MCGILL
										CYLINDRICAL OUTER RING	CYLINDRICAL OUTER RING	CYLINDRICAL OUTER RING	CYLINDRICAL OUTER RING
CFS	g	d	D	C	G	B1	C1	Cr N	Cor N	—	CFS-F	2F-KRM	—
CFS 2.5MA	**1**	2.5	5	3	M2.5×0.45	9.5	0.7	370	300	—	CFS2.5F	2F-KRM5XT2H/3A	—
CFS 2.5VMA	**1**	2.5	5	3	M2.5×0.45	9.5	0.7	920	990	—	CFS2.5FV	2F-KRMV5XT2H/3A	—
CFS 3MA	**2**	3	6	4	M3×0.5	11.5	0.7	570	560	—	CFS3F	2F-KRM6XT2H/3A	—
CFS 3VMA	**2**	3	6	4	M3×0.5	11.5	0.7	1 260	1 620	—	CFS3FV	2F-KRMV6XT2H/3A	—
CFS 4MA	**4**	4	8	5	M4×0.7	15	1	990	990	—	CFS4F	2F-KRM8XT2H/3A	—
CFS 4VMA	**4**	4	8	5	M4×0.7	15	1	2 160	2 790	—	CFS4FV	2F-KRMV8XT2H/3A	—
CFS 5MA	**7**	5	10	6	M5×0.8	18	1	1 440	1 710	—	CFS5F	2F-KRM10XT2H/3A	—
CFS 5VMA	**7**	5	10	6	M5×0.8	18	1	2 880	4 330	—	CFS5FV	2F-KRMV10XT2H/3A	—
CFS 6MA	**13**	6	12	7	M6×1	21.5	1.2	1 890	1 980	—	CFS6F	2F-KRM12XT2H/3A	—
CFS 6VMA	**13**	6	12	7	M6×1	21.5	1.2	4 240	5 760	—	CFS6FV	2F-KRMV12XT2H/3A	—

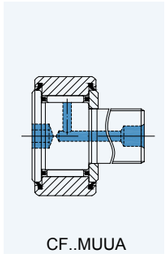
INTERCHANGE

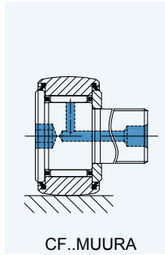
CAM FOLLOWERS STAINLESS STEEL
HEXAGON SOCKET ON STUD HEAD




CF..MA


CF..MRA


CF..MUUA


CF..MUURA

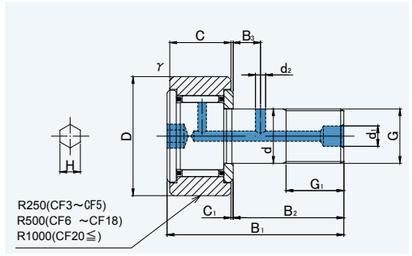
CF..MA, MRA, MUUA, MUURA

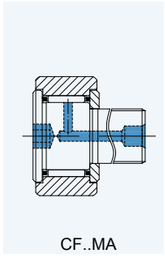
DIMENSION TABLE

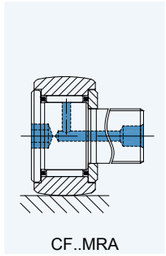
INTERCHANGE TABLE

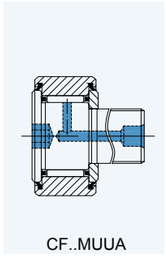
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO				MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CF..MA	CF..MRA	CF..MUUA	CF..MUURA	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	CF-FB	CF-FBR	CF-FBUU	CF-FBUUR	—	—
CF3MA	**CF3MRA**	**CF3MUUA**	**CF3MUURA**	**4.5**	3	10	7	M3×0.5	17	0.5	1 350	1 080	—	—	—	—	CF3FB	CF3FBR	CF3FBUU	CF3FBUUR	—	—
CF3VMA	**CF3VMRA**	**CF3VMUUA**	**CF3VMUURA**	**4.5**	3	10	7	M3×0.5	17	0.5	2 570	2 300	—	—	—	—	—	—	—	—	—	—
CF4MA	**CF4MRA**	**CF4MUUA**	**CF4MUURA**	**7.5**	4	12	8	M4×0.7	20	0.5	1 890	1 880	—	—	—	—	CF4FB	CF4FBR	CF4FBUU	CF4FBUUR	—	—
CF4VMA	**CF4VMRA**	**CF4VMUUA**	**CF4VMUURA**	**7.5**	4	12	8	M4×0.7	20	0.5	3 680	3 950	—	—	—	—	—	—	—	—	—	—
CF5MA	**CF5MRA**	**CF5MUUA**	**CF5MUURA**	**10.5**	5	13	9	M5×0.8	23	0.5	2 880	2 540	—	—	—	—	CF5FB	CF5FBR	CF5FBUU	CF5FBUUR	—	—
CF5VMA	**CF5VMRA**	**CF5VMUUA**	**CF5VMUURA**	**10.5**	5	13	9	M5×0.8	23	0.5	4 690	5 060	—	—	—	—	—	—	—	—	—	—
CF6MA	**CF6MRA**	**CF6MUUA**	**CF6MUURA**	**18.5**	6	16	11	M6×1	28	0.6	3 330	3 330	—	—	—	—	—	CF6FBR	—	CF6FBUUR	—	—
CF6VMA	**CF6VMRA**	**CF6VMUUA**	**CF6VMUURA**	**18.5**	6	16	11	M6×1	28	0.6	6 400	7 840	—	—	—	—	—	—	—	—	—	—
CF8MA	**CF8MRA**	**CF8MUUA**	**CF8MUURA**	**28.5**	8	19	11	M8×1.25	32	0.6	3 960	4 330	—	—	—	—	—	CF8FBR	—	CF8FBUUR	—	—
CF8VMA	**CF8VMRA**	**CF8VMUUA**	**CF8VMUURA**	**28.5**	8	19	11	M8×1.25	32	0.6	7 470	10 270	—	—	—	—	—	—	—	—	—	—
CF10MA	**CF10MRA**	**CF10MUUA**	**CF10MUURA**	**45**	10	22	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	CF10FBR	—	CF10FBUUR	—	—
CF10VMA	**CF10VMRA**	**CF10VMUUA**	**CF10VMUURA**	**45**	10	22	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—	—	—
CF10MAK	**CF10MRAK**	**CF10MUUAK**	**CF10MUURAK**	**45**	10	22	12	M10×1	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—	—	—
CF10VMAK	**CF10VMRAK**	**CF10VMUUAK**	**CF10VMUURAK**	**45**	10	22	12	M10×1	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—	—	—
CF10-1MA	**CF10-1MRA**	**CF10-1MUUA**	**CF10-1MUURA**	**60**	10	26	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—	—	—
CF10-1VMA	**CF10-1VMRA**	**CF10-1VMUUA**	**CF10-1VMUURA**	**60**	10	26	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—	—	—
CF10-1MAK	**CF10-1MRAK**	**CF10-1MUUAK**	**CF10-1MUURAK**	**60**	10	26	12	M10×1	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—	—	—
CF10-1VMAK	**CF10-1VMRAK**	**CF10-1VMUUAK**	**CF10-1VMUURAK**	**60**	10	26	12	M10×1	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—	—	—
CF12MA	**CF12MRA**	**CF12MUUA**	**CF12MUURA**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	CF12FBR	—	CF12FBUUR	—	—
CF12VMA	**CF12VMRA**	**CF12VMUUA**	**CF12VMUURA**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—	—	—
CF12-1MA	**CF12-1MRA**	**CF12-1MUUA**	**CF12-1MUURA**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—	—	—
CF12-1VMA	**CF12-1VMRA**	**CF12-1VMUUA**	**CF12-1VMUURA**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—	—	—
CF16MA	**CF16MRA**	**CF16MUUA**	**CF16MUURA**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	CF16FBR	—	CF16FBUUR	—	—
CF16VMA	**CF16VMRA**	**CF16VMUUA**	**CF16VMUURA**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—	—	—
CF18MA	**CF18MRA**	**CF18MUUA**	**CF18MUURA**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	CF18FBR	—	CF18FBUUR	—	—
CF18VMA	**CF18VMRA**	**CF18VMUUA**	**CF18VMUURA**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—	—	—
CF20MA	**CF20MRA**	**CF20MUUA**	**CF20MUURA**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	CF20FBR	—	CF20FBUUR	—	—
CF20VMA	**CF20VMRA**	**CF20VMUUA**	**CF20VMUURA**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—	—	—
CF20-1MA	**CF20-1MRA**	**CF20-1MUUA**	**CF20-1MUURA**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—	—	—
CF20-1VMA	**CF20-1VMRA**	**CF20-1VMUUA**	**CF20-1VMUURA**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—	—	—
CF24MA	**CF24MRA**	**CF24MUUA**	**CF24MUURA**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—	—	—
CF24VMA	**CF24VMRA**	**CF24VMUUA**	**CF24VMUURA**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—	—	—
CF24-1MA	**CF24-1MRA**	**CF24-1MUUA**	**CF24-1MUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—	—	—
CF24-1VMA	**CF24-1VMRA**	**CF24-1VMUUA**	**CF24-1VMUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—	—	—

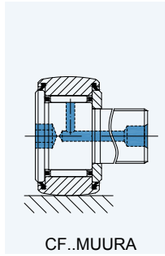
Stud diameter (d) 3 to 10mm : No grease refilling hole is provided (except "K" type)




CF..MA


CF..MRA


CF..MUUA


CF..MUURA

CF..MA, MRA, MUUA, MUURA

DIMENSION TABLE

JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating
CF..MA	CF..MRA	CF..MUUA	CF..MUURA	g	d	D	C	G	B1	C1	Cr N	Cor N
CF30MA	**CF30MRA**	**CF30MUUA**	**CF30MUURA**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250
CF30VMA	**CF30VMRA**	**CF30VMUUA**	**CF30VMUURA**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530
CF30-1MA	**CF30-1MRA**	**CF30-1MUUA**	**CF30-1MUURA**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250
CF30-1VMA	**CF30-1VMRA**	**CF30-1VMUUA**	**CF30-1VMUURA**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530
CF30-2MA	**CF30-2MRA**	**CF30-2MUUA**	**CF30-2MUURA**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250
CF30-2VMA	**CF30-2VMRA**	**CF30-2VMUUA**	**CF30-2VMUURA**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530

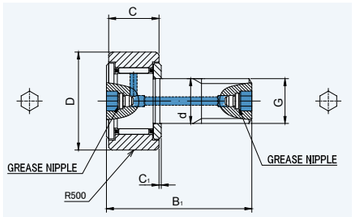
INTERCHANGE TABLE

INA		NTN		IKO				MCGILL	
CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITH SEALS	CROWNED OUTER RING WITH SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—

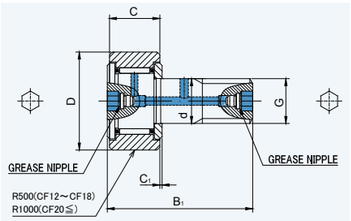
Stud diameter (d) 3 to 10mm : No grease refilling hole is provided (except "K" type)

CAM FOLLOWERS STAINLESS STEEL

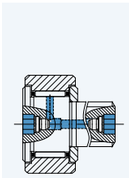
HEXAGON SOCKET ON BOTH SIDES GREASE NIPPLE INSTALLED



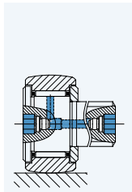
CF. . MAB (CF10MABK, CF10−1MABK)



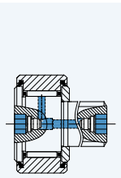
CF. . MAB (CF12≦)



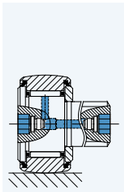
CF. . MAB



CF. . MRAB



CF. . MUUAB



CF. . MUURAB

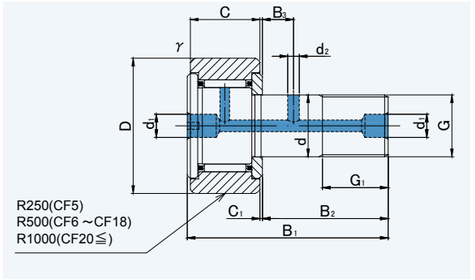
CF..MAB, MRAB, MUUAB, MUURAB

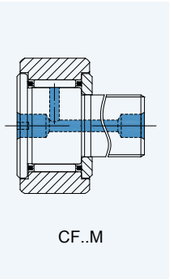
DIMENSION TABLE

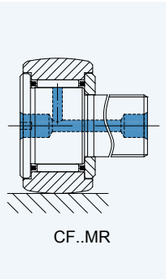
INTERCHANGE TABLE

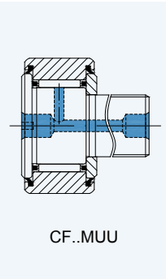
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CF..MAB	CF..MRAB	CF..MUUAB	CF..MUURAB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CF10MABK	**CF10MRABK**	**CF10MUUABK**	**CF10MUURABK**	**45**	10	22	12	M10×1	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CF10VMABK	**CF10VMRABK**	**CF10VMUUABK**	**CF10VMUURABK**	**45**	10	22	12	M10×1	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CF10-1MABK	**CF10-1MRABK**	**CF10-1MUUABK**	**CF10-1MUURABK**	**60**	10	26	12	M10×1	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CF10-1VMABK	**CF10-1VMRABK**	**CF10-1VMUUABK**	**CF10-1VMUURABK**	**60**	10	26	12	M10×1	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CF12MAB	**CF12MRAB**	**CF12MUUAB**	**CF12MUURAB**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CF12VMAB	**CF12VMRAB**	**CF12VMUUAB**	**CF12VMUURAB**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CF12-1MAB	**CF12-1MRAB**	**CF12-1MUUAB**	**CF12-1MUURAB**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CF12-1VMAB	**CF12-1VMRAB**	**CF12-1VMUUAB**	**CF12-1VMUURAB**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CF16MAB	**CF16MRAB**	**CF16MUUAB**	**CF16MUURAB**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CF16VMAB	**CF16VMRAB**	**CF16VMUUAB**	**CF16VMUURAB**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CF18MAB	**CF18MRAB**	**CF18MUUAB**	**CF18MUURAB**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CF18VMAB	**CF18VMRAB**	**CF18VMUUAB**	**CF18VMUURAB**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CF20MAB	**CF20MRAB**	**CF20MUUAB**	**CF20MUURAB**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CF20VMAB	**CF20VMRAB**	**CF20VMUUAB**	**CF20VMUURAB**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CF20-1MAB	**CF20-1MRAB**	**CF20-1MUUAB**	**CF20-1MUURAB**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CF20-1VMAB	**CF20-1VMRAB**	**CF20-1VMUUAB**	**CF20-1VMUURAB**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CF24MAB	**CF24MRAB**	**CF24MUUAB**	**CF24MUURAB**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CF24VMAB	**CF24VMRAB**	**CF24VMUUAB**	**CF24VMUURAB**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CF24-1MAB	**CF24-1MRAB**	**CF24-1MUUAB**	**CF24-1MUURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CF24-1VMAB	**CF24-1VMRAB**	**CF24-1VMUUAB**	**CF24-1VMUURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CF30MAB	**CF30MRAB**	**CF30MUUAB**	**CF30MUURAB**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30VMAB	**CF30VMRAB**	**CF30VMUUAB**	**CF30VMUURAB**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CF30-1MAB	**CF30-1MRAB**	**CF30-1MUUAB**	**CF30-1MUURAB**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30-1VMAB	**CF30-1VMRAB**	**CF30-1VMUUAB**	**CF30-1VMUURAB**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CF30-2MAB	**CF30-2MRAB**	**CF30-2MUUAB**	**CF30-2MUURAB**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30-2VMAB	**CF30-2VMRAB**	**CF30-2VMUUAB**	**CF30-2VMUURAB**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

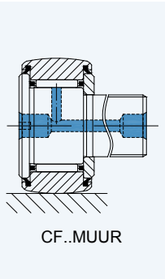
CAM FOLLOWERS STAINLESS STEEL
SCREWDRIVER SLOT HEAD




CF..M


CF..MR


CF..MUU


CF..MUUR

CF..M, MR, MUU, MUUR

DIMENSION TABLE

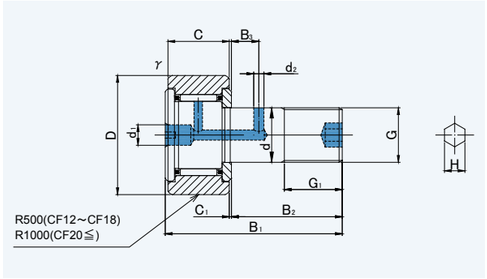
INTERCHANGE TABLE

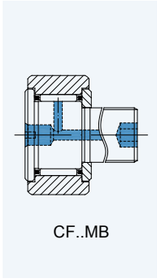
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CF..M	CF..MR	CF..MUU	CF..MUUR	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CF5M	**CF5MR**	**CF5MUU**	**CF5MUUR**	**10.5**	5	13	9	M5×0.8	23	0.5	2 880	2 540	—	—	—	—	—	—	—	—
CF5VM	**CF5VMR**	**CF5VMUU**	**CF5VMUUR**	**10.5**	5	13	9	M5×0.8	23	0.5	4 690	5 060	—	—	—	—	—	—	—	—
CF6M	**CF6MR**	**CF6MUU**	**CF6MUUR**	**18.5**	6	16	11	M6×1	28	0.6	3 330	3 330	—	—	—	—	—	—	—	—
CF6VM	**CF6VMR**	**CF6VMUU**	**CF6VMUUR**	**18.5**	6	16	11	M6×1	28	0.6	6 400	7 840	—	—	—	—	—	—	—	—
CF8M	**CF8MR**	**CF8MUU**	**CF8MUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	3 960	4 330	—	—	—	—	—	—	—	—
CF8VM	**CF8VMR**	**CF8VMUU**	**CF8VMUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	7 470	10 270	—	—	—	—	—	—	—	—
CF10M	**CF10MR**	**CF10MUU**	**CF10MUUR**	**45**	10	22	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CF10VM	**CF10VMR**	**CF10VMUU**	**CF10VMUUR**	**45**	10	22	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CF10MK	**CF10MRK**	**CF10MUUK**	**CF10MUURK**	**45**	10	22	12	M10×1	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CF10VMK	**CF10VMRK**	**CF10VMUUK**	**CF10VMUURK**	**45**	10	22	12	M10×1	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CF10-1M	**CF10-1MR**	**CF10-1MUU**	**CF10-1MUUR**	**60**	10	26	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CF10-1VM	**CF10-1VMR**	**CF10-1VMUU**	**CF10-1VMUUR**	**60**	10	26	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CF10-1MK	**CF10-1MRK**	**CF10-1MUUK**	**CF10-1MUURK**	**60**	10	26	12	M10×1	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CF10-1VMK	**CF10-1VMRK**	**CF10-1VMUUK**	**CF10-1VMUURK**	**60**	10	26	12	M10×1	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CF12M	**CF12MR**	**CF12MUU**	**CF12MUUR**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CF12VM	**CF12VMR**	**CF12VMUU**	**CF12VMUUR**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CF12-1M	**CF12-1MR**	**CF12-1MUU**	**CF12-1MUUR**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CF12-1VM	**CF12-1VMR**	**CF12-1VMUU**	**CF12-1VMUUR**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CF16M	**CF16MR**	**CF16MUU**	**CF16MUUR**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CF16VM	**CF16VMR**	**CF16VMUU**	**CF16VMUUR**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CF18M	**CF18MR**	**CF18MUU**	**CF18MUUR**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CF18VM	**CF18VMR**	**CF18VMUU**	**CF18VMUUR**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CF20M	**CF20MR**	**CF20MUU**	**CF20MUUR**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CF20VM	**CF20VMR**	**CF20VMUU**	**CF20VMUUR**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CF20-1M	**CF20-1MR**	**CF20-1MUU**	**CF20-1MUUR**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CF20-1VM	**CF20-1VMR**	**CF20-1VMUU**	**CF20-1VMUUR**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CF24M	**CF24MR**	**CF24MUU**	**CF24MUUR**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CF24VM	**CF24VMR**	**CF24VMUU**	**CF24VMUUR**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CF24-1M	**CF24-1MR**	**CF24-1MUU**	**CF24-1MUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CF24-1VM	**CF24-1VMR**	**CF24-1VMUU**	**CF24-1VMUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CF30M	**CF30MR**	**CF30MUU**	**CF30MUUR**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30VM	**CF30VMR**	**CF30VMUU**	**CF30VMUUR**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CF30-1M	**CF30-1MR**	**CF30-1MUU**	**CF30-1MUUR**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30-1VM	**CF30-1VMR**	**CF30-1VMUU**	**CF30-1VMUUR**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CF30-2M	**CF30-2MR**	**CF30-2MUU**	**CF30-2MUUR**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30-2VM	**CF30-2VMR**	**CF30-2VMUU**	**CF30-2VMUUR**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

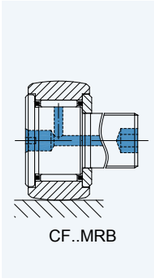
Stud diameter (d) 5 to 10mm : Without oil hole in the thread side.(except "K" type)

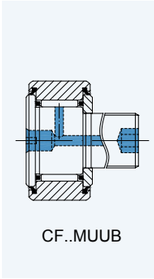
CAM FOLLOWERS STAINLESS STEEL

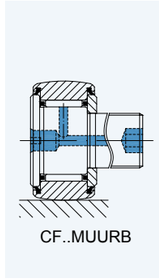
HEXAGON SOCKET ON THREAD SIDE SCREWDRIVER SLOT HEAD











CF..MB, MRB, MUUB, MUURB

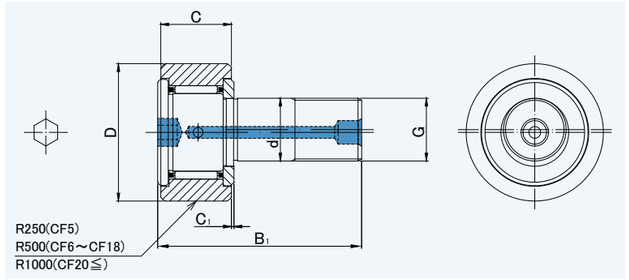
DIMENSION TABLE

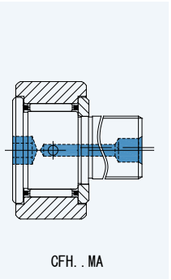
INTERCHANGE TABLE

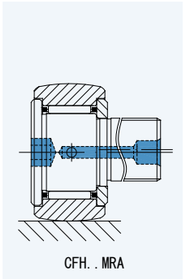
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CF..MB	CF..MRB	CF..MUUB	CF..MUURB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CF12MB	**CF12MRB**	**CF12MUUB**	**CF12MUURB**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CF12VMB	**CF12VMRB**	**CF12VMUUB**	**CF12VMUURB**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CF12-1MB	**CF12-1MRB**	**CF12-1MUUB**	**CF12-1MUURB**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CF12-1VMB	**CF12-1VMRB**	**CF12-1VMUUB**	**CF12-1VMUURB**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CF16MB	**CF16MRB**	**CF16MUUB**	**CF16MUURB**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CF16VMB	**CF16VMRB**	**CF16VMUUB**	**CF16VMUURB**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CF18MB	**CF18MRB**	**CF18MUUB**	**CF18MUURB**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CF18VMB	**CF18VMRB**	**CF18VMUUB**	**CF18VMUURB**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CF20MB	**CF20MRB**	**CF20MUUB**	**CF20MUURB**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CF20VMB	**CF20VMRB**	**CF20VMUUB**	**CF20VMUURB**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CF20-1MB	**CF20-1MRB**	**CF20-1MUUB**	**CF20-1MUURB**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CF20-1VMB	**CF20-1VMRB**	**CF20-1VMUUB**	**CF20-1VMUURB**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CF24MB	**CF24MRB**	**CF24MUUB**	**CF24MUURB**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CF24VMB	**CF24VMRB**	**CF24VMUUB**	**CF24VMUURB**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CF24-1MB	**CF24-1MRB**	**CF24-1MUUB**	**CF24-1MUURB**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CF24-1VMB	**CF24-1VMRB**	**CF24-1VMUUB**	**CF24-1VMUURB**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CF30MB	**CF30MRB**	**CF30MUUB**	**CF30MUURB**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30VMB	**CF30VMRB**	**CF30VMUUB**	**CF30VMUURB**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CF30-1MB	**CF30-1MRB**	**CF30-1MUUB**	**CF30-1MUURB**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30-1VMB	**CF30-1VMRB**	**CF30-1VMUUB**	**CF30-1VMUURB**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CF30-2MB	**CF30-2MRB**	**CF30-2MUUB**	**CF30-2MUURB**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CF30-2VMB	**CF30-2VMRB**	**CF30-2VMUUB**	**CF30-2VMUURB**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

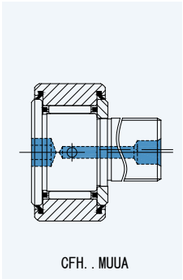
CAM FOLLOWERS STAINLESS STEEL

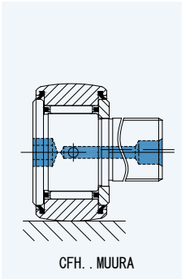
SOLID ECCENTRIC TYPE HEXAGON SOCKET ON STUD HEAD




CFH. . MA


CFH. . MRA


CFH. . MUUA


CFH. . MUURA

CFH..MA, MRA, MUUA, MUURA

DIMENSION TABLE

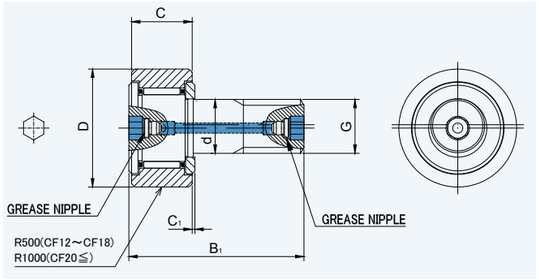
INTERCHANGE TABLE

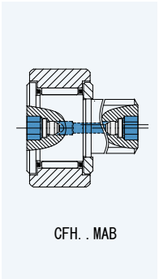
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH..MA	CFH..MRA	CFH..MUUA	CFH..MUURA	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFH5MA	**CFH5MRA**	**CFH5MUUA**	**CFH5MUURA**	**10.5**	5	13	9	M5×0.8	23	0.5	2 880	2 540	—	—	—	—	—	—	—	—
CFH5VMA	**CFH5VMRA**	**CFH5VMUUA**	**CFH5VMUURA**	**10.5**	5	13	9	M5×0.8	23	0.5	4 690	5 060	—	—	—	—	—	—	—	—
CFH6MA	**CFH6MRA**	**CFH6MUUA**	**CFH6MUURA**	**18.5**	6	16	11	M6×1	28	0.6	3 330	3 330	—	—	—	—	—	—	—	—
CFH6VMA	**CFH6VMRA**	**CFH6VMUUA**	**CFH6VMUURA**	**18.5**	6	16	11	M6×1	28	0.6	6 400	7 840	—	—	—	—	—	—	—	—
CFH8MA	**CFH8MRA**	**CFH8MUUA**	**CFH8MUURA**	**28.5**	8	19	11	M8×1.25	32	0.6	3 960	4 330	—	—	—	—	—	—	—	—
CFH8VMA	**CFH8VMRA**	**CFH8VMUUA**	**CFH8VMUURA**	**28.5**	8	19	11	M8×1.25	32	0.6	7 470	10 270	—	—	—	—	—	—	—	—
CFH10MA	**CFH10MRA**	**CFH10MUUA**	**CFH10MUURA**	**45**	10	22	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CFH10VMA	**CFH10VMRA**	**CFH10VMUUA**	**CFH10VMUURA**	**45**	10	22	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CFH10-1MA	**CFH10-1MRA**	**CFH10-1MUUA**	**CFH10-1MUURA**	**60**	10	26	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CFH10-1VMA	**CFH10-1VMRA**	**CFH10-1VMUUA**	**CFH10-1VMUURA**	**60**	10	26	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CFH12MA	**CFH12MRA**	**CFH12MUUA**	**CFH12MUURA**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12VMA	**CFH12VMRA**	**CFH12VMUUA**	**CFH12VMUURA**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH12-1MA	**CFH12-1MRA**	**CFH12-1MUUA**	**CFH12-1MUURA**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12-1VMA	**CFH12-1VMRA**	**CFH12-1VMUUA**	**CFH12-1VMUURA**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH16MA	**CFH16MRA**	**CFH16MUUA**	**CFH16MUURA**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CFH16VMA	**CFH16VMRA**	**CFH16VMUUA**	**CFH16VMUURA**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CFH18MA	**CFH18MRA**	**CFH18MUUA**	**CFH18MUURA**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CFH18VMA	**CFH18VMRA**	**CFH18VMUUA**	**CFH18VMUURA**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CFH20MA	**CFH20MRA**	**CFH20MUUA**	**CFH20MUURA**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20VMA	**CFH20VMRA**	**CFH20VMUUA**	**CFH20VMUURA**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH20-1MA	**CFH20-1MRA**	**CFH20-1MUUA**	**CFH20-1MUURA**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20-1VMA	**CFH20-1VMRA**	**CFH20-1VMUUA**	**CFH20-1VMUURA**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH24MA	**CFH24MRA**	**CFH24MUUA**	**CFH24MUURA**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24VMA	**CFH24VMRA**	**CFH24VMUUA**	**CFH24VMUURA**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH24-1MA	**CFH24-1MRA**	**CFH24-1MUUA**	**CFH24-1MUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24-1VMA	**CFH24-1VMRA**	**CFH24-1VMUUA**	**CFH24-1VMUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH30MA	**CFH30MRA**	**CFH30MUUA**	**CFH30MUURA**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30VMA	**CFH30VMRA**	**CFH30VMUUA**	**CFH30VMUURA**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-1MA	**CFH30-1MRA**	**CFH30-1MUUA**	**CFH30-1MUURA**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-1VMA	**CFH30-1VMRA**	**CFH30-1VMUUA**	**CFH30-1VMUURA**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-2MA	**CFH30-2MRA**	**CFH30-2MUUA**	**CFH30-2MUURA**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-2VMA	**CFH30-2VMRA**	**CFH30-2VMUUA**	**CFH30-2VMUURA**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

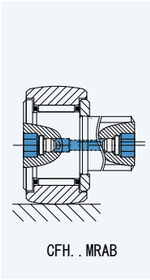
Stud diameter (d) 5 to 10mm : No grease refilling hole is provided

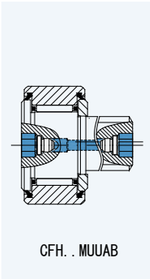
CAM FOLLOWERS STAINLESS STEEL

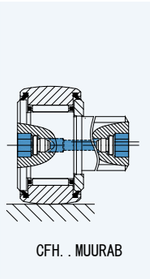
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON BOTH SIDES
GREASE NIPPLE INSTALLED




CFH. . MAB


CFH. . MRAB


CFH. . MUUAB


CFH. . MUURAB

CFH..MAB, MRAB, MUUAB, MUURAB

STAINLESS STEEL

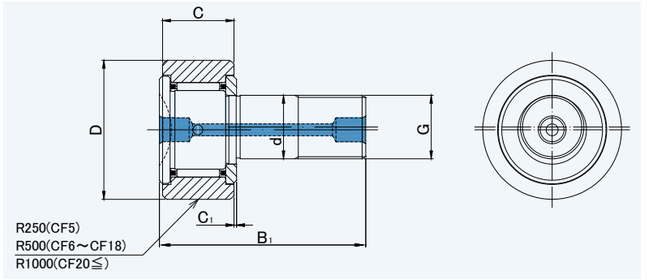
CFH..MAB, MRAB, MUUAB, MUURAB

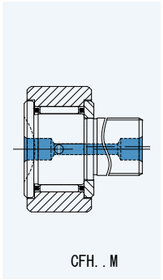
DIMENSION TABLE

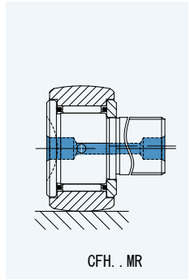
INTERCHANGE TABLE

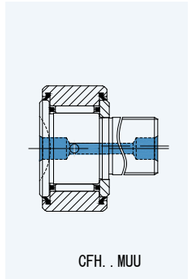
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH..MAB	CFH..MRAB	CFH..UUAB	CFH..UURAB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFH12MAB	**CFH12RMAB**	**CFH12MUUAB**	**CFH12MUURAB**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12MVAB	**CFH12VMRAB**	**CFH12VMUUAB**	**CFH12VMUURAB**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH12-1MAB	**CFH12-1RMAB**	**CFH12-1MUUAB**	**CFH12-1MUURAB**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12-1MVAB	**CFH12-1VMRAB**	**CFH12-1VMUUAB**	**CFH12-1VMUURAB**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH16MAB	**CFH16RMAB**	**CFH16MUUAB**	**CFH16MUURAB**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CFH16MVAB	**CFH16VMRAB**	**CFH16VMUUAB**	**CFH16VMUURAB**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CFH18MAB	**CFH18RMAB**	**CFH18MUUAB**	**CFH18MUURAB**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CFH18MVAB	**CFH18VMRAB**	**CFH18VMUUAB**	**CFH18VMUURAB**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CFH20MAB	**CFH20RMAB**	**CFH20MUUAB**	**CFH20MUURAB**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20MVAB	**CFH20VMRAB**	**CFH20VMUUAB**	**CFH20VMUURAB**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH20-1MAB	**CFH20-1RMAB**	**CFH20-1MUUAB**	**CFH20-1MUURAB**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20-1MVAB	**CFH20-1VMRAB**	**CFH20-1VMUUAB**	**CFH20-1VMUURAB**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH24MAB	**CFH24RMAB**	**CFH24MUUAB**	**CFH24MUURAB**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24MVAB	**CFH24VMRAB**	**CFH24VMUUAB**	**CFH24VMUURAB**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH24-1MAB	**CFH24-1RMAB**	**CFH24-1MUUAB**	**CFH24-1MUURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24-1MVAB	**CFH24-1VMRAB**	**CFH24-1VMUUAB**	**CFH24-1VMUURAB**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH30MAB	**CFH30RMAB**	**CFH30MUUAB**	**CFH30MUURAB**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30MVAB	**CFH30VMRAB**	**CFH30VMUUAB**	**CFH30VMUURAB**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-1MAB	**CFH30-1RMAB**	**CFH30-1MUUAB**	**CFH30-1MUURAB**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-1MVAB	**CFH30-1VMRAB**	**CFH30-1VMUUAB**	**CFH30-1VMUURAB**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-2MAB	**CFH30-2RMAB**	**CFH30-2MUUAB**	**CFH30-2MUURAB**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-2MVAB	**CFH30-2VMRAB**	**CFH30-2VMUUAB**	**CFH30-2VMUURAB**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

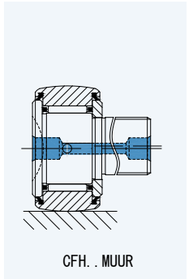
CAM FOLLOWERS STAINLESS STEEL
SOLID ECCENTRIC TYPE SCREWDRIVER SLOT HEAD




CFH. . M


CFH. . MR


CFH. . MUU


CFH. . MUUR

CFH..M, MR, MUU, MUUR

DIMENSION TABLE

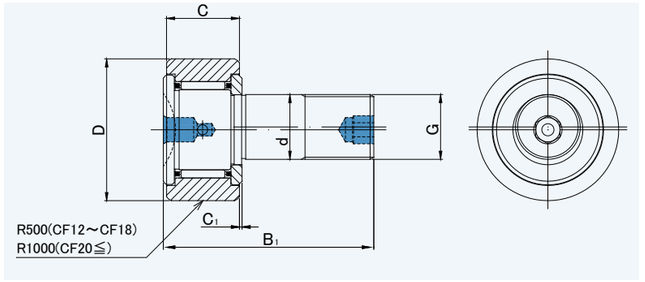
INTERCHANGE TABLE

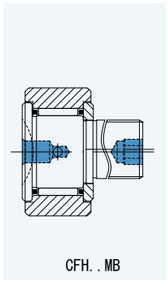
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH..M	CFH..MR	CFH..MUU	CFH..MUUR	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFH5M	**CFH5MR**	**CFH5MUU**	**CFH5MUUR**	**10.5**	5	13	9	M5×0.8	23	0.5	2 880	2 540	—	—	—	—	—	—	—	—
CFH5VM	**CFH5VMR**	**CFH5VMUU**	**CFH5VMUUR**	**10.5**	5	13	9	M5×0.8	23	0.5	4 690	5 060	—	—	—	—	—	—	—	—
CFH6M	**CFH6MR**	**CFH6MUU**	**CFH6MUUR**	**18.5**	6	16	11	M6×1	28	0.6	3 330	3 330	—	—	—	—	—	—	—	—
CFH6VM	**CFH6VMR**	**CFH6VMUU**	**CFH6VMUUR**	**18.5**	6	16	11	M6×1	28	0.6	6 400	7 840	—	—	—	—	—	—	—	—
CFH8M	**CFH8MR**	**CFH8MUU**	**CFH8MUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	3 960	4 330	—	—	—	—	—	—	—	—
CFH8VM	**CFH8VMR**	**CFH8VMUU**	**CFH8VMUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	7 470	10 270	—	—	—	—	—	—	—	—
CFH10M	**CFH10MR**	**CFH10MUU**	**CFH10MUUR**	**45**	10	22	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CFH10VM	**CFH10VMR**	**CFH10VMUU**	**CFH10VMUUR**	**45**	10	22	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CFH10-1M	**CFH10-1MR**	**CFH10-1MUU**	**CFH10-1MUUR**	**60**	10	26	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CFH10-1VM	**CFH10-1VMR**	**CFH10-1VMUU**	**CFH10-1VMUUR**	**60**	10	26	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CFH12M	**CFH12MR**	**CFH12MUU**	**CFH12MUUR**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12VM	**CFH12VMR**	**CFH12VMUU**	**CFH12VMUUR**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH12-1M	**CFH12-1MR**	**CFH12-1MUU**	**CFH12-1MUUR**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12-1VM	**CFH12-1VMR**	**CFH12-1VMUU**	**CFH12-1VMUUR**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH16M	**CFH16MR**	**CFH16MUU**	**CFH16MUUR**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CFH16VM	**CFH16VMR**	**CFH16VMUU**	**CFH16VMUUR**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CFH18M	**CFH18MR**	**CFH18MUU**	**CFH18MUUR**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CFH18VM	**CFH18VMR**	**CFH18VMUU**	**CFH18VMUUR**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CFH20M	**CFH20MR**	**CFH20MUU**	**CFH20MUUR**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20VM	**CFH20VMR**	**CFH20VMUU**	**CFH20VMUUR**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH20-1M	**CFH20-1MR**	**CFH20-1MUU**	**CFH20-1MUUR**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20-1VM	**CFH20-1VMR**	**CFH20-1VMUU**	**CFH20-1VMUUR**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH24M	**CFH24MR**	**CFH24MUU**	**CFH24MUUR**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24VM	**CFH24VMR**	**CFH24VMUU**	**CFH24VMUUR**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH24-1M	**CFH24-1MR**	**CFH24-1MUU**	**CFH24-1MUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24-1VM	**CFH24-1VMR**	**CFH24-1VMUU**	**CFH24-1VMUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH30M	**CFH30MR**	**CFH30MUU**	**CFH30MUUR**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30VM	**CFH30VMR**	**CFH30VMUU**	**CFH30VMUUR**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-1M	**CFH30-1MR**	**CFH30-1MUU**	**CFH30-1MUUR**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-1VM	**CFH30-1VMR**	**CFH30-1VMUU**	**CFH30-1VMUUR**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-2M	**CFH30-2MR**	**CFH30-2MUU**	**CFH30-2MUUR**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-2VM	**CFH30-2VMR**	**CFH30-2VMUU**	**CFH30-2VMUUR**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

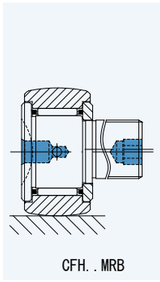
Stud diameter (d) 5 to 10mm : Without oil hole in the thread side.

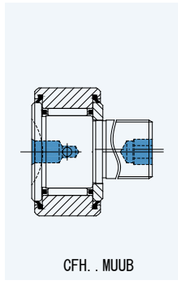
CAM FOLLOWERS STAINLESS STEEL

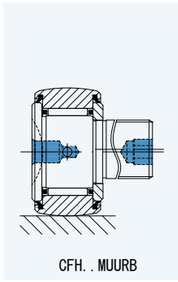
SOLID ECCENTRIC TYPE
HEXAGON SOCKET ON THREAD SIDE
SCREWDRIVER SLOT HEAD




CFH. . MB


CFH. . MRB


CFH. . MUUB


CFH. . MUURB

CFH..MB, MRB, MUUB, MUURB

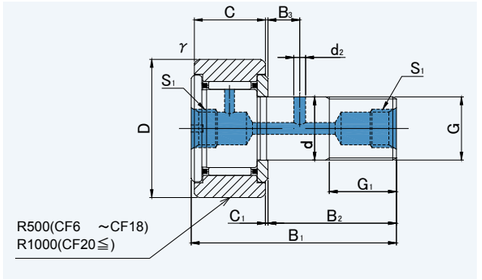
DIMENSION TABLE

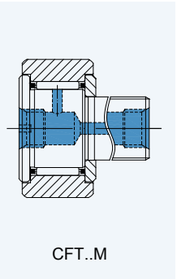
INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFH..MB	CFH..MRB	CFH..MUUB	CFH..MUURB	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFH12MB	**CFH12MRB**	**CFH12MUUB**	**CFH12MUURB**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12VMB	**CFH12VMRB**	**CFH12VMUUB**	**CFH12VMUURB**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH12-1MB	**CFH12-1MRB**	**CFH12-1MUUB**	**CFH12-1MUURB**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFH12-1VMB	**CFH12-1VMRB**	**CFH12-1VMUUB**	**CFH12-1VMUURB**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFH16MB	**CFH16MRB**	**CFH16MUUB**	**CFH16MUURB**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CFH16VMB	**CFH16VMRB**	**CFH16VMUUB**	**CFH16VMUURB**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CFH18MB	**CFH18MRB**	**CFH18MUUB**	**CFH18MUURB**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CFH18VMB	**CFH18VMRB**	**CFH18VMUUB**	**CFH18VMUURB**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CFH20MB	**CFH20MRB**	**CFH20MUUB**	**CFH20MUURB**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20VMB	**CFH20VMRB**	**CFH20VMUUB**	**CFH20VMUURB**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH20-1MB	**CFH20-1MRB**	**CFH20-1MUUB**	**CFH20-1MUURB**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFH20-1VMB	**CFH20-1VMRB**	**CFH20-1VMUUB**	**CFH20-1VMUURB**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFH24MB	**CFH24MRB**	**CFH24MUUB**	**CFH24MUURB**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24VMB	**CFH24VMRB**	**CFH24VMUUB**	**CFH24VMUURB**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH24-1MB	**CFH24-1MRB**	**CFH24-1MUUB**	**CFH24-1MUURB**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFH24-1VMB	**CFH24-1VMRB**	**CFH24-1VMUUB**	**CFH24-1VMUURB**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFH30MB	**CFH30MRB**	**CFH30MUUB**	**CFH30MUURB**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30VMB	**CFH30VMRB**	**CFH30VMUUB**	**CFH30VMUURB**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-1MB	**CFH30-1MRB**	**CFH30-1MUUB**	**CFH30-1MUURB**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-1VMB	**CFH30-1VMRB**	**CFH30-1VMUUB**	**CFH30-1VMUURB**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFH30-2MB	**CFH30-2MRB**	**CFH30-2MUUB**	**CFH30-2MUURB**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFH30-2VMB	**CFH30-2VMRB**	**CFH30-2VMUUB**	**CFH30-2VMUURB**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

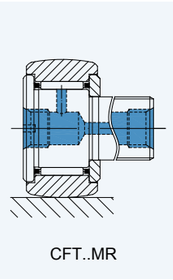
CAM FOLLOWERS STAINLESS STEEL

TAP HOLE FOR PIPING SCREWDRIVER SLOT HEAD

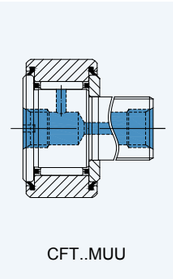




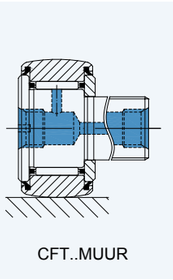
CFT..M



CFT..MR



CFT..MUU



CFT..MUUR

CFT..M, MR, MUU, MUUR

DIMENSION TABLE

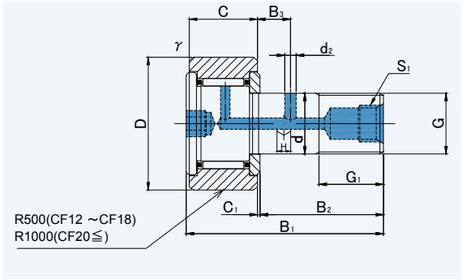
INTERCHANGE TABLE

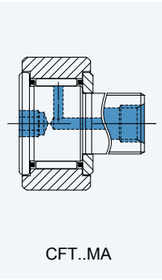
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFT..M	CFT..MR	CFT..MUU	CFT..MUUR	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFT6M	**CFT6MR**	**CFT6MUU**	**CFT6MUUR**	**18.5**	6	16	11	M6×1	28	0.6	3 330	3 330	—	—	—	—	—	—	—	—
CFT6VM	**CFT6VMR**	**CFT6VMUU**	**CFT6VMUUR**	**18.5**	6	16	11	M6×1	28	0.6	6 400	7 840	—	—	—	—	—	—	—	—
CFT8M	**CFT8MR**	**CFT8MUU**	**CFT8MUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	3 960	4 330	—	—	—	—	—	—	—	—
CFT8VM	**CFT8VMR**	**CFT8VMUU**	**CFT8VMUUR**	**28.5**	8	19	11	M8×1.25	32	0.6	7 470	10 270	—	—	—	—	—	—	—	—
CFT10M	**CFT10MR**	**CFT10MUU**	**CFT10MUUR**	**45**	10	22	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CFT10VM	**CFT10VMR**	**CFT10VMUU**	**CFT10VMUUR**	**45**	10	22	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CFT10-1M	**CFT10-1MR**	**CFT10-1MUU**	**CFT10-1MUUR**	**60**	10	26	12	M10×1.25	36	0.6	4 950	6 310	—	—	—	—	—	—	—	—
CFT10-1VM	**CFT10-1VMR**	**CFT10-1VMUU**	**CFT10-1VMUUR**	**60**	10	26	12	M10×1.25	36	0.6	8 740	13 340	—	—	—	—	—	—	—	—
CFT12M	**CFT12MR**	**CFT12MUU**	**CFT12MUUR**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFT12VM	**CFT12VMR**	**CFT12VMUU**	**CFT12VMUUR**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFT12-1M	**CFT12-1MR**	**CFT12-1MUU**	**CFT12-1MUUR**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFT12-1VM	**CFT12-1VMR**	**CFT12-1VMUU**	**CFT12-1VMUUR**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFT16M	**CFT16MR**	**CFT16MUU**	**CFT16MUUR**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CFT16VM	**CFT16VMR**	**CFT16VMUU**	**CFT16VMUUR**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CFT18M	**CFT18MR**	**CFT18MUU**	**CFT18MUUR**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CFT18VM	**CFT18VMR**	**CFT18VMUU**	**CFT18VMUUR**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CFT20M	**CFT20MR**	**CFT20MUU**	**CFT20MUUR**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFT20VM	**CFT20VMR**	**CFT20VMUU**	**CFT20VMUUR**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFT20-1M	**CFT20-1MR**	**CFT20-1MUU**	**CFT20-1MUUR**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFT20-1VM	**CFT20-1VMR**	**CFT20-1VMUU**	**CFT20-1VMUUR**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFT24M	**CFT24MR**	**CFT24MUU**	**CFT24MUUR**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFT24VM	**CFT24VMR**	**CFT24VMUU**	**CFT24VMUUR**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFT24-1M	**CFT24-1MR**	**CFT24-1MUU**	**CFT24-1MUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFT24-1VM	**CFT24-1VMR**	**CFT24-1VMUU**	**CFT24-1VMUUR**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFT30M	**CFT30MR**	**CFT30MUU**	**CFT30MUUR**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFT30VM	**CFT30VMR**	**CFT30VMUU**	**CFT30VMUUR**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFT30-1M	**CFT30-1MR**	**CFT30-1MUU**	**CFT30-1MUUR**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFT30-1VM	**CFT30-1VMR**	**CFT30-1VMUU**	**CFT30-1VMUUR**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFT30-2M	**CFT30-2MR**	**CFT30-2MUU**	**CFT30-2MUUR**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFT30-2VM	**CFT30-2VMR**	**CFT30-2VMUU**	**CFT30-2VMUUR**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

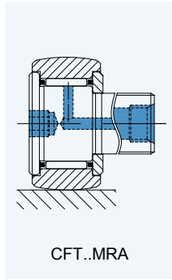
Stud diameter (d) 6 to 10mm : Without oil hole in the thread side.

CAM FOLLOWERS STAINLESS STEEL

TAP HOLE FOR PIPING
HEXAGON SOCKET ON STUD HEAD




CFT..MA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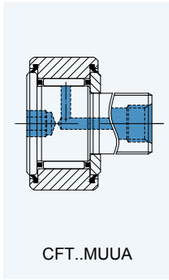
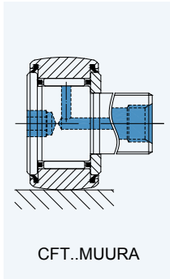

CFT..MUUA


CFT..MUURA

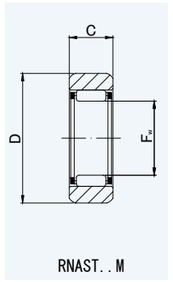
CFT..MA, MRA, MUUA, MUURA

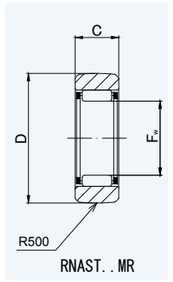
DIMENSION TABLE

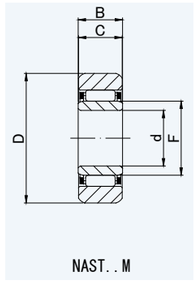
INTERCHANGE TABLE

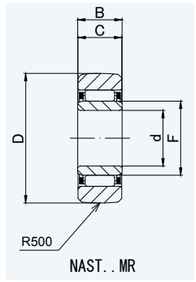
JNS NUMBER CYLINDRICAL OUTER RING	JNS NUMBER CROWNED OUTER RING	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)						Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
													CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
CFT..MA	CFH..MRA	CFT..MUUA	CFT..MUURA	g	d	D	C	G	B1	C1	Cr N	Cor N	—	—	—	—	—	—	—	—
CFT12MA	**CFT12MRA**	**CFT12MUUA**	**CFT12MUURA**	**95**	12	30	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFT12VMA	**CFT12VMRA**	**CFT12VMUUA**	**CFT12VMUURA**	**95**	12	30	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFT12-1MA	**CFT12-1MRA**	**CFT12-1MUUA**	**CFT12-1MUURA**	**105**	12	32	14	M12×1.5	40	0.6	7 300	9 010	—	—	—	—	—	—	—	—
CFT12-1VMA	**CFT12-1VMRA**	**CFT12-1VMUUA**	**CFT12-1VMUURA**	**105**	12	32	14	M12×1.5	40	0.6	12 350	18 120	—	—	—	—	—	—	—	—
CFT16MA	**CFT16MRA**	**CFT16MUUA**	**CFT16MUURA**	**170**	16	35	18	M16×1.5	52	0.8	11 080	16 860	—	—	—	—	—	—	—	—
CFT16VMA	**CFT16VMRA**	**CFT16VMUUA**	**CFT16VMUURA**	**170**	16	35	18	M16×1.5	52	0.8	19 020	34 610	—	—	—	—	—	—	—	—
CFT18MA	**CFT18MRA**	**CFT18MUUA**	**CFT18MUURA**	**250**	18	40	20	M18×1.5	58	0.8	13 520	23 180	—	—	—	—	—	—	—	—
CFT18VMA	**CFT18VMRA**	**CFT18VMUUA**	**CFT18VMUURA**	**250**	18	40	20	M18×1.5	58	0.8	23 250	47 240	—	—	—	—	—	—	—	—
CFT20MA	**CFT20MRA**	**CFT20MUUA**	**CFT20MUURA**	**460**	20	52	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFT20VMA	**CFT20VMRA**	**CFT20VMUUA**	**CFT20VMUURA**	**460**	20	52	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFT20-1MA	**CFT20-1MRA**	**CFT20-1MUUA**	**CFT20-1MUURA**	**385**	20	47	24	M20×1.5	66	0.8	19 020	31 830	—	—	—	—	—	—	—	—
CFT20-1VMA	**CFT20-1VMRA**	**CFT20-1VMUUA**	**CFT20-1VMUURA**	**385**	20	47	24	M20×1.5	66	0.8	30 470	59 320	—	—	—	—	—	—	—	—
CFT24MA	**CFT24MRA**	**CFT24MUUA**	**CFT24MUURA**	**815**	24	62	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFT24VMA	**CFT24VMRA**	**CFT24VMUUA**	**CFT24VMUURA**	**815**	24	62	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFT24-1MA	**CFT24-1MRA**	**CFT24-1MUUA**	**CFT24-1MUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	28 040	48 410	—	—	—	—	—	—	—	—
CFT24-1VMA	**CFT24-1VMRA**	**CFT24-1VMUUA**	**CFT24-1VMUURA**	**1 140**	24	72	29	M24×1.5	80	0.8	42 820	84 650	—	—	—	—	—	—	—	—
CFT30MA	**CFT30MRA**	**CFT30MUUA**	**CFT30MUURA**	**1 870**	30	80	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFT30VMA	**CFT30VMRA**	**CFT30VMUUA**	**CFT30VMUURA**	**1 870**	30	80	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFT30-1MA	**CFT30-1MRA**	**CFT30-1MUUA**	**CFT30-1MUURA**	**2 030**	30	85	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFT30-1VMA	**CFT30-1VMRA**	**CFT30-1VMUUA**	**CFT30-1VMUURA**	**2 030**	30	85	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—
CFT30-2MA	**CFT30-2MRA**	**CFT30-2MUUA**	**CFT30-2MUURA**	**2 220**	30	90	35	M30×1.5	100	1	41 740	78 250	—	—	—	—	—	—	—	—
CFT30-2VMA	**CFT30-2VMRA**	**CFT30-2VMUUA**	**CFT30-2VMUURA**	**2 220**	30	90	35	M30×1.5	100	1	62 210	132 530	—	—	—	—	—	—	—	—

INTERCHANGE









RNAST..M, MR, NAST..M, MR

DIMENSION TABLE

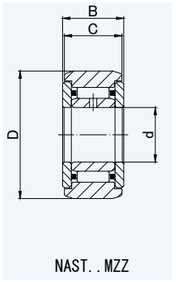
INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING WITHOUT INNER RING	JNS NUMBER CROWNED OUTER RING WITHOUT INNER RING	Mass (Approx.)	JNS NUMBER CYLINDRICAL OUTER RING WITH INNER RING	JNS NUMBER CROWNED OUTER RING WITH INNER RING	Mass (Approx.)	Dimensions(mm)					Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		TORRINGTON(KOYO)	
													CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING	CYLINDRICAL OUTER RING WITHOUT INNER RING	CROWNED OUTER RING WITHOUT INNER RING
RNAST..M	RNAST..MR	g	NAST..M	NAST..MR	g	Fw (F)	D	d	C	B	Cr N	Cor N	—	—	—	—	—	—	—	—
RNAST5M	**RNAST5MR**	**8.9**	—	—	—	7	16	—	7.8	—	2 520	2 190	—	—	—	—	—	—	—	—
RNAST6M	**RNAST6MR**	**13.9**	**NAST6M**	**NAST6MR**	**17.8**	10	19	6	9.8	10	3 790	4 180	—	—	—	—	—	—	—	—
RNAST8M	**RNAST8MR**	**23.5**	**NAST8M**	**NAST8MR**	**28**	12	24	8	9.8	10	5 220	5 410	—	—	—	—	—	—	—	—
RNAST10M	**RNAST10MR**	**42.5**	**NAST10M**	**NAST10MR**	**50**	14	30	10	11.8	12	8 920	8 890	—	—	—	—	—	—	—	—
RNAST12M	**RNAST12MR**	**49.5**	**NAST12M**	**NAST12MR**	**58**	16	32	12	11.8	12	9 560	10 020	—	—	—	—	—	—	—	—
RNAST15M	**RNAST15MR**	**50**	**NAST15M**	**NAST15MR**	**62**	20	35	15	11.8	12	11 310	13 150	—	—	—	—	—	—	—	—
RNAST17M	**RNAST17MR**	**90**	**NAST17M**	**NAST17MR**	**110**	22	40	17	15.8	16	16 000	19 220	—	—	—	—	—	—	—	—
RNAST20M	**RNAST20MR**	**135**	**NAST20M**	**NAST20MR**	**155**	25	47	20	15.8	16	17 660	22 540	—	—	—	—	—	—	—	—
RNAST25M	**RNAST25MR**	**152**	**NAST25M**	**NAST25MR**	**180**	30	52	25	15.8	16	19 040	26 120	—	—	—	—	—	—	—	—
RNAST30M	**RNAST30MR**	**255**	**NAST30M**	**NAST30MR**	**320**	38	62	30	19.8	20	27 870	41 760	—	—	—	—	—	—	—	—
RNAST35M	**RNAST35MR**	**375**	**NAST35M**	**NAST35MR**	**440**	42	72	35	19.8	20	29 620	46 550	—	—	—	—	—	—	—	—
RNAST40M	**RNAST40MR**	**420**	**NAST40M**	**NAST40MR**	**530**	50	80	40	19.8	20	32 840	56 210	—	—	—	—	—	—	—	—
RNAST45M	**RNAST45MR**	**460**	**NAST45M**	**NAST45MR**	**580**	55	85	45	19.8	20	34 130	61 080	—	—	—	—	—	—	—	—
RNAST50M	**RNAST50MR**	**500**	**NAST50M**	**NAST50MR**	**635**	60	90	50	19.8	20	35 600	66 050	—	—	—	—	—	—	—	—

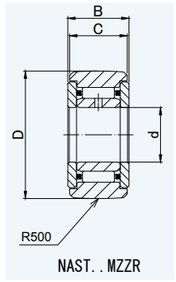
INTERCHANGE

ROLLER FOLLOWERS STAINLESS STEEL

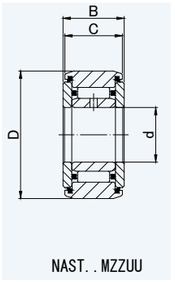
SEPARABLE
WITH INNER RING
WITH SHIELD



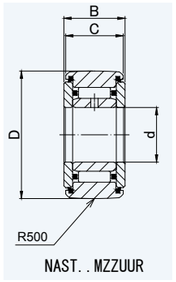
NAST. . MZZ



NAST. . MZZR



NAST. . MZZUU



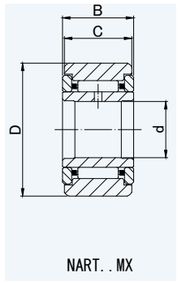
NAST. . MZZUUR

NAST..MZZ, MZZR, MZZUU, MZZUUR

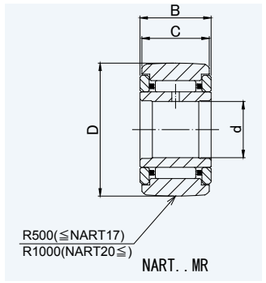
DIMENSION TABLE

INTERCHANGE TABLE

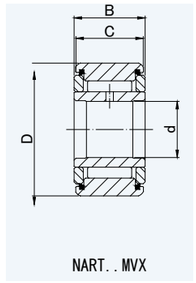
JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		TORRINGTON(KOYO)	
											CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
NAST..MZZ	NAST..MZZR	NAST..MZZUU	NAST..MZZUUR	g	d	D	B	C	Cr N	Cor N	—	—	—	—	—	—	—	—
NAST6MZZ	**NAST6MZZR**	**NAST6MZZUU**	**NAST6MZZUUR**	**24.5**	6	19	14	13.8	3 790	4 180	—	—	—	—	—	—	—	—
NAST8MZZ	**NAST8MZZR**	**NAST8MZZUU**	**NAST8MZZUUR**	**39**	8	24	14	13.8	5 220	5 410	—	—	—	—	—	—	—	—
NAST10MZZ	**NAST10MZZR**	**NAST10MZZUU**	**NAST10MZZUUR**	**65**	10	30	16	15.8	8 920	8 890	—	—	—	—	—	—	—	—
NAST12MZZ	**NAST12MZZR**	**NAST12MZZUU**	**NAST12MZZUUR**	**75**	12	32	16	15.8	9 560	10 020	—	—	—	—	—	—	—	—
NAST15MZZ	**NAST15MZZR**	**NAST15MZZUU**	**NAST15MZZUUR**	**83**	15	35	16	15.8	11 310	13 150	—	—	—	—	—	—	—	—
NAST17MZZ	**NAST17MZZR**	**NAST17MZZUU**	**NAST17MZZUUR**	**135**	17	40	20	19.8	16 000	19 220	—	—	—	—	—	—	—	—
NAST20MZZ	**NAST20MZZR**	**NAST20MZZUU**	**NAST20MZZUUR**	**195**	20	47	20	19.8	17 660	22 540	—	—	—	—	—	—	—	—
NAST25MZZ	**NAST25MZZR**	**NAST25MZZUU**	**NAST25MZZUUR**	**225**	25	52	20	19.8	19 040	26 120	—	—	—	—	—	—	—	—
NAST30MZZ	**NAST30MZZR**	**NAST30MZZUU**	**NAST30MZZUUR**	**400**	30	62	25	24.8	27 870	41 760	—	—	—	—	—	—	—	—
NAST35MZZ	**NAST35MZZR**	**NAST35MZZUU**	**NAST35MZZUUR**	**550**	35	72	25	24.8	29 620	46 550	—	—	—	—	—	—	—	—
NAST40MZZ	**NAST40MZZR**	**NAST40MZZUU**	**NAST40MZZUUR**	**710**	40	80	26	25.8	32 840	56 210	—	—	—	—	—	—	—	—
NAST45MZZ	**NAST45MZZR**	**NAST45MZZUU**	**NAST45MZZUUR**	**760**	45	85	26	25.8	34 130	61 080	—	—	—	—	—	—	—	—
NAST50MZZ	**NAST50MZZR**	**NAST50MZZUU**	**NAST50MZZUUR**	**830**	50	90	26	25.8	35 600	66 050	—	—	—	—	—	—	—	—



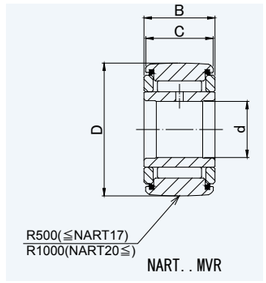
NART. . MX



NART. . MR



NART. . MVX



NART. . MVR

NART..MX, MR, MUUX, MUUR

DIMENSION TABLE

INTERCHANGE TABLE

JNS NUMBER CYLINDRICAL OUTER RING WITHOUT SEALS	JNS NUMBER CROWNED OUTER RING WITHOUT SEALS	JNS NUMBER CYLINDRICAL OUTER RING WITH SEALS	JNS NUMBER CROWNED OUTER RING WITH SEALS	Mass (Approx.)	Dimensions(mm)				Basic dynamic load rating	Basic static load rating	INA		NTN		IKO		MCGILL	
											CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS	CYLINDRICAL OUTER RING WITHOUT SEALS	CROWNED OUTER RING WITHOUT SEALS
NART..MX	NART..MR	NART..MUUX	NART..MUUR	g	d	D	B	C	Cr N	Cor N	—	—	—	—	—	—	—	—
NART5MX	**NART5MR**	**NART5MUUX**	**NART5MUUR**	**14.5**	5	16	12	11	3 330	3 420	—	—	—	—	—	—	—	—
NART5MVX	**NART5MVR**	**NART5MUUVX**	**NART5MUUVR**	**15.1**	5	16	12	11	6 210	7 670	—	—	—	—	—	—	—	—
NART6MX	**NART6MR**	**NART6MUUX**	**NART6MUUR**	**20.5**	6	19	12	11	3 860	4 320	—	—	—	—	—	—	—	—
NART6MVX	**NART6MVR**	**NART6MUUVX**	**NART6MUUVR**	**21.5**	6	19	12	11	7 020	9 470	—	—	—	—	—	—	—	—
NART8MX	**NART8MR**	**NART8MUUX**	**NART8MUUR**	**41.5**	8	24	15	14	6 070	6 710	—	—	—	—	—	—	—	—
NART8MVX	**NART8MVR**	**NART8MUUVX**	**NART8MUUVR**	**42.5**	8	24	15	14	10 850	14 350	—	—	—	—	—	—	—	—
NART10MX	**NART10MR**	**NART10MUUX**	**NART10MUUR**	**64.5**	10	30	15	14	7 910	7 630	—	—	—	—	—	—	—	—
NART10MVX	**NART10MVR**	**NART10MUUVX**	**NART10MUUVR**	**66.5**	10	30	15	14	14 350	16 650	—	—	—	—	—	—	—	—
NART12MX	**NART12MR**	**NART12MUUX**	**NART12MUUR**	**71**	12	32	15	14	8 370	8 460	—	—	—	—	—	—	—	—
NART12MVX	**NART12MVR**	**NART12MUUVX**	**NART12MUUVR**	**73**	12	32	15	14	15 450	18 860	—	—	—	—	—	—	—	—
NART15MX	**NART15MR**	**NART15MUUX**	**NART15MUUR**	**102**	15	35	19	18	13 240	16 190	—	—	—	—	—	—	—	—
NART15MVX	**NART15MVR**	**NART15MUUVX**	**NART15MUUVR**	**106**	15	35	19	18	23 090	33 480	—	—	—	—	—	—	—	—
NART17MX	**NART17MR**	**NART17MUUX**	**NART17MUUR**	**149**	17	40	21	20	17 110	20 700	—	—	—	—	—	—	—	—
NART17MVX	**NART17MVR**	**NART17MUUVX**	**NART17MUUVR**	**155**	17	40	21	20	29 440	42 500	—	—	—	—	—	—	—	—
NART20MX	**NART20MR**	**NART20MUUX**	**NART20MUUR**	**250**	20	47	25	24	22 170	30 080	—	—	—	—	—	—	—	—
NART20MVX	**NART20MVR**	**NART20MUUVX**	**NART20MUUVR**	**255**	20	47	25	24	38 360	61 910	—	—	—	—	—	—	—	—
NART25MX	**NART25MR**	**NART25MUUX**	**NART25MUUR**	**285**	25	52	25	24	23 730	34 500	—	—	—	—	—	—	—	—
NART25MVX	**NART25MVR**	**NART25MUUVX**	**NART25MUUVR**	**295**	25	52	25	24	41 860	72 680	—	—	—	—	—	—	—	—
NART30MX	**NART30MR**	**NART30MUUX**	**NART30MUUR**	**470**	30	62	29	28	33 300	52 340	—	—	—	—	—	—	—	—
NART30MVX	**NART30MVR**	**NART30MUUVX**	**NART30MUUVR**	**485**	30	62	29	28	55 010	101 560	—	—	—	—	—	—	—	—
NART35MX	**NART35MR**	**NART35MUUX**	**NART35MUUR**	**640**	35	72	29	28	35 140	57 770	—	—	—	—	—	—	—	—
NART35MVX	**NART35MVR**	**NART35MUUVX**	**NART35MUUVR**	**655**	35	72	29	28	57 960	111 780	—	—	—	—	—	—	—	—
NART40MX	**NART40MR**	**NART40MUUX**	**NART40MUUR**	**845**	40	80	32	30	42 500	77 920	—	—	—	—	—	—	—	—
NART40MVX	**NART40MVR**	**NART40MUUVX**	**NART40MUUVR**	**865**	40	80	32	30	70 100	151 060	—	—	—	—	—	—	—	—
NART45MX	**NART45MR**	**NART45MUUX**	**NART45MUUR**	**915**	45	85	32	30	45 350	87 580	—	—	—	—	—	—	—	—
NART45MVX	**NART45MVR**	**NART45MUUVX**	**NART45MUUVR**	**935**	45	85	32	30	73 780	166 610	—	—	—	—	—	—	—	—
NART50MX	**NART50MR**	**NART50MUUX**	**NART50MUUR**	**980**	50	90	32	30	47 010	94 110	—	—	—	—	—	—	—	—
NART50MVX	**NART50MVR**	**NART50MUUVX**	**NART50MUUVR**	**1 010**	50	90	32	30	77 370	182 160	—	—	—	—	—	—	—	—

All of JNS products are made in Japan.

HEAD OFFICE

OSAKA,JAPAN

NARA,JAPAN

NARA PLANT

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