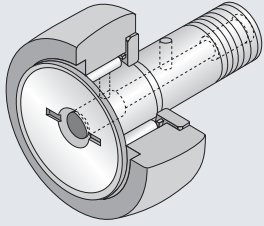
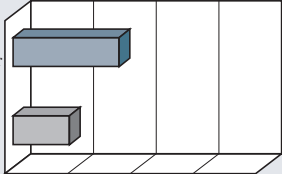
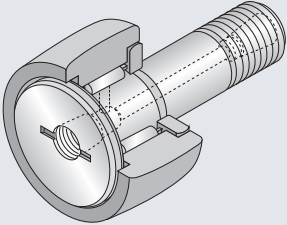

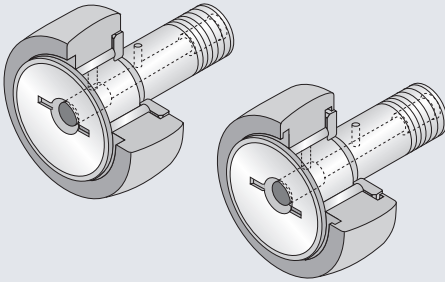
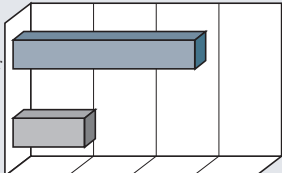
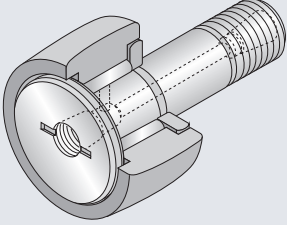



## Cam Followers (Stud Type Track Roller)

This is a track roller complete with stud instead of inner ring, which of the outer ring rolls on the track. These NTN stud type track rollers are applied to eccentric roller, guide roller, rocker arm roller, etc. similarly to the roller followers. One end of the stud is so threaded as to facilitate mounting thereof. And the outer ring is guided in

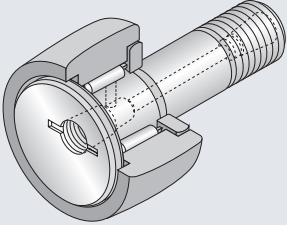
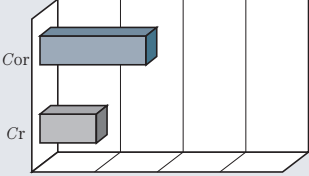
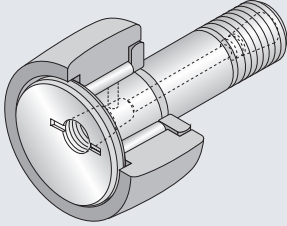
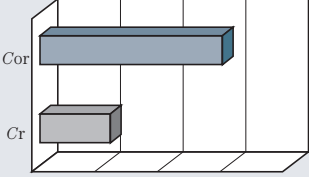
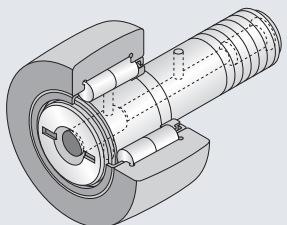
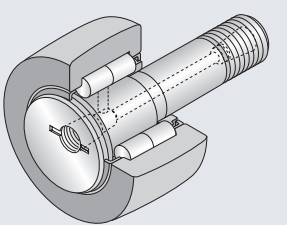
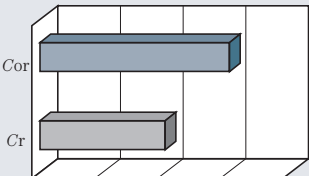
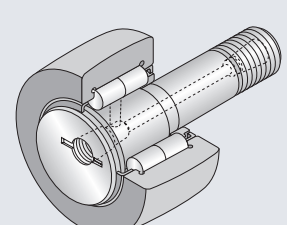
axial direction by the side plates which are press-fitted in the flange end of the stud and the stud itself.

The outer ring has a thick wall and both of spherical outer profile and cylindrical outer surface (tail code: X) are available for it similarly to the outer ring of the roller follower.

Follower type	Applied shaft diameter (mm)	Load capacity	Composition of nominal bearing number
<p><b>KR</b> <b>CR</b></p> 	<p>KR : <math>\phi 3 \sim \phi 30</math></p> <p>CR : <math>\phi 4.826 \sim \phi 22.225</math></p>	 <p>Cor</p> <p>Cr</p>	<p><b>KR 12 T2 H / 3A</b></p> <ul style="list-style-type: none"> <li>— Tailed code</li> <li>— T2: Resin cage</li> <li>— H: With hexagon hole</li> <li>— 3A: grease</li> <li>— Dimension code</li> <li>— Type code</li> </ul>
<p><b>KRT</b></p> 	<p><math>\phi 6 \sim \phi 30</math></p>	 <p><b>KR90</b></p>	<p><b>KRT 32 X LL</b></p> <ul style="list-style-type: none"> <li>— Tail code</li> <li>— LL: Seal</li> <li>— Tailed code</li> <li>— X: Cylinder outer diameter</li> <li>— Dimension code</li> <li>— Type code</li> </ul>
<p><b>KRV</b> <b>CRV</b></p> 	<p>KRV : <math>\phi 3 \sim \phi 30</math></p> <p>CRV : <math>\phi 4.826 \sim \phi 63.5</math></p>	 <p>Cor</p> <p>Cr</p>	<p><b>CRV 30 X LL</b></p> <ul style="list-style-type: none"> <li>— Tail code</li> <li>— LL: Seal</li> <li>— Tailed code</li> <li>— X: Cylinder outer diameter</li> <li>— Dimension code</li> <li>— Type code</li> </ul>
<p><b>KRVT</b></p> 	<p><math>\phi 6 \sim \phi 30</math></p>	 <p><b>KRV90</b></p>	<p><b>KRVT 52 X LL</b></p> <ul style="list-style-type: none"> <li>— Tail code</li> <li>— LL: Seal</li> <li>— Tailed code</li> <li>— X: Cylinder outer diameter</li> <li>— Dimension code</li> <li>— Type code</li> </ul>

※ Each listed load capacity is subject to the reference bearing diameter of  $\phi 30$ .

Follower components	Features
<p>Outer ring outer diameter : <math>\phi</math> 12                      With metric series cage                      Without seal                      Outer profile : spherical                      Stud head : with hexagon hole                      Cage : resin cage                      Grease : already filled</p>	<ul style="list-style-type: none"> <li>● Standard cage is of steel plate punched type.</li> <li>● Polyamide resin cage (Tail code: T2) can be used, too.                          Allowable temperature: 120°C                          Continuous operating temperature: 100°C or less</li> <li>● Suited to high speed.</li> <li>● Due to much filled grease, these types can be used for a long time without additional greasing though actual operating conditions.</li> </ul>
<p>Outer ring outer diameter : <math>\phi</math> 32                      With metric series cage                      Stud head : with recessed slot for screwdriver use and tapped hole                      Outer surface profile : cylindrical                      Seal : with                      Grease : already filled.</p>	<ul style="list-style-type: none"> <li>● The standard follower of Type KRT has no hexagon hole (tail code: H), but with a threaded plug with hexagon socket as standard.</li> <li>● The follower with neither seal nor grease code as tail code is of grease non-filled type.</li> </ul>
<p>Outer ring outer diameter : <math>\phi</math> 47.825                      Inch series full-complement roller type                      Stud head : with recessed slot for screwdriver use                      Outer surface profile : cylindrical                      Seal : with                      Grease : already filled.</p>	<ul style="list-style-type: none"> <li>● Suited to high load.</li> <li>● Lower allowable running speed than the type with cage.</li> <li>● Grease replenishing interval must be shortened due to the small spacing volume.</li> </ul>
<p>Outer ring outer diameter : <math>\phi</math> 32                      With metric series cage                      Stud head : With recessed slot for screwdriver use and tapped hole                      Outer surface profile : cylindrical                      Seal : with                      Grease : already filled.</p>	<ul style="list-style-type: none"> <li>● The standard follower of Type KRVT has no hexagon hole (tail code H), but with a threaded plug with hexagon socket as standard.</li> </ul>

Follower type	Applied shaft diameter (mm)	Load capacity	Composition of nominal bearing number
<p><b>KRU</b></p> 	<p><math>\phi 6 \sim \phi 30</math></p>	 <p><b>KRU90</b></p>	<p><b>KRU 32 LL</b></p> <ul style="list-style-type: none"> <li>— Tail code LL: seal</li> <li>— Dimension code 32</li> <li>— Type code KRU</li> </ul>
<p><b>KRVU</b></p> 	<p><math>\phi 6 \sim \phi 30</math></p>	 <p><b>KRVU90</b></p>	<p><b>KRVU 62 X LL</b></p> <ul style="list-style-type: none"> <li>— Tail code LL: seal</li> <li>— Tail code X: Cylinder outer diameter</li> <li>— Dimension code 62</li> <li>— Type code KRVU</li> </ul>
<p><b>NUKR</b></p> 	<p><math>\phi 12 \sim \phi 64</math></p>		<p><b>NUKR 80 H</b></p> <ul style="list-style-type: none"> <li>— Tail code H: with hexagon socket</li> <li>— Dimension code 80</li> <li>— Type code NUKR</li> </ul>
<p><b>NUKRT</b></p> 	<p><math>\phi 12 \sim \phi 64</math></p>	 <p><b>NUKR90</b></p>	<p><b>NUKRT 90</b></p> <ul style="list-style-type: none"> <li>— Dimension code 90</li> <li>— Type code NUKRT</li> </ul>
<p><b>NUKRU</b></p> 	<p><math>\phi 12 \sim \phi 64</math></p>		<p><b>NUKRU 140 X</b></p> <ul style="list-style-type: none"> <li>— Tail code X: Cylinder outer diameter</li> <li>— Dimension code 140</li> <li>— Dimension code NUKRU</li> </ul>

※ Each listed load capacity is subject to the reference bearing diameter of  $\phi 30$ .

Follower components	Features
<p>Outer ring outer diameter: <math>\phi 32</math>                      Metric series stud with cage, eccentric type                      Stud head : with recessed slot for screwdriver use and tapped hole                      Outer profile: spherical                      Seal : with                      Grease : already filled</p>	<ul style="list-style-type: none"> <li>● Unlike Type KRT and KRVT, Type KRU and KRVU have the eccentric stud (eccentricity : 0.25 to 1.0mm) so as to enable to adjust positional variation of the stud mounting hole.</li> <li>● The standard follower has no hexagon hole (tail code H), but with a threaded plug with hexagon socket as standard.</li> <li>● Type KRU --without seal. In addition, the same follower with no grease code is of grease non-filled type.</li> </ul>
<p>Outer ring outer diameter: <math>\phi 62</math>                      Metric series stud with cage, eccentric type                      Stud head : Metric series full-complement roller type stud, eccentric type                      Seal : with                      Outer profile: cylindrical                      Grease : already filled</p>	
<p>Outer ring outer diameter: <math>\phi 80</math>                      Metric series double-row cylindrical roller type                      Shielded full-complement roller type                      Stud head : with hexagon socket                      Seal : with                      Outer profile: spherical                      Grease : already filled</p>	<ul style="list-style-type: none"> <li>● Highest rated load, best-suited to applications subjected to high load and shock load.</li> <li>● The outer ring is guided in axial direction by the outer ring ribs and the end faces of cylindrical roller.</li> <li>● Grease replenishing interval must be shortened due to the small spacing volume.</li> <li>● Type NUKRU has the eccentric stud (eccentricity: 0.4 to 2.5mm) so as to enable to adjust positional variation of the stud mounting hole.</li> <li>● The standard followers of Type NUKRT and NUKRU have no hexagon hole (tail code H), but with a threaded plug with hexagon socket as standard.</li> </ul>
<p>Outer ring outer diameter: <math>\phi 90</math>                      Metric series double-row cylindrical roller type                      Shielded full-complement roller type                      Stud head : with recessed slot for screwdriver use and tapped hole                      Outer profile: spherical                      Grease : already filled</p>	
<p>Outer ring outer diameter: <math>\phi 140</math>                      Metric series double-row cylindrical roller type                      Shielded full-complement roller type stud, eccentric type                      Stud head : with recessed slot for screwdriver use and tapped hole                      Outer profile: cylindrical                      Grease : already filled</p>	

## Bearing accuracy

The dimensional accuracy and profile accuracy of cylindrical roller outer diameter ( $D$ ) and outer ring width ( $C$ ), and the running accuracy of bearing assy are as shown in **Tables 4.3** and 4.4 of Section 4 "**Bearing Tolerances**" (page A-26) and the accuracy class of each conforms to JIS Class-0. The dimensional accuracy of spherical outer diameter ( $D$ ) and stud diameter ( $d_1$ ) are as shown in applicable Dimensions Table.

## Bearing fit and radial internal clearance

**Table 1** shows the recommended fitting tolerance for the stud mounting hole.

And **Table 2** shows the radial internal clearance.

**Table 1 Recommended tolerance**

Classification	Tolerance range class for mounting hole
Metric series	H7
Inch series	F7

**Table 2 Radial internal clearance**

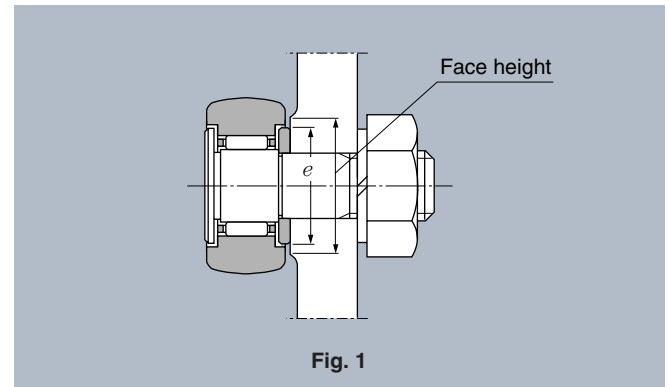
Unit:  $\mu\text{m}$

Nominal roller inscribed circle diameter $F_w$ (mm)		Clearance							
		C2		CN (ordinary)		C3		C4	
over	incl.	min	max	min	max	min	max	min	max
3	6	0	10	3	17	15	30	20	40
6	10	0	12	5	20	15	30	25	45
10	18	0	15	5	25	15	35	30	55
18	30	0	20	10	30	20	40	40	65
30	50	0	25	10	40	25	55	50	80
50	80	0	30	15	50	30	65	60	100
80	100	0	35	20	55	35	75	70	115

**Note)** When shock load acts on, make the stud - hole clearance as less as possible in assembling.

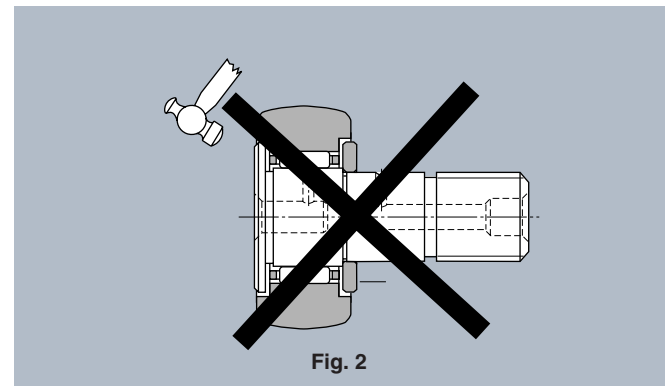
## Fitting relations

- (1) Make the face height at the cam follower mount greater than "e" dimension given in applicable Dimension Table. (**Fig.1**)  
Furthermore, chamfer the stud mounting hole at  $R$  as small as possible (around  $0.5 \times 45^\circ$ ) and bring the side faces of side face in precise contact.



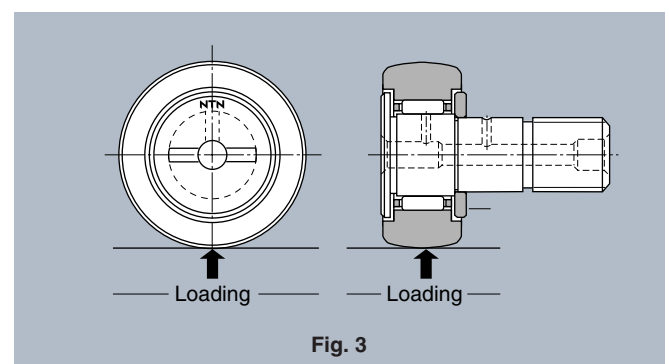
**Fig. 1**

- (2) Don't hammer directly the cam follower rib. Doing so would cause breakdown and rotation failure of the rib.



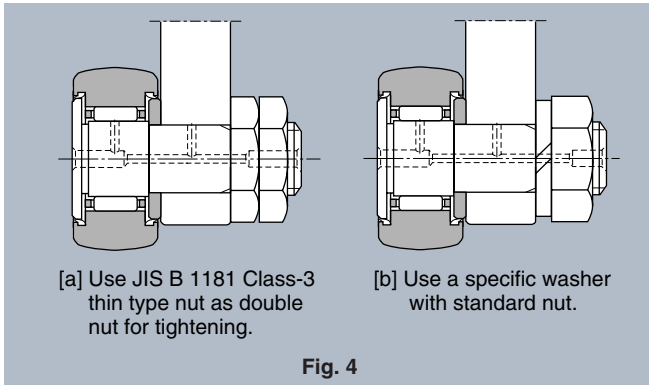
**Fig. 2**

- (3) The oil hole position on the stud raceway surface is shown with NTN mark stamped on the stud rib surface. Mount the stud so the oil hole locates within the non-load area (non-load side). (**Fig. 3**) If the oil hole locates within the load area, it would cause shorter life of the follower.

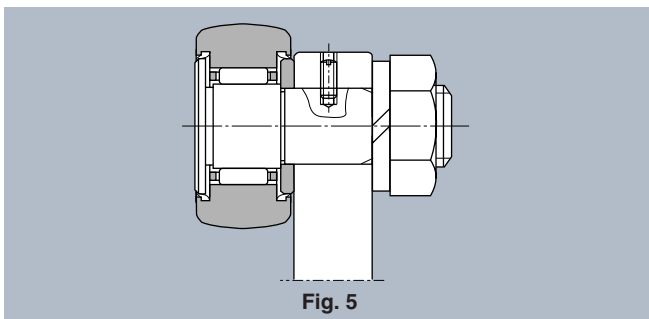


**Fig. 3**

- (4) Particularly where loose of the mounting screw is forecast due to wide amplitude vibration during running, the mounting methods as illustrated in **Fig. 4** are available.



- (5) The stud is subjected to bending stress and tensile force arising from bearing load. Tighten the stud screws with tightening torque which does not exceed the torque value specified in applicable Dimension Table. **Too tight tightening torque could result in rupture of the threaded portion.**
- (6) A hole is provided on the stud center at right angle to the shaft axial center, as illustrated in **Fig. 5**. Use this hole for locking or grease replenishment.



- (7) For mounting and adjusting the eccentric stud type cam follower, follow the sequence given hereunder.
1. Insert the stud in the mounting hole so that the **NTN** mark (showing oil hole position) locates in relative to load acting direction as illustrated in **Fig. 3**.
  2. Turn the stud using the recessed slot for screwdriver on the stud head or the accessory threaded plug with hexagon socket, to adjust a clearance from the mating contact surface.
  3. After adjustment, tighten the stud nut with specific tightening torque described in applicable Dimensions Table.

**NTN cam follower is generally stud-mounted so that non-uniform load (bias load) could act on the bearing, inversely affected by fitting loose arising from continuous running. So, good care must be exercised of fitting loose for stable running of an equipment.**

## Lubrication and how to feed and replenish grease into the follower

### Lubrication

The cam follower type with synthetic rubber seal (with tail code LL) and the full-complement roller type are pre-filled up with lithium soap base grease so they can be used in the operating temperature range of -25 to +100°C.

The type with cage and with no seal is not filled up with grease. If a grease pre-filled type is needed, feel free to contact NTN.

Further, NTN Bearings with Solid Dreeze using solid lubricant of less leakage is also available on request. Feel free to contact NTN for the detailed information.

**The outer ring outer surface of bearing and the track surface must both be lubricated. Failure to lubricate could result earlier in damage of bearing.**

### How to feed and replenish grease

Feed and replenish grease through a grease nipple provided on the flange end face or threaded-side end face of the stud. In this case, plug the grease-feed hole or the tapped hole at non-greasing side (with a special-purposed plug or a threaded plug with hexagon socket.)

These grease nipple and plug are enclosed in each cam follower package. Screw-in them in specific position before mounting the cam follower.

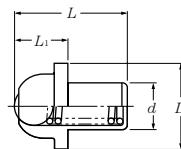
Special grease nipple and that specified in JIS Standard as applicable are available for use. The dimensions thereof and the applicable bearing types are as specified in **Tables 3** and **4** respectively.

Furthermore, special press-fit type plug and threaded plug with hexagon socket are available for use. The dimensions thereof and the applicable bearing types are as specified in **Tables 5-1, -2** and **Table 6** respectively.

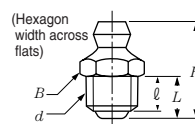
When using the special-purposed press-fit plug, press-fit it in the grease feed hole using a mandrel of applicable dimension shown in **Table 7**.

**Table 3 Grease nipple dimension**

Nominal nipple number	Dimension mm			
	d	D	L	L <sub>1</sub>
NIP-B3	3	7.5	9	5.5
NIP-B4	4	7.5	10	5.5
NIP-B6	6	8	13	6
NIP-B8	8	10	16	7



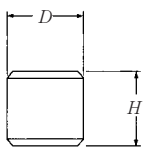
Nominal nipple number	Dimension mm				
	d	H	ℓ	L	B
NIP-X30	M4×0.7	13.9	4	5	7
JIS A-M6F	M6×0.75	13.5	4	5.4	7
JIS A-PT1/8	PT1/8	20	8	9.5	10



**Table 4 Grease nipple applied bearing types and grease nipple dimension codes**

Nominal nipple number	Nipple applied bearing types									
	KR, KRV	KR·H, KRV·H	CRV	CRV·H	NUKR	NUKR·H	KRT, KRVT	NUKRT	KRU, KRUV	NUKRU
NIP-B3	—	—	8.8-1	—	—	—	—	—	—	—
NIP-B4	16~26	22~26	10~18	12~18	—	—	—	—	—	—
NIP-B6	30~40	30~40	20~44	20~44	30~40	30~40	—	—	—	—
NIP-B8	47~90	47~90	48~96	48~96	47~90	47~90	—	—	—	—
NIP-X30	—	—	—	—	—	—	16~26	—	16~26	—
JIS A-M6F	—	—	—	—	—	—	30~32	30	30~35	30~35
JIS A-PT1/8	—	—	—	—	100~180 (Threaded side)	100~180	35~90	35~180	40~90	40~180

Special-purposed plug

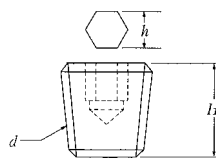


**Table 5-1 Plug dimension**

unit : mm

Nominal number	D	H
SEN 3	3	3
SEN 4	4	4
SEN 6	6	6
SEN 8	8	8

Threaded plug with hexagon socket



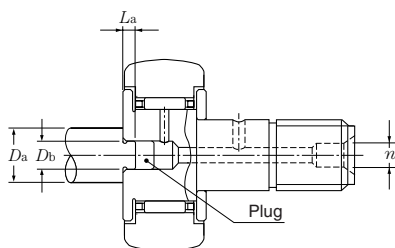
**Table 5-2 Plug dimension**

unit : mm

Nominal number	d	H	Width across flats h
M4X0.7X4 ℓ	M4X0.7	4	2
M6X0.75X6 ℓ	M6X0.75	6	3
PT1/8X7 ℓ	PT1/8	7	5

**Table 6 Plug applied bearing types and plug dimension codes**

Plug	Plug applied bearing types									
	KR, KRV	KR·H, KRV·H	CRV	CRV·H	NUKR	NUKR·H	KRT, KRVT	NUKRT	KRU, KRUV	NUKRU
SEN3	—	—	8.8-1	—	—	—	—	—	—	—
SEN4	16~26	22~26	10~18	12~18	—	—	—	—	—	—
SEN6	30~40	30~40	20~44	20~44	30~40	30~40	—	—	—	—
SEN8	47~90	47~90	48~96	48~96	47~180	47~90	—	—	—	—
M4X0.7X4 ℓ	—	—	—	—	—	—	16~26	—	16~26	—
M6X0.75X6 ℓ	—	—	—	—	—	—	30~32	30	30~35	30~35
PT1/8X7 ℓ	—	—	—	—	—	100~180	35~90	35~180	40~90	40~180



**Table 7 Mandrels used for plug press-fitting**

unit : mm

Grease feed hole dia. n	Mandrel dimension		
	Da	Db <sup>0</sup> <sub>-0.1</sub>	La <sup>0</sup> <sub>-0.1</sub>
3	8	2.8	1.5
4	10	3.8	1.5
6	12	5.8	1.5
8	15	7.8	2.5

## Track load capacity

Maximum radial load which is statically allowable on the track roller to track contact surface is referred to as "track load capacity", and the track load capacity subject to track surface hardness HRC40 is as described in applicable Dimensions Table.

Where the track surface hardness is other than HRD40, adjust the track load capacity using the adjustment factor shown in **Table 11.1**.

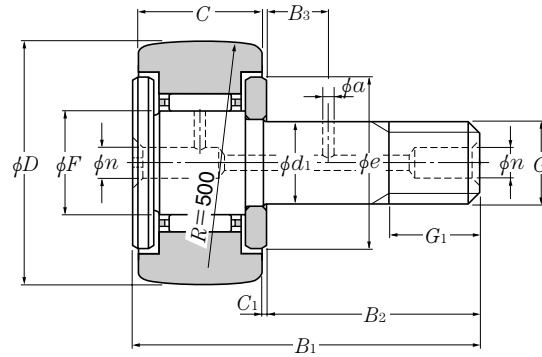
## Metric series

Type KR

Type KR··LL

Type KRV

Type KRV··LL



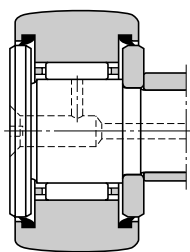
**Type KR  
(With cage)**

**D** 10~52mm

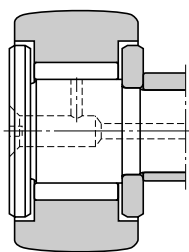
### Boundary dimensions

D 0 -0.050	C	d <sub>1</sub>	F	B <sub>1</sub>	B <sub>2</sub>	mm							
						G	G <sub>1</sub>	C <sub>1</sub>	n	B <sub>3</sub>	a	e	h
10	7	3 <sub>0</sub> <sup>-0.010</sup>	4.0	17	9	M 3×0.5	5	0.5	—	—	—	7	2.5 <sup>3)</sup>
	7	3 <sub>0</sub> <sup>-0.010</sup>	4.0	17	9	M 3×0.5	5	0.5	—	—	—	7	2.5 <sup>3)</sup>
12	8	4 <sub>0</sub> <sup>-0.012</sup>	4.8	20	11	M 4×0.7	6	0.5	—	—	—	8.5	2.5 <sup>3)</sup>
	8	4 <sub>0</sub> <sup>-0.012</sup>	4.8	20	11	M 4×0.7	6	0.5	—	—	—	8.5	2.5 <sup>3)</sup>
13	9	5 <sub>0</sub> <sup>-0.012</sup>	5.75	23	13	M 5×0.8	7.5	0.5	—	—	—	9.5	3 <sup>3)</sup>
	9	5 <sub>0</sub> <sup>-0.012</sup>	5.75	23	13	M 5×0.8	7.5	0.5	—	—	—	9.5	3 <sup>3)</sup>
16	11	6 <sub>0</sub> <sup>-0.012</sup>	8	28	16	M 6×1	8	0.6	4 <sup>2)</sup>	—	—	12	3
	11	6 <sub>0</sub> <sup>-0.012</sup>	8	28	16	M 6×1	8	0.6	4 <sup>2)</sup>	—	—	12	3
19	11	8 <sub>0</sub> <sup>-0.015</sup>	10	32	20	M 8×1.25	10	0.6	4 <sup>2)</sup>	—	—	14	4
	11	8 <sub>0</sub> <sup>-0.015</sup>	10	32	20	M 8×1.25	10	0.6	4 <sup>2)</sup>	—	—	14	4
22	12	10 <sub>0</sub> <sup>-0.015</sup>	12	36	23	M10×1.25	12	0.6	4	—	—	17	4
	12	10 <sub>0</sub> <sup>-0.015</sup>	12	36	23	M10×1.25	12	0.6	4	—	—	17	4
26	12	10 <sub>0</sub> <sup>-0.015</sup>	12	36	23	M10×1.25	12	0.6	4	—	—	17	4
	12	10 <sub>0</sub> <sup>-0.015</sup>	12	36	23	M10×1.25	12	0.6	4	—	—	17	4
30	14	12 <sub>0</sub> <sup>-0.018</sup>	15	40	25	M12×1.5	13	0.6	6	6	3	23	6
	14	12 <sub>0</sub> <sup>-0.018</sup>	15	40	25	M12×1.5	13	0.6	6	6	3	23	6
32	14	12 <sub>0</sub> <sup>-0.018</sup>	15	40	25	M12×1.5	13	0.6	6	6	3	23	6
	14	12 <sub>0</sub> <sup>-0.018</sup>	15	40	25	M12×1.5	13	0.6	6	6	3	23	6
35	18	16 <sub>0</sub> <sup>-0.018</sup>	18	52	32.5	M16×1.5	17	0.8	6	8	3	27	6
	18	16 <sub>0</sub> <sup>-0.018</sup>	18	52	32.5	M16×1.5	17	0.8	6	8	3	27	6
40	20	18 <sub>0</sub> <sup>-0.018</sup>	22	58	36.5	M18×1.5	19	0.8	6	8	3	32	6
	20	18 <sub>0</sub> <sup>-0.018</sup>	22	58	36.5	M18×1.5	19	0.8	6	8	3	32	6
47	24	20 <sub>0</sub> <sup>-0.021</sup>	25	66	40.5	M20×1.5	21	0.8	8	9	4	37	8
	24	20 <sub>0</sub> <sup>-0.021</sup>	25	66	40.5	M20×1.5	21	0.8	8	9	4	37	8
52	24	20 <sub>0</sub> <sup>-0.021</sup>	25	66	40.5	M20×1.5	21	0.8	8	9	4	37	8
	24	20 <sub>0</sub> <sup>-0.021</sup>	25	66	40.5	M20×1.5	21	0.8	8	9	4	37	8

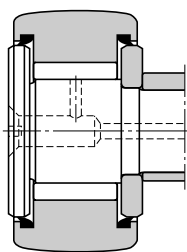
Note 1) For bearing with cylindrical outer surface, the nominal number is followed by "X" code. In this case, the cylindrical bearing is manufactured with the tolerance for outer ring outer diameter *D* which conforms to JIS Class-0. Ex. KR22XLL  
 2) Grease replenishing hole is provided at front side only (on left side-face in the above sketch). However, in the case with "hexagon hole" no grease replenishing hole is provided.



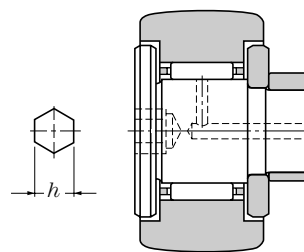
**Type KR·LL**  
(Sealed type with cage)



**Type KRV**  
(Full complement type)



**Type KRV·LL**  
(Full complement type with seal)



**Type KR·H**  
(With hexagonal wrench socket)

Basic load ratings				Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers		Mass (approx.)	
dynamic		static		N		kgf		r/min		N·m		Type NR <sup>1)</sup>		kg	
$C_r$	$C_{or}$	$C_r$	$C_{or}$	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	grease	oil	N·m	kgf·m	Type NR <sup>1)</sup>	Type NR·LL <sup>1)</sup>	Type KR	Type KRV
												Type KRV	Type KRV·LL		
1 640	1 270	168	130	560	1 360	57	139	※27 000	※40 000	0.5	0.05	KR10T2H/3A	KR10T2LLH	0.005	—
2 500	2 610	255	267	560	1 360	57	139	※25 000	※32 000	0.5	0.05	KRV10H	KRV10LLH	—	0.005
2 170	1 690	221	172	725	1 790	74	183	※25 000	※36 000	1	0.1	KR12T2H/3A	KR12T2LLH	0.008	—
3 500	3 800	360	385	725	1 790	74	183	※20 000	※27 000	1	0.1	KRV12H	KRV12LLH	—	0.008
2 650	2 260	270	231	805	2 220	82	226	※23 000	※33 000	2	0.2	KR13T2H/3A	KR13T2LLH	0.010	—
4 500	5 350	455	545	805	2 220	82	226	※17 000	※22 000	2	0.2	KRV13H	KRV13LLH	—	0.011
4 050	4 200	415	430	1 080	3 400	110	350	※19 000	※25 000	3	0.3	KR16	KR16LL	0.019	—
6 500	9 350	665	955	1 080	3 400	110	350	※13 000	※16 000	3	0.3	KRV16	KRV16LL	—	0.020
4 750	5 400	480	555	1 380	4 050	141	415	※15 000	※20 000	8	0.8	KR19	KR19LL	0.031	—
7 450	11 700	760	1 190	1 380	4 050	141	415	10 000	※13 000	8	0.8	KRV19	KRV19LL	—	0.032
5 300	6 650	540	680	1 690	5 150	172	525	※12 000	※16 000	14	1.4	KR22	KR22LL	0.046	—
8 200	14 000	840	1 420	1 690	5 150	172	525	8 500	※11 000	14	1.4	KRV22	KRV22LL	—	0.047
5 300	6 650	540	680	2 120	6 100	216	620	※12 000	※16 000	14	1.4	KR26	KR26LL	0.059	—
8 200	14 000	840	1 420	2 120	6 100	216	620	8 500	※11 000	14	1.4	KRV26	KRV26LL	—	0.061
7 850	9 650	800	985	2 620	7 700	267	785	10 000	※13 000	20	2	KR30	KR30LL	0.087	—
12 000	20 300	1 230	2 070	2 620	7 700	267	785	6 500	8 500	20	2	KRV30	KRV30LL	—	0.089
7 850	9 650	800	985	2 860	8 200	291	835	10 000	※13 000	20	2	KR32	KR32LL	0.097	—
12 000	20 300	1 230	2 070	2 860	8 200	291	835	6 500	8 500	20	2	KRV32	KRV32LL	—	0.100
12 200	17 900	1 240	1 830	3 200	11 900	325	1 220	8 000	※11 000	52	5.3	KR35	KR35LL	0.169	—
17 600	34 000	1 790	3 500	3 200	11 900	325	1 220	5 500	7 000	52	5.3	KRV35	KRV35LL	—	0.172
14 000	22 800	1 430	2 330	3 850	14 500	390	1 480	7 000	9 000	76	7.8	KR40	KR40LL	0.248	—
19 400	42 000	1 980	4 250	3 850	14 500	390	1 480	4 500	6 000	76	7.8	KRV40	KRV40LL	—	0.252
20 700	33 500	2 110	3 450	4 700	21 000	480	2 150	6 000	8 000	98	10	KR47	KR47LL	0.386	—
28 800	61 000	2 940	6 250	4 700	21 000	480	2 150	4 000	5 000	98	10	KRV47	KRV47LL	—	0.390
20 700	33 500	2 110	3 450	5 550	23 300	565	2 370	6 000	8 000	98	10	KR52	KR52LL	0.461	—
28 800	61 000	2 940	6 250	5 550	23 300	565	2 370	4 000	5 000	98	10	KRV52	KRV52LL	—	0.465

Note 3) Cam follower with hexagon hole is standard.

Remarks: For the cam follower with ※marked seal, the allowable running speed is approximately 10 000 r/min.

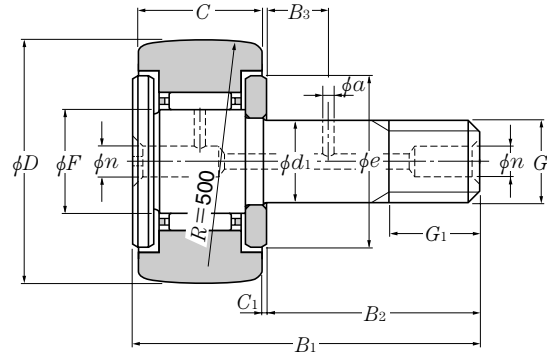
## Metric series

Type KR

Type KR··LL

Type KRV

Type KRV··LL



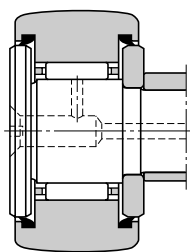
**Type KR  
(With cage)**

**D** 62~90mm

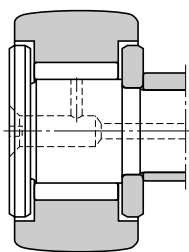
### Boundary dimensions

D $\begin{smallmatrix} 0 \\ -0.050 \end{smallmatrix}$	C	d <sub>1</sub>	F	B <sub>1</sub>	B <sub>2</sub>	mm							
						G	G <sub>1</sub>	C <sub>1</sub>	n	B <sub>3</sub>	a	e	h
<b>62</b>	29	24 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	80	49.5	M24×1.5	25	0.8	8	11	4	44	8
	29	24 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	80	49.5	M24×1.5	25	0.8	8	11	4	44	8
<b>72</b>	29	24 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	80	49.5	M24×1.5	25	0.8	8	11	4	44	8
	29	24 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	80	49.5	M24×1.5	25	0.8	8	11	4	44	8
<b>80</b>	35	30 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	8	15	4	53	8
	35	30 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	8	15	4	53	8
<b>85</b>	35	30 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	8	15	4	53	8
	35	30 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	8	15	4	53	8
<b>90</b>	35	30 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	8	15	4	53	8
	35	30 $\begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	8	15	4	53	8

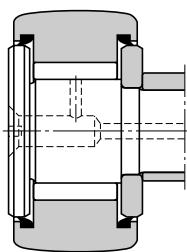
Note 1) For bearing with cylindrical outer surface, the nominal number is followed by "X" code. In this case, the cylindrical bearing is manufactured with the tolerance for outer ring outer diameter *D* which conforms to JIS Class-0. Ex. KR62XLL



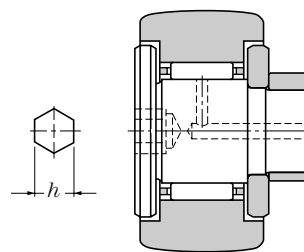
**Type KR·LL**  
(Sealed type with cage)



**Type KRV**  
(Full complement type)



**Type KRV·LL**  
(Full complement type with seal)

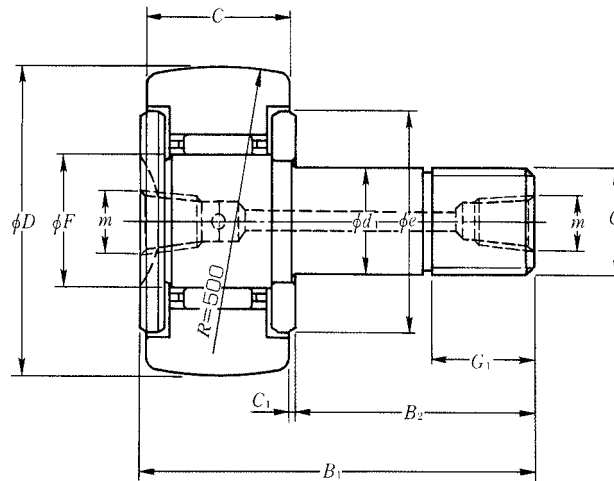


**Type KR·H**  
(With hexagonal wrench socket)

Basic load ratings				Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers		Mass (approx.)	
dynamic		static		N		kgf		r /min		N·m		Type NR <sup>1)</sup>		kg	
$C_r$	$C_{or}$	$C_r$	$C_{or}$	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	grease	oil	N·m	kgf·m	Type NR <sup>1)</sup>	Type NR·LL <sup>1)</sup>	Type KR	Type KRV
												Type KRV	Type KRV·LL		
28 900	55 000	2 950	5 600	6 950	34 500	710	3 500	5 000	6 500	178	18	KR62	KR62LL	0.790	—
39 500	98 500	4 000	10 000	6 950	34 500	710	3 500	3 300	4 500	178	18	KRV62	KRV62LL	—	0.800
28 900	55 000	2 950	5 600	8 050	38 500	820	3 900	5 000	6 500	178	18	KR72	KR72LL	1.04	—
39 500	98 500	4 000	10 000	8 050	38 500	820	3 900	3 300	4 500	178	18	KRV72	KRV72LL	—	1.05
45 000	88 500	4 600	9 050	9 800	53 000	1 000	5 400	40 00	5 500	360	37	KR80	KR80LL	1.55	—
58 000	147 000	5 900	15 000	9 800	53 000	1 000	5 400	2 600	3 500	360	37	KRV80	KRV80LL	—	1.56
45 000	88 500	4 600	9 050	10 400	56 000	1 060	5 750	4 000	5 500	360	37	KR85	KR85LL	1.74	—
45 000	88 500	4 600	9 050	11 400	59 000	1 160	6 100	4 000	5 500	360	37	KR90	KR90LL	1.95	—
58 000	147 000	5 900	15 000	11 400	59 000	1 160	6 100	2 600	3 500	360	37	KRV90	KRV90LL	—	1.97

**Metric series**

- Type KRT
- Type KRT··X
- Type KRT··LL
- Type KRT··XLL

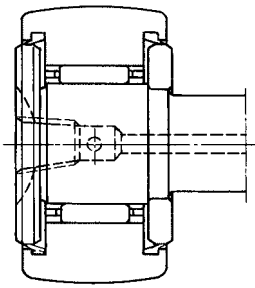


**Type KRT  
(With cage)**

D 16~90mm

Boundary dimensions											Basic load ratings			
mm											dynamic	static	dynamic	static
$D^{1)}$	$C$	$d_1$	$F$	$B_1$	$B_2$	$G$	$G_1$	$C_1$	$e$	$m$	N	kgf	kgf	kgf
											$C_r$	$C_{or}$	$C_r$	$C_{or}$
16	11	$6 \begin{smallmatrix} 0 \\ -0.012 \end{smallmatrix}$	8	28	16	M 6×1	8	0.6	12	M4×0.7 <sup>2)</sup>	4 050	4 200	415	430
19	11	$8 \begin{smallmatrix} 0 \\ -0.015 \end{smallmatrix}$	10	32	20	M 8×1.25	10	0.6	14	M4×0.7 <sup>2)</sup>	4 750	5 400	480	555
22	12	$10 \begin{smallmatrix} 0 \\ -0.015 \end{smallmatrix}$	12	36	23	M10×1.25	12	0.6	17	M4×0.7	5 300	6 650	540	680
26	12	$10 \begin{smallmatrix} 0 \\ -0.015 \end{smallmatrix}$	12	36	23	M10×1.25	12	0.6	17	M4×0.7	5 300	6 650	540	680
30	14	$12 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	15	40	25	M12×1.5	13	0.6	23	M6×0.75	7 850	9 650	800	985
32	14	$12 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	15	40	25	M12×1.5	13	0.6	23	M6×0.75	7 850	9 650	800	985
35	18	$16 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	18	52	32.5	M16×1.5	17	0.8	27	PT $\frac{1}{8}$	12 200	17 900	1 240	1 830
40	20	$18 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	22	58	36.5	M18×1.5	19	0.8	32	PT $\frac{1}{8}$	14 000	22 800	1 430	2 330
47	24	$20 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	25	66	40.5	M20×1.5	21	0.8	37	PT $\frac{1}{8}$	20 700	33 500	2 110	3 450
52	24	$20 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	25	66	40.5	M20×1.5	21	0.8	37	PT $\frac{1}{8}$	20 700	33 500	2 110	3 450
62	29	$24 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	80	49.5	M24×1.5	25	0.8	44	PT $\frac{1}{8}$	28 900	55 000	2 950	5 600
72	29	$24 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	80	49.5	M24×1.5	25	0.8	44	PT $\frac{1}{8}$	28 900	55 000	2 950	5 600
80	35	$30 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	53	PT $\frac{1}{8}$	45 000	88 500	4 600	9 050
85	35	$30 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	53	PT $\frac{1}{8}$	45 000	88 500	4 600	9 050
90	35	$30 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	38	100	63	M30×1.5	32	1	53	PT $\frac{1}{8}$	45 000	88 500	4 600	9 050

Note 1) The dimensional tolerances for the outer ring outer diameter  $D$  of **Type KRT··X** and **KRT··XLL** with cylindrical outer surface conform to JIS Class -0.  
 2) A tapped hole is provided at front side only (on left end-face in the above sketch).



**Type KR·LL**  
(with cage, sealed type)

Accessories

Nominal number of applied bearing	Nominal No. of grease nipple	Nominal No. of threaded plug with hexagon socket	Nominal No. of applied hexagon nut
30~35	JIS A-M6F	M6×0.75×6ℓ	1M12×1.5~1M16×1.5
40~180	JIS A-PT $\frac{1}{8}$	PT $\frac{1}{8}$ ×7ℓ	1M18×1.5~1M64×3

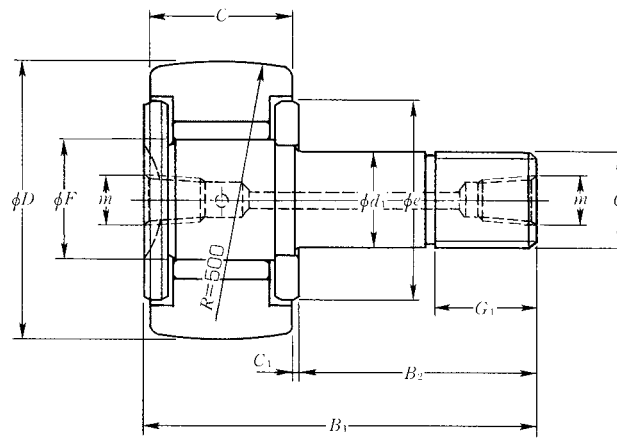
※ Table 3 on B-179 and Table 5-2 on B-180 shows the respective boundary dimensions of grease nipple and threaded plug with hexagon socket.

Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers				Mass	Stud diameter
N		kgf		r/min		N·m		Without seal		With seal		kg (approx.)	mm
Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	grease	oil	N·m	kgf·m	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	Spherical outer ring		
1 080	3 400	110	350	※19 000	※25 000	3	0.3	KRT16	KRT16X	KRT16LL	KRT16XLL	0.019	6
1 380	4 050	141	415	※15 000	※20 000	8	0.8	KRT19	KRT19X	KRT19LL	KRT19XLL	0.031	8
1 690	5 150	172	525	※12 000	※16 000	14	1.4	KRT22	KRT22X	KRT22LL	KRT22XLL	0.046	10
2 120	6 100	216	620	※12 000	※16 000	14	1.4	KRT26	KRT26X	KRT26LL	KRT26XLL	0.059	10
2 620	7 700	267	785	10 000	※13 000	20	2	KRT30	KRT30X	KRT30LL	KRT30XLL	0.087	12
2 860	8 200	291	835	10 000	※13 000	20	2	KRT32	KRT32X	KRT32LL	KRT32XLL	0.097	12
3 200	11 900	325	1 220	8 000	※11 000	52	5.3	KRT35	KRT35X	KRT35LL	KRT35XLL	0.169	16
3 850	14 500	390	1 480	7 000	9 000	76	7.8	KRT40	KRT40X	KRT40LL	KRT40XLL	0.248	18
4 700	21 000	480	2 150	6 000	8 000	98	10	KRT47	KRT47X	KRT47LL	KRT47XLL	0.386	20
5 550	23 300	565	2 370	6 000	8 000	98	10	KRT52	KRT52X	KRT52LL	KRT52XLL	0.461	20
6 950	34 500	710	3 500	5 000	6 500	178	18	KRT62	KRT62X	KRT62LL	KRT62XLL	0.790	24
8 050	38 500	820	3 900	5 000	6 500	178	18	KRT72	KRT72X	KRT72LL	KRT72XLL	1.04	24
9 800	53 000	1 000	5 400	4 000	5 500	360	37	KRT80	KRT80X	KRT80LL	KRT80XLL	1.55	30
10 400	56 000	1 060	5 750	4 000	5 500	360	37	KRT85	KRT85X	KRT85LL	KRT85XLL	1.74	30
11 400	59 000	1 160	6 100	4 000	5 500	360	37	KRT90	KRT90X	KRT90LL	KRT90XLL	1.95	30

Remarks: The allowable running speed of Type KRT·LL and KRT·XLL with ※marked seal is approximately 10 000r/min.

**Metric series**

- Type KRT
- Type RT··X
- Type KRT··LL
- Type KRT··XLL

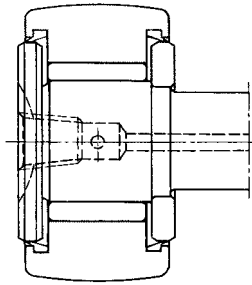


**Type KRV**  
(Full-complement roller type)

**D** 16~90mm

D <sup>1)</sup>	Boundary dimensions										Basic load ratings			
	C	d <sub>1</sub>	F	B <sub>1</sub>	B <sub>2</sub>	G	G <sub>1</sub>	C <sub>1</sub>	e	m	dynamic N	static	dynamic kgf	static
16	11	6 <sup>0</sup> <sub>-0.012</sub>	8	28	16	M 6×1	8	0.6	12	M4×0.7 <sup>2)</sup>	6 500	9 350	665	955
19	11	8 <sup>0</sup> <sub>-0.015</sub>	10	32	20	M 8×1.25	10	0.6	14	M4×0.7 <sup>2)</sup>	7 450	11 700	760	1 190
22	12	10 <sup>0</sup> <sub>-0.015</sub>	12	36	23	M10×1.25	12	0.6	17	M4×0.7	8 200	14 000	840	1 420
26	12	10 <sup>0</sup> <sub>-0.015</sub>	12	36	23	M10×1.25	12	0.6	17	M4×0.7	8 200	14 000	840	1 420
30	14	12 <sup>0</sup> <sub>-0.018</sub>	15	40	25	M12×1.5	13	0.6	23	M6×0.75	12 000	20 300	1 230	2 070
32	14	12 <sup>0</sup> <sub>-0.018</sub>	15	40	25	M12×1.5	13	0.6	23	M6×0.75	12 000	20 300	1 230	2 070
35	18	16 <sup>0</sup> <sub>-0.018</sub>	18	52	32.5	M16×1.5	17	0.8	27	PT <sup>1</sup> / <sub>8</sub>	17 600	34 000	1 790	3 500
40	20	18 <sup>0</sup> <sub>-0.018</sub>	22	58	36.5	M18×1.5	19	0.8	32	PT <sup>1</sup> / <sub>8</sub>	19 400	42 000	1 980	4 250
47	24	20 <sup>0</sup> <sub>-0.021</sub>	25	66	40.5	M20×1.5	21	0.8	37	PT <sup>1</sup> / <sub>8</sub>	28 800	61 000	2 940	6 250
52	24	20 <sup>0</sup> <sub>-0.021</sub>	25	66	40.5	M20×1.5	21	0.8	37	PT <sup>1</sup> / <sub>8</sub>	28 800	61 000	2 940	6 250
62	29	24 <sup>0</sup> <sub>-0.021</sub>	30	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	39 500	98 500	4 000	10 000
72	29	24 <sup>0</sup> <sub>-0.021</sub>	30	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	39 500	98 500	4 000	10 000
80	35	30 <sup>0</sup> <sub>-0.021</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	58 000	147 000	5 900	15 000
90	35	30 <sup>0</sup> <sub>-0.021</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	58 000	147 000	5 900	15 000

Note 1) The dimensional tolerances for the outer ring outer diameter *D* of Type KRVT··X and KRVT··XLL with cylindrical outer surface conform to JIS Class-0.  
2) A tapped hole is provided at front side only (on left end-face in the above sketch).



**Type KRVT··LL**  
(Full-complement roller and sealed type)

Accessories

Nominal number of applied bearing	Nominal No. of grease nipple	Nominal No. of threaded plug with hexagon socket	Nominal No. of applied hexagon nut
30~35	JIS A-M6F	M6×0.75×6ℓ	1M12×1.5~1M16×1.5
40~180	JIS A-PT $\frac{1}{8}$	PT $\frac{1}{8}$ ×7ℓ	1M18×1.5~1M64×3

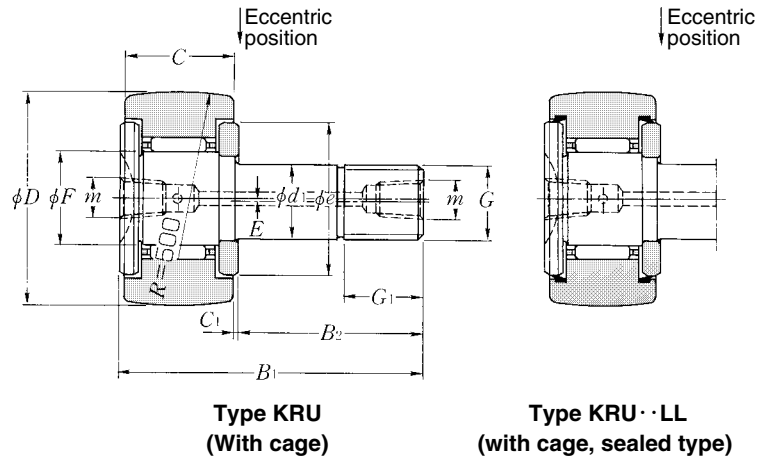
※Table 3 on B-179 and Table 5-2 on B-180 shows the respective boundary dimensions of grease nipple and threaded plug with hexagon socket.

Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers				Mass kg (approx.)	Stud diameter mm
N		kgf		r/min grease	oil	N·m	kgf·m	Without seal		With seal			
Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring					Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	Spherical outer ring		
1 080	3 400	110	350	※13 000	※16 000	3	0.3	KRVT16	KRVT16X	KRVT16LL	KRVT16XLL	0.020	6
1 380	4 050	141	415	10 000	※13 000	8	0.8	KRVT19	KRVT19X	KRVT19LL	KRVT19XLL	0.032	8
1 690	5 150	172	525	8 500	※11 000	14	1.4	KRVT22	KRVT22X	KRVT22LL	KRVT22XLL	0.047	10
2 120	6 100	216	620	8 500	※11 000	14	1.4	KRVT26	KRVT26X	KRVT26LL	KRVT26XLL	0.061	10
2 620	7 700	267	785	6 500	8 500	20	2	KRVT30	KRVT30X	KRVT30LL	KRVT30XLL	0.089	12
2 860	8 200	291	835	6 500	8 500	20	2	KRVT32	KRVT32X	KRVT32LL	KRVT32XLL	0.100	12
3 200	11 900	325	1 220	5 500	7 000	52	5.3	KRVT35	KRVT35X	KRVT35LL	KRVT35XLL	0.172	16
3 850	14 500	390	1 480	4 500	6 000	76	7.8	KRVT40	KRVT40X	KRVT40LL	KRVT40XLL	0.252	18
4 700	21 000	480	2 150	4 000	5 000	98	10	KRVT47	KRVT47X	KRVT47LL	KRVT47XLL	0.390	20
5 550	23 300	565	2 370	4 000	5 000	98	10	KRVT52	KRVT52X	KRVT52LL	KRVT52XLL	0.465	20
6 950	34 500	710	3 500	3 300	4 500	178	18	KRVT62	KRVT62X	KRVT62LL	KRVT62XLL	0.800	24
8 050	38 500	820	3 900	3 300	4 500	178	18	KRVT72	KRVT72X	KRVT72LL	KRVT72XLL	1.05	24
9 800	53 000	1 000	5 400	2 600	3 500	360	37	KRVT80	KRVT80X	KRVT80LL	KRVT80XLL	1.56	30
11 400	59 000	1 160	6 100	2 600	3 500	360	37	KRVT90	KRVT90X	KRVT90LL	KRVT90XLL	1.97	30

Remarks: The allowable running speed of Type KRVT··LL and KRVT··XLL with ※marked seal is approximately 10 000r/min.

Metric Series

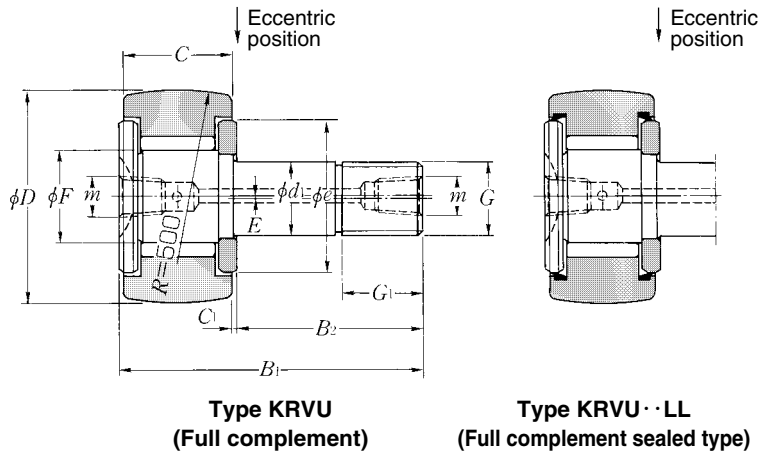
- Type KRU
- Type KRU··LL
- Type KRVU
- Type KRVU··LL



D 16~80mm

D 0 -0.050	Boundary dimensions											Basic load ratings				
	C	d <sub>1</sub>	F	B <sub>1</sub>	B <sub>2</sub>	mm		G <sub>1</sub>	C <sub>1</sub>	e	m	E eccentricity	dynamic N	static N	dynamic kgf	static kgf
						G							C <sub>r</sub>	C <sub>or</sub>	C <sub>r</sub>	C <sub>or</sub>
16	11	6 <sub>0</sub>	8	28	16	M 6×1	8	0.6	12	M4×0.7 <sup>2)</sup>	0.25	4 050	4 200	415	430	
	11	6 <sup>-0.012</sup>	8	28	16	M 6×1	8	0.6	12	M4×0.7 <sup>2)</sup>	0.25	6 500	9 350	665	955	
19	11	8 <sub>0</sub>	10	32	20	M 8×1.25	10	0.6	14	M4×0.7 <sup>2)</sup>	0.25	4 750	5 400	480	555	
	11	8 <sup>-0.015</sup>	10	32	20	M 8×1.25	10	0.6	14	M4×0.7 <sup>2)</sup>	0.25	7 450	11 700	760	1 190	
22	12	10 <sub>0</sub>	12	36	23	M10×1.25	12	0.6	17	M4×0.7	0.3	5 300	6 650	540	680	
	12	10 <sup>-0.015</sup>	12	36	23	M10×1.25	12	0.6	17	M4×0.7	0.3	8 200	14 000	840	1 420	
26	12	10 <sub>0</sub>	12	36	23	M10×1.25	12	0.6	17	M4×0.7	0.3	5 300	6 650	540	680	
	12	10 <sup>-0.015</sup>	12	36	23	M10×1.25	12	0.6	17	M4×0.7	0.3	8 200	14 000	840	1 420	
30	14	12 <sub>0</sub>	15	40	25	M12×1.5	13	0.6	23	M6×0.75	0.4	7 850	9 650	800	985	
	14	12 <sup>-0.018</sup>	15	40	25	M12×1.5	13	0.6	23	M6×0.75	0.4	12 000	20 300	1 230	2 070	
32	14	12 <sub>0</sub>	15	40	25	M12×1.5	13	0.6	23	M6×0.75	0.4	7 850	9 650	800	985	
	14	12 <sup>-0.018</sup>	15	40	25	M12×1.5	13	0.6	23	M6×0.75	0.4	12 000	20 300	1 230	2 070	
35	18	16 <sub>0</sub>	18	52	32.5	M16×1.5	17	0.8	27	M6×0.75	0.5	12 500	18 900	1 280	1 930	
	18	16 <sup>-0.018</sup>	18	52	32.5	M16×1.5	17	0.8	27	M6×0.75	0.5	18 000	36 500	1 840	3 700	
40	20	18 <sub>0</sub>	22	58	36.5	M18×1.5	19	0.8	32	PT <sup>1</sup> / <sub>8</sub>	0.6	14 000	22 800	1 430	2 330	
	20	18 <sup>-0.018</sup>	22	58	36.5	M18×1.5	19	0.8	32	PT <sup>1</sup> / <sub>8</sub>	0.6	19 400	42 000	1 980	4 250	
47	24	20 <sub>0</sub>	25	66	40.5	M20×1.5	21	0.8	37	PT <sup>1</sup> / <sub>8</sub>	0.7	20 700	33 500	2 110	3 450	
	24	20 <sup>-0.021</sup>	25	66	40.5	M20×1.5	21	0.8	37	PT <sup>1</sup> / <sub>8</sub>	0.7	28 800	61 000	2 940	6 250	
52	24	20 <sub>0</sub>	25	66	40.5	M20×1.5	21	0.8	37	PT <sup>1</sup> / <sub>8</sub>	0.7	20 700	33 500	2 110	3 450	
	24	20 <sup>-0.021</sup>	25	66	40.5	M20×1.5	21	0.8	37	PT <sup>1</sup> / <sub>8</sub>	0.7	28 800	61 000	2 940	6 250	
62	29	24 <sub>0</sub>	30	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	0.8	28 900	55 000	2 950	5 600	
	29	24 <sup>-0.021</sup>	30	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	0.8	39 500	98 500	4 000	10 000	
72	29	24 <sub>0</sub>	30	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	0.8	28 900	55 000	2 950	5 600	
	29	24 <sup>-0.021</sup>	30	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	0.8	39 500	98 500	4 000	10 000	
80	35	30 <sub>0</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	1.0	45 000	88 500	4 600	9 050	
	35	30 <sup>-0.021</sup>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	1.0	58 000	147 000	5 900	15 000	

Note 1) For bearing with cylindrical outer surface, the nominal number is followed by "X" code. In this case, the cylindrical bearing is manufactured with the tolerance for outer ring outer diameter D which conforms to JIS Class-0. Ex. KRU52XLL  
 2) A tapped hole is provided at front side only (on left side-face in the above sketch).



Accessories

Nominal number of applied bearing	Nominal No. of grease nipple	Nominal No. of threaded plug with hexagon socket	Nominal No. of applied hexagon nut
16~26	NIP-X30	M4×0.7 ×4ℓ	1M 6×1 ~1M10×1.25
30~35	JIS A-M6F	M6×0.75×6ℓ	1M12×1.5~1M16×1.5
40~90	JIS A-PT $\frac{1}{8}$	PT $\frac{1}{8}$ ×7ℓ	1M18×1.5~1M30×1.5

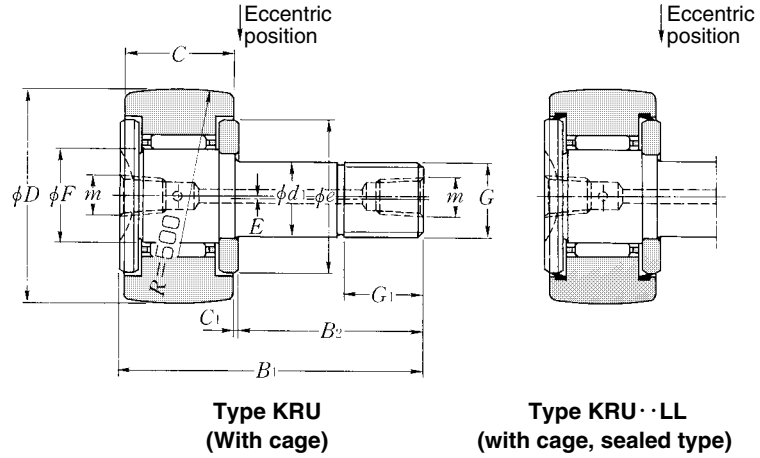
※ Table 3 on B-179 and Table 5-2 on B-180 shows the respective boundary dimensions of grease nipple and threaded plug with hexagon socket.

Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers		Mass (approx.) kg	
N		kgf		r/min		N·m kgf·m		Type KRU <sup>1)</sup>	Type KRUV <sup>1)</sup>	Type KRU	Type KRUV
Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	grease	oil	N·m	kgf·m	Type KRUV	Type KRUV·LL		
1 080	3 400	110	350	※19 000	※25 000	3	0.3	KRU16	KRU16LL	0.019	—
1 080	3 400	110	350	※13 000	※16 000	3	0.3	KRVU16	KRVU16LL	—	0.020
1 380	4 050	141	415	※15 000	※20 000	8	0.8	KRU19	KRU19LL	0.031	—
1 380	4 050	141	415	10 000	※13 000	8	0.8	KRVU19	KRVU19LL	—	0.032
1 690	5 150	172	525	※12 000	※16 000	14	1.4	KRU22	KRU22LL	0.046	—
1 690	5 150	172	525	8 500	※11 000	14	1.4	KRVU22	KRVU22LL	—	0.047
2 120	6 100	216	620	※12 000	※16 000	14	1.4	KRU26	KRU26LL	0.059	—
2 120	6 100	216	620	8 500	※11 000	14	1.4	KRVU26	KRVU26LL	—	0.061
2 620	7 700	267	785	10 000	※13 000	20	2	KRU30	KRU30LL	0.087	—
2 620	7 700	267	785	6 500	8 500	20	2	KRVU30	KRVU30LL	—	0.089
2 860	8 200	291	835	10 000	※13 000	20	2	KRU32	KRU32LL	0.097	—
2 860	8 200	291	835	6 500	8 500	20	2	KRVU32	KRVU32LL	—	0.100
3 200	11 900	325	1 220	8 000	※11 000	52	5.3	KRU35	KRU35LL	0.169	—
3 200	11 900	325	1 220	5 500	7 000	52	5.3	KRVU35	KRVU35LL	—	0.172
3 850	14 500	390	1 480	7 000	9 000	76	7.8	KRU40	KRU40LL	0.248	—
3 850	14 500	390	1 480	4 500	6 000	76	7.8	KRVU40	KRVU40LL	—	0.252
4 700	21 000	480	2 150	6 000	8 000	98	10	KRU47	KRU47LL	0.386	—
4 700	21 000	480	2 150	4 000	5 000	98	10	KRVU47	KRVU47LL	—	0.390
5 550	23 300	565	2 370	6 000	8 000	98	10	KRU52	KRU52LL	0.461	—
5 550	23 300	565	2 370	4 000	5 000	98	10	KRVU52	KRVU52LL	—	0.465
6 950	34 500	710	3 500	5 000	6 500	178	18	KRU62	KRU62LL	0.790	—
6 950	34 500	710	3 500	3 300	4 500	178	18	KRVU62	KRVU62LL	—	0.800
8 050	38 500	820	3 900	5 000	6 500	178	18	KRU72	KRU72LL	1.04	—
8 050	38 500	820	3 900	3 300	4 500	178	18	KRVU72	KRVU72LL	—	1.05
9 800	53 000	1 000	5 400	4 000	5 500	360	37	KRU80	KRU80LL	1.55	—
9 800	53 000	1 000	5 400	2 600	3 500	360	37	KRVU80	KRVU80LL	—	1.56

Remarks: For the cam follower with ※marked seal, the allowable running speed is approximately 10 000 r/min.

**Metric Series**

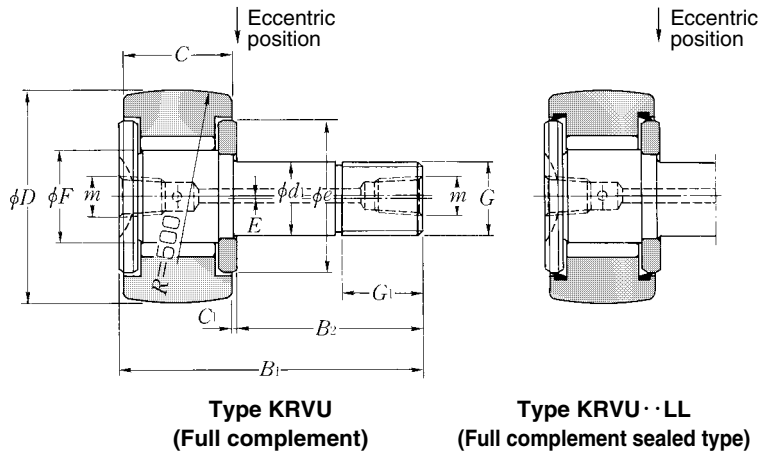
- Type KRU
- Type KRU··LL
- Type KRVU
- Type KRVU··LL



**D** 85~90mm

D	Boundary dimensions											Basic load ratings			
	C	d <sub>1</sub>	F	B <sub>1</sub>	B <sub>2</sub>	mm G	G <sub>1</sub>	C <sub>1</sub>	e	m	E eccentricity	dynamic N	static N	dynamic kgf	static kgf
85	35	30 <sup>0</sup> <sub>-0.021</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	1.0	45 000	88 500	4 600	9 050
	35	30 <sup>0</sup> <sub>-0.021</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	1.0	45 000	88 500	4 600	9 050
90	35	30 <sup>0</sup> <sub>-0.021</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	1.0	58 000	147 000	5 900	15 000
	35	30 <sup>0</sup> <sub>-0.021</sub>	38	100	63	M30×1.5	32	1	53	PT <sup>1</sup> / <sub>8</sub>	1.0	58 000	147 000	5 900	15 000

Note 1) For bearing with cylindrical outer surface, the nominal number is followed by "X" code. In this case, the cylindrical bearing is manufactured with the tolerance for outer ring outer diameter D which conforms to JIS Class-0. Ex. KRU85XLL



Accessories

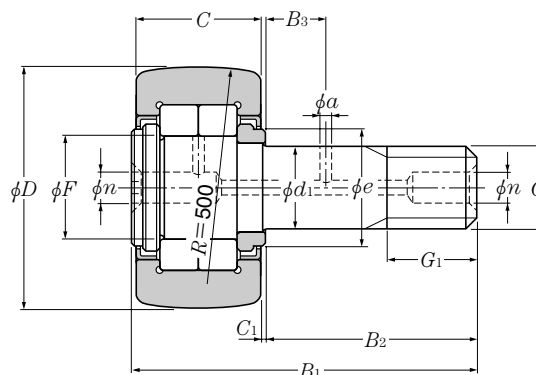
Nominal number of applied bearing	Nominal No. of grease nipple	Nominal No. of threaded plug with hexagon socket	Nominal No. of applied hexagon nut
16~26	NIP-X30	M4×0.7 ×4ℓ	1M 6×1 ~1M10×1.25
30~35	JIS A-M6F	M6×0.75×6ℓ	1M12×1.5~1M16×1.5
40~90	JIS A-PT $\frac{1}{8}$	PT $\frac{1}{8}$ ×7ℓ	1M18×1.5~1M30×1.5

※ Table 3 on B-179 and Table 5-2 on B-180 shows the respective boundary dimensions of grease nipple and threaded plug with hexagon socket.

Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers		Mass (approx.) kg	
N		kgf		r/min				Type KRU <sup>1)</sup>	Type KRU·LL <sup>1)</sup>	Type KRU	Type KRVU
Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	grease	oil	N·m	kgf·m	Type KRVU	Type KRVU·LL		
10 400	56 000	1 060	5 750	4 000	5 500	360	37	KRU85	KRU85LL	1.74	—
11 400	59 000	1 160	6 100	4 000	5 500	360	37	KRU90	KRU90LL	1.95	—
11 400	59 000	1 160	6 100	2 600	3 500	360	37	KRVU90	KRVU90LL	—	1.97

## Metric Series

### Type NUKR



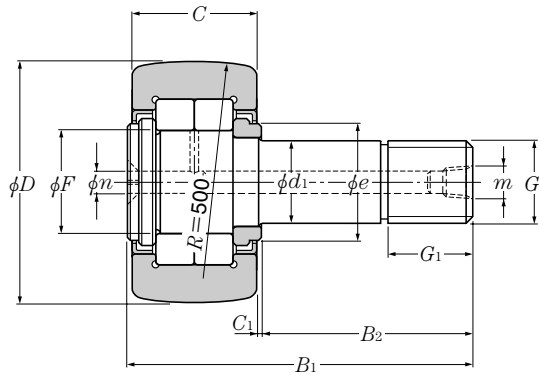
Type NUKR ( $D < 100\text{mm}$ ) (Double row type full complement with seal)

$D$  30~180mm

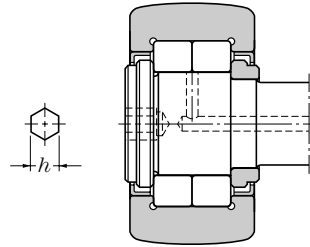
#### Boundary dimensions

$D$ -0.050	$C$	$d_1$	$F$	$B_1$	$B_2$	mm		$C_1$	$n$	$m$	$B_3$	$a$	$e$	$h$
						$G$	$G_1$							
30	14	$12 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	14.5	40	25	M12×1.5	13	0.6	6	—	6	3	15	6
35	18	$16 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	19	52	32.5	M16×1.5	17	0.8	6	—	8	3	21	6
40	20	$18 \begin{smallmatrix} 0 \\ -0.018 \end{smallmatrix}$	21.5	58	36.5	M18×1.5	19	0.8	6	—	8	3	23	6
47	24	$20 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	25.5	66	40.5	M20×1.5	21	0.8	8	—	9	4	27	8
52	24	$20 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	30	66	40.5	M20×1.5	21	0.8	8	—	9	4	31	8
62	29	$24 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	35	80	49.5	M24×1.5	25	0.8	8	—	11	4	38	8
72	29	$24 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	41.5	80	49.5	M24×1.5	25	0.8	8	—	11	4	44	8
80	35	$30 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	47.5	100	63	M30×1.5	32	1	8	—	15	4	51	8
90	35	$30 \begin{smallmatrix} 0 \\ -0.021 \end{smallmatrix}$	47.5	100	63	M30×1.5	32	1	8	—	15	4	51	8
100	43	$36 \begin{smallmatrix} 0 \\ -0.025 \end{smallmatrix}$	48.5	120	74	M36×1.5	38	1.5	8	PT $1/8$	—	—	53	14
120	50	$42 \begin{smallmatrix} 0 \\ -0.025 \end{smallmatrix}$	60.5	140	87	M42×1.5	44	1.5	8	PT $1/8$	—	—	66	14
140	57	$48 \begin{smallmatrix} 0 \\ -0.025 \end{smallmatrix}$	65	160	100	M48×1.5	52	1.5	8	PT $1/8$	—	—	72.5	14
150	60	$52 \begin{smallmatrix} 0 \\ -0.030 \end{smallmatrix}$	75.5	170	107	M52×1.5	52	1.5	8	PT $1/8$	—	—	85.5	17
160	63	$56 \begin{smallmatrix} 0 \\ -0.030 \end{smallmatrix}$	80.5	180	113	M56×3	58	2	8	PT $1/8$	—	—	89.5	17
170	66	$60 \begin{smallmatrix} 0 \\ -0.030 \end{smallmatrix}$	86	190	120	M60×3	58	2	8	PT $1/8$	—	—	96.5	17
180	72	$64 \begin{smallmatrix} 0 \\ -0.030 \end{smallmatrix}$	91.5	200	124	M64×3	65	2	8	PT $1/8$	—	—	103.5	17

Note 1) For bearing with cylindrical outer surface, the nominal number is followed by "X" code. In this case, the cylindrical bearing is manufactured with the tolerance for outer ring outer diameter  $D$  which conforms to JIS Class-0. Ex. NUKR52X



Type NUKR ( $D \geq 100\text{mm}$ )



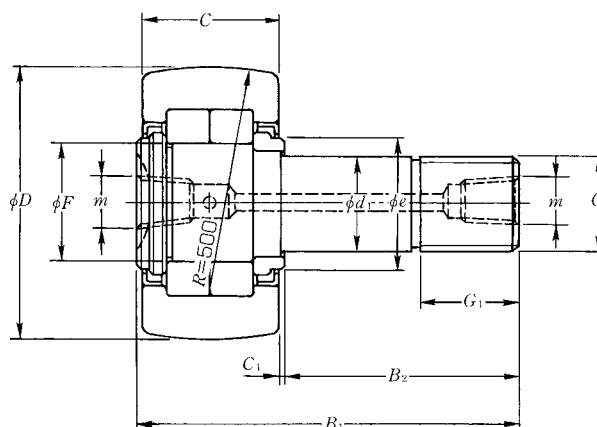
Type NUKR · H  
(With hexagonal wrench socket)

Basic load ratings				Load ratings of truck				Limiting speeds r/min grease	Maximum tightening torque		Bearing numbers Type KUKR <sup>1)</sup>	Mass (approx.) kg Type KUKR
dynamic		static		N		kgf			N · m	kgf · m		
$C_r$	$C_{or}$	$C_r$	$C_{or}$	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring					
13 300	13 500	1 360	1 380	2 620	7 700	267	785	6 900	20	2	NUKR 30	0.088
22 300	25 700	2 280	2 620	3 200	11 900	325	1 220	5 500	52	5.3	NUKR 35	0.165
24 100	29 100	2 450	2 970	3 850	14 500	390	1 480	4 700	76	7.8	NUKR 40	0.242
38 500	48 000	3 950	4 900	4 700	21 000	480	2 150	4 000	98	10	NUKR 47	0.380
42 500	57 500	4 350	5 850	5 550	23 300	565	2 370	3 300	98	10	NUKR 52	0.450
56 500	72 500	5 750	7 400	6 950	34 500	710	3 500	2 900	178	18	NUKR 62	0.795
62 000	85 500	6 350	8 700	8 050	38 500	820	3 900	2 400	178	18	NUKR 72	1.01
101 000	151 000	10 300	15 400	9 800	53 000	1 000	5 400	2 100	360	37	NUKR 80	1.54
101 000	151 000	10 300	15 400	11 400	59 000	1 160	6 100	2 100	360	37	NUKR 90	1.96
119 000	167 000	12 100	17 000	13 000	79 000	1 300	8 050	2 000	630	65	NUKR100	3.08
172 000	266 000	17 600	27 100	16 400	113 000	1 670	11 500	1 700	1 020	105	NUKR120	5.17
201 000	294 000	20 500	30 000	20 000	152 000	2 040	15 500	1 500	1 540	160	NUKR140	7.98
258 000	380 000	26 300	39 000	22 000	173 000	2 250	17 600	1 300	1 950	200	NUKR150	9.70
274 000	400 000	27 900	41 000	24 000	194 000	2 450	19 800	1 200	2 480	250	NUKR160	11.7
320 000	475 000	32 500	48 500	26 000	218 000	2 650	22 200	1 100	3 030	310	NUKR170	13.9
365 000	555 000	37 500	56 500	27 900	253 000	2 840	25 800	1 000	3 670	375	NUKR180	17.0

## Metric Series

## Type NUKRT

## Type NUKRT · X



Type NUKRT

(Shielded full-complement roller, double-row cylindrical roller type)

D 30~180mm

D <sup>1)</sup>	Boundary dimensions										Basic load ratings			
	C	d <sub>1</sub>	F	B <sub>1</sub>	B <sub>2</sub>	G	G <sub>1</sub>	C <sub>1</sub>	e	m	dynamic N	static N	dynamic kgf	static kgf
30	14	12 <sup>0</sup> <sub>-0.018</sub>	14.5	40	25	M12×1.5	13	0.6	15	M6×0.75	13 300	13 500	1 360	1 380
35	18	16 <sup>0</sup> <sub>-0.018</sub>	19	52	32.5	M16×1.5	17	0.8	21	PT <sup>1</sup> / <sub>8</sub>	22 300	25 700	2 280	2 620
40	20	18 <sup>0</sup> <sub>-0.018</sub>	21.5	58	36.5	M18×1.5	19	0.8	23	PT <sup>1</sup> / <sub>8</sub>	24 100	29 100	2 450	2 970
47	24	20 <sup>0</sup> <sub>-0.021</sub>	25.5	66	40.5	M20×1.5	21	0.8	27	PT <sup>1</sup> / <sub>8</sub>	38 500	48 000	3 950	4 900
52	24	20 <sup>0</sup> <sub>-0.021</sub>	30	66	40.5	M20×1.5	21	0.8	31	PT <sup>1</sup> / <sub>8</sub>	42 500	57 500	4 350	5 850
62	29	24 <sup>0</sup> <sub>-0.021</sub>	35	80	49.5	M24×1.5	25	0.8	38	PT <sup>1</sup> / <sub>8</sub>	56 500	72 500	5 750	7 400
72	29	24 <sup>0</sup> <sub>-0.021</sub>	41.5	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	62 000	85 500	6 350	8 700
80	35	30 <sup>0</sup> <sub>-0.021</sub>	47.5	100	63	M30×1.5	32	1	51	PT <sup>1</sup> / <sub>8</sub>	101 000	151 000	10 300	15 400
90	35	30 <sup>0</sup> <sub>-0.021</sub>	47.5	100	63	M30×1.5	32	1	51	PT <sup>1</sup> / <sub>8</sub>	101 000	151 000	10 300	15 400
100	43	36 <sup>0</sup> <sub>-0.025</sub>	48.5	120	74	M36×1.5	38	1.5	53	PT <sup>1</sup> / <sub>8</sub>	119 000	167 000	12 100	17 000
120	50	42 <sup>0</sup> <sub>-0.025</sub>	60.5	140	87	M42×1.5	44	1.5	66	PT <sup>1</sup> / <sub>8</sub>	172 000	266 000	17 600	27 100
140	57	48 <sup>0</sup> <sub>-0.025</sub>	65	160	100	M48×1.5	52	1.5	72.5	PT <sup>1</sup> / <sub>8</sub>	201 000	294 000	20 500	30 000
150	60	52 <sup>0</sup> <sub>-0.030</sub>	75.5	170	107	M52×1.5	52	1.5	85.5	PT <sup>1</sup> / <sub>8</sub>	258 000	380 000	26 300	39 000
160	63	56 <sup>0</sup> <sub>-0.030</sub>	80.5	180	113	M56×3	58	2	89.5	PT <sup>1</sup> / <sub>8</sub>	274 000	400 000	27 900	41 000
170	66	60 <sup>0</sup> <sub>-0.030</sub>	86	190	120	M60×3	58	2	96.5	PT <sup>1</sup> / <sub>8</sub>	320 000	475 000	32 500	48 500
180	72	64 <sup>0</sup> <sub>-0.030</sub>	91.5	200	124	M64×3	65	2	103.5	PT <sup>1</sup> / <sub>8</sub>	365 000	555 000	37 500	56 500

 Note 1) The dimensional tolerance for the outer ring outer diameter *D* of Type NUKRT · X with cylindrical outer surface conforms to JIS Class-0.

Accessories

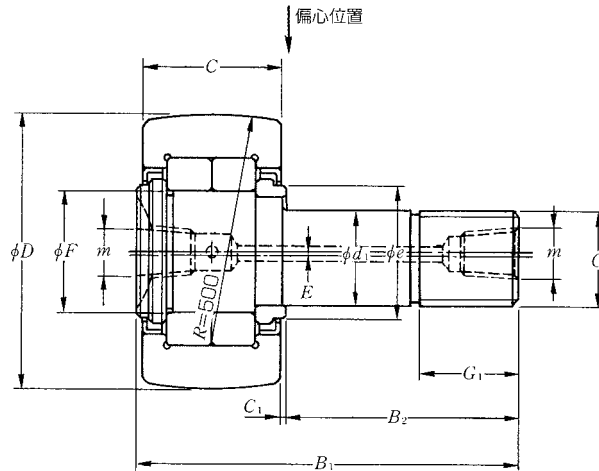
Nominal number of applied bearing	Nominal No. of grease nipple	Nominal No. of threaded plug with hexagon socket	Nominal No. of applied hexagon nut
30	JIS A-M6F	M6×0.75×6ℓ	1M12×1.5
35~180	JIS A-PT $\frac{1}{8}$	PT $\frac{1}{8}$ ×7ℓ	1M16×1.5~1M64×3

※Table 3 on B-179 and Table 5-2 on B-180 shows the respective boundary dimensions of grease nipple and threaded plug with hexagon socket.

Load ratings of truck				Limiting speeds r/min grease	Maximum tightening torque		Bearing numbers		Mass kg (approx.)	Stud diameter mm
N		kgf			N·m	kgf·m	Cylindrical outer ring	Spherical outer ring		
Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring							
2 620	7 700	267	785	6 900	20	2	NUKRT30	NUKRT30X	0.088	12
3 200	11 900	325	1 220	5 500	52	5.3	NUKRT35	NUKRT35X	0.165	16
3 850	14 500	390	1 480	4 700	76	7.8	NUKRT40	NUKRT40X	0.242	18
4 700	21 000	480	2 150	4 000	98	10	NUKRT47	NUKRT47X	0.380	20
5 550	23 300	565	2 370	3 300	98	10	NUKRT52	NUKRT52X	0.450	20
6 950	34 500	710	3 500	2 900	178	18	NUKRT62	NUKRT62X	0.795	24
8 050	38 500	820	3 900	2 400	178	18	NUKRT72	NUKRT72X	1.01	24
9 800	53 000	1 000	5 400	2 100	360	37	NUKRT80	NUKRT80X	1.54	30
11 400	59 000	1 160	6 100	2 100	360	37	NUKRT90	NUKRT90X	1.96	30
13 000	79 000	1 300	8 050	2 000	630	65	NUKRT100	NUKRT100X	3.08	36
16 400	113 000	1 670	11 500	1 700	1 020	105	NUKRT120	NUKRT120X	5.17	42
20 000	152 000	2 040	15 500	1 500	1 540	160	NUKRT140	NUKRT140X	7.98	48
22 000	173 000	2 250	17 600	1 300	1 950	200	NUKRT150	NUKRT150X	9.70	52
24 000	194 000	2 450	19 800	1 200	2 480	250	NUKRT160	NUKRT160X	11.7	56
26 000	218 000	2 650	22 200	1 100	3 030	310	NUKRT170	NUKRT170X	13.9	60
27 900	253 000	2 840	25 800	1 000	3 670	375	NUKRT180	NUKRT180X	17.0	64

Metric Series

Type NUKRU  
Type NUKRU··X



Type NUKRU  
(Shielded full-complement roller, double-row cylindrical roller type)

D 30~180mm

D <sup>1)</sup>	C	d <sub>1</sub>	F	Boundary dimensions								Basic load ratings	
				B <sub>1</sub>	B <sub>2</sub>	mm G	G <sub>1</sub>	C <sub>1</sub>	e	m	E eccentricity	dynamic N C <sub>r</sub>	static C <sub>or</sub>
30	14	12 <sup>0</sup> <sub>-0.018</sub>	14.5	40	25	M12×1.5	13	0.6	15	M6×0.75	0.4	13 300	13 500
35	18	16 <sup>0</sup> <sub>-0.018</sub>	19	52	32.5	M16×1.5	17	0.8	21	M6×0.75	0.5	22 300	25 700
40	20	18 <sup>0</sup> <sub>-0.018</sub>	21.5	58	36.5	M18×1.5	19	0.8	23	PT <sup>1</sup> / <sub>8</sub>	0.6	24 100	29 100
47	24	20 <sup>0</sup> <sub>-0.021</sub>	25.5	66	40.5	M20×1.5	21	0.8	27	PT <sup>1</sup> / <sub>8</sub>	0.7	38 500	48 000
52	24	20 <sup>0</sup> <sub>-0.021</sub>	30	66	40.5	M20×1.5	21	0.8	31	PT <sup>1</sup> / <sub>8</sub>	0.7	42 500	57 500
62	29	24 <sup>0</sup> <sub>-0.021</sub>	35	80	49.5	M24×1.5	25	0.8	38	PT <sup>1</sup> / <sub>8</sub>	0.8	56 500	72 500
72	29	24 <sup>0</sup> <sub>-0.021</sub>	41.5	80	49.5	M24×1.5	25	0.8	44	PT <sup>1</sup> / <sub>8</sub>	1.0	62 000	85 500
80	35	30 <sup>0</sup> <sub>-0.021</sub>	47.5	100	63	M30×1.5	32	1	51	PT <sup>1</sup> / <sub>8</sub>	1.0	101 000	151 000
90	35	30 <sup>0</sup> <sub>-0.021</sub>	47.5	100	63	M30×1.5	32	1	51	PT <sup>1</sup> / <sub>8</sub>	1.0	101 000	151 000
100	43	36 <sup>0</sup> <sub>-0.025</sub>	48.5	120	74	M36×1.5	38	1.5	53	PT <sup>1</sup> / <sub>8</sub>	1.5	119 000	167 000
120	50	42 <sup>0</sup> <sub>-0.025</sub>	60.5	140	87	M42×1.5	44	1.5	66	PT <sup>1</sup> / <sub>8</sub>	1.5	172 000	266 000
140	57	48 <sup>0</sup> <sub>-0.025</sub>	65	160	100	M48×1.5	52	1.5	72.5	PT <sup>1</sup> / <sub>8</sub>	2	201 000	294 000
150	60	52 <sup>0</sup> <sub>-0.030</sub>	75.5	170	107	M52×1.5	52	1.5	85.5	PT <sup>1</sup> / <sub>8</sub>	2	258 000	380 000
160	63	56 <sup>0</sup> <sub>-0.030</sub>	80.5	180	113	M56×3	58	2	89.5	PT <sup>1</sup> / <sub>8</sub>	2	274 000	400 000
170	66	60 <sup>0</sup> <sub>-0.030</sub>	86	190	120	M60×3	58	2	96.5	PT <sup>1</sup> / <sub>8</sub>	2.5	320 000	475 000
180	72	64 <sup>0</sup> <sub>-0.030</sub>	91.5	200	124	M64×3	65	2	103.5	PT <sup>1</sup> / <sub>8</sub>	2.5	365 000	555 000

Note 1) The dimensional tolerance for the outer ring outer diameter D of Type NUKRU··X with cylindrical outer surface conforms to JIS Class-0.

Accessories

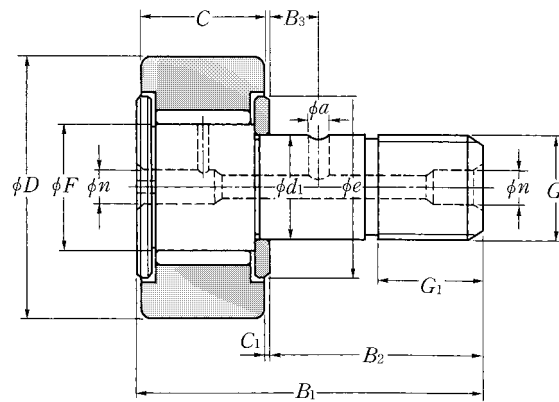
Nominal number of applied bearing	Nominal No. of grease nipple	Nominal No. of threaded plug with hexagon socket	Nominal No. of applied hexagon nut
30~35	JIS A-M6F	M6×0.75×6ℓ	1M12×1.5~1M16×1.5
40~180	JIS A-PT $\frac{1}{8}$	PT $\frac{1}{8}$ ×7ℓ	1M18×1.5~1M64×3

※Table 3 on B-179 and Table 5-2 on B-180 shows the respective boundary dimensions of grease nipple and threaded plug with hexagon socket.

Basic load ratings		Load ratings of truck				Limiting speeds r/min grease	Maximum tightening torque		Bearing numbers		Mass kg (approx.)	Stud diameter mm
dynamic kgf $C_r$	static kgf $C_{or}$	N		kgf			N·m	kgf·m	Cylindrical outer ring	Spherical outer ring		
1 360	1 380	2 620	7 700	267	785	6 900	20	2	NUKRU30	NUKRU30X	0.088	12
2 280	2 620	3 200	11 900	325	1 220	5 500	52	5.3	NUKRU35	NUKRU35X	0.165	16
2 450	2 970	3 850	14 500	390	1 480	4 700	76	7.8	NUKRU40	NUKRU40X	0.242	18
3 950	4 900	4 700	21 000	480	2 150	4 000	98	10	NUKRU47	NUKRU47X	0.380	20
4 350	5 850	5 550	23 300	565	2 370	3 300	98	10	NUKRU52	NUKRU52X	0.450	20
5 750	7 400	6 950	34 500	710	3 500	2 900	178	18	NUKRU62	NUKRU62X	0.795	24
6 350	8 700	8 050	38 500	820	3 900	2 400	178	18	NUKRU72	NUKRU72X	1.01	24
10 300	15 400	9 800	53 000	1 000	5 400	2 100	360	37	NUKRU80	NUKRU80X	1.54	30
10 300	15 400	11 400	59 000	1 160	6 100	2 100	360	37	NUKRU90	NUKRU90X	1.96	30
12 100	17 000	13 000	79 000	1 300	8 050	2 000	630	65	NUKRU100	NUKRU100X	3.08	36
17 600	27 100	16 400	113 000	1 670	11 500	1 700	1 020	105	NUKRU120	NUKRU120X	5.17	42
20 500	30 000	20 000	152 000	2 040	15 500	1 500	1 540	160	NUKRU140	NUKRU140X	7.98	48
26 300	39 000	22 000	173 000	2 250	17 600	1 300	1 950	200	NUKRU150	NUKRU150X	9.70	52
27 900	41 000	24 000	194 000	2 450	19 800	1 200	2 480	250	NUKRU160	NUKRU160X	11.7	56
32 500	48 500	26 000	218 000	2 650	22 200	1 100	3 030	310	NUKRU170	NUKRU170X	13.9	60
37 500	56 500	27 900	253 000	2 840	25 800	1 000	3 670	375	NUKRU180	NUKRU180X	17.0	64

## Inch series

Type CRV···X  
Type CRV···XLL



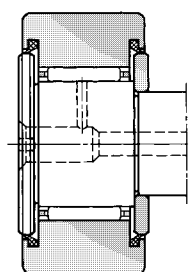
**Type CR  
(with cage)**

**D** 12.700~152.400mm

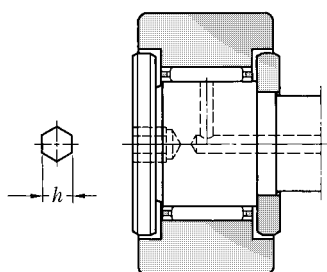
### Boundary dimensions

D -0.025	C -0.130	d <sub>1</sub> +0.025 0	F	mm (1/25.4mm)		G	G <sub>1</sub>	C <sub>1</sub>	n	B <sub>3</sub>	a	e	h
				B <sub>1</sub>	B <sub>2</sub>								
12.700(1/2)	8.731(1/32)	4.762(-)	6	23	12.7	NO-10-32UNF	6.4	0.8	3 <sup>2)</sup>	-	-	10	1/8
	9.525(3/8)	4.762(-)	6	27	15.9	NO-10-32UNF	6.4	0.8	3 <sup>2)</sup>	-	-	10	1/8
15.875(5/8)	10.319(13/32)	6.350(1/4)	8	27.8	15.9	1/4-28UNF	7.9	0.8	4 <sup>2)</sup>	-	-	12.5	1/8
	11.112(7/16)	6.350(1/4)	8	31.8	19.1	1/4-28UNF	7.9	0.8	4 <sup>2)</sup>	-	-	12.5	1/8
19.050(3/4)	12.700(1/2)	9.525(3/8)	12	36.5	22.2	3/8-24UNF	9.5	0.8	4	6.35	3	16.2	3/16
22.225(7/8)	12.700(1/2)	9.525(3/8)	12	36.5	22.2	3/8-24UNF	9.5	0.8	4	6.35	3	16.2	3/16
25.400(1)	15.875(5/8)	11.112(7/16)	13	42.8	25.4	7/16-20UNF	12.7	0.8	4	6.35	3	21	1/4
28.575(1 1/8)	15.875(5/8)	11.112(7/16)	13	42.8	25.4	7/16-20UNF	12.7	0.8	4	6.35	3	21	1/4
31.750(1 1/4)	19.050(3/4)	12.700(1/2)	16	52.4	31.8	1/2-20UNF	15.9	0.8	6	7.94	3	25	1/4
34.925(1 3/8)	19.050(3/4)	12.700(1/2)	16	52.4	31.8	1/2-20UNF	15.9	0.8	6	7.94	3	25	1/4
38.100(1 1/2)	22.225(7/8)	15.875(5/8)	20	61.9	38.1	5/8-18UNF	19.1	0.8	6	9.53	4	30	5/16
41.275(1 5/8)	22.225(7/8)	15.875(5/8)	20	61.9	38.1	5/8-18UNF	19.1	0.8	6	9.53	4	30	5/16
44.450(1 3/4)	25.400(1)	19.050(3/4)	25	71.4	44.4	3/4-16UNF	22.2	0.8	6	11.11	4	36.5	5/16
47.625(1 7/8)	25.400(1)	19.050(3/4)	25	71.4	44.4	3/4-16UNF	22.2	0.8	6	11.11	4	36.5	5/16
50.800(2)	31.750(1 1/4)	22.225(7/8)	30	84.1	50.8	7/8-14UNF	25.4	0.8	8	12.7	5	41.5	7/16
57.150(2 1/4)	31.750(1 1/4)	22.225(7/8)	30	84.1	50.8	7/8-14UNF	25.4	0.8	8	12.7	5	41.5	7/16

1) For bearing with cylindrical outer surface, the nominal number is followed by "X" code. In this case, the cylindrical bearing is manufactured with the tolerance for outer ring outer diameter *D* which conforms to JIS Class-0. **Ex. CR10XLL**



**Type CR·LL**  
(with cage, sealed type)



**Type CR·H**  
(with hexagon hole)

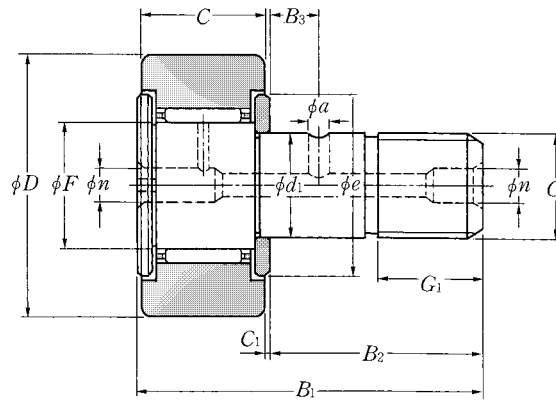
Basic load ratings				Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers		Mass (approx.)
dynamic	static	dynamic	static	N		kgf		r/min		N·m	kgf·m	Type CRV·X <sup>1)</sup>	Type CRV·XLL <sup>1)</sup>	Type CRV·X
N		kgf		Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	grease	oil					
$C_r$	$C_{or}$	$C_r$	$C_{or}$											
2 820	2 450	287	250	2 090	790	213	81	※20 000	※28 000	2	0.2	CR8T2	—	0.009
2 820	2 450	287	250	2 310	790	235	81	※20 000	※28 000	2	0.2	CR8-1T2	—	0.010
4 050	4 000	415	405	3 000	1 080	310	110	※18 000	※25 000	4	0.4	CR10	—	0.020
4 050	4 000	415	405	3 300	1 080	335	110	※18 000	※25 000	4	0.4	CR10-1	CR10-1LL	0.022
5 300	6 650	540	680	4 600	1 380	470	140	13 000	※16 000	13	1.3	CR12	CR12LL	0.037
5 300	6 650	540	680	5 350	1 710	545	174	13 000	※16 000	13	1.3	CR14	CR14LL	0.048
7 250	8 350	740	850	7 400	2 060	755	210	12 000	15 000	18	1.9	CR16	CR16LL	0.087
7 250	8 350	740	850	8 350	2 430	850	248	12 000	15 000	18	1.9	CR18	CR18LL	0.100
11 400	15 900	1 160	1 620	11 400	2 840	1 160	290	9 000	13 000	24	2.4	CR20	CR20LL	0.150
11 400	15 900	1 160	1 620	12 500	3 250	1 280	330	9 000	13 000	24	2.4	CR22	CR22LL	0.166
13 300	20 100	1 360	2 120	16 300	3 600	1 660	365	7 500	10 000	51	5.2	CR24	CR24LL	0.235
13 300	20 100	1 360	2 120	17 600	4 050	1 800	410	7 500	10 000	51	5.2	CR26	CR26LL	0.265
20 700	33 500	2 110	3 450	21 600	4 400	2 200	450	6 000	8 000	92	9.3	CR28	CR28LL	0.375
20 700	33 500	2 110	3 450	23 200	4 850	2 360	495	6 000	8 000	92	9.3	CR30	CR30LL	0.420
28 900	55 000	2 950	5 600	31 000	5 300	3 150	540	5 000	6 600	150	15	CR32	CR32LL	0.505
28 900	55 000	2 950	5 600	35 000	6 200	3 550	635	5 000	6 600	150	15	CR36	CR36LL	0.750

Note 2) Grease replenishing hole is provided at front side only (on left side-face in the above sketch). However, in the case with "hexagon hole" no grease replenishing hole is provided.

Remarks: For the cam follower with ※marked seal, the allowable running speed is approximately 10 000 r/min.

## Inch series

Type CRV··X  
Type CRV··XLL



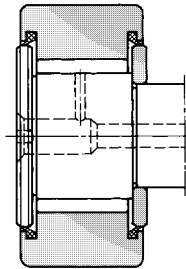
**Type CRV··X**  
**(Full-complement roller type)**

**D** 12.700~152.400mm

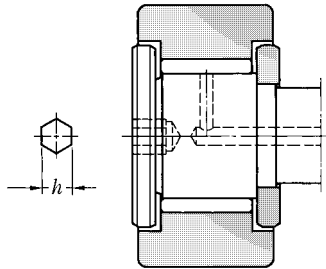
### Boundary dimensions

D -0.025	C -0.130	d <sub>1</sub> +0.025 0	F	mm (1/25.4mm)		G	G <sub>1</sub>	C <sub>1</sub>	n	B <sub>3</sub>	a	e	h
				B <sub>1</sub>	B <sub>2</sub>								
12.700(1/2)	8.731(1/32)	4.826(-)	5.75	23	12.7	NO-10-32UNF	6.4	0.8	3 <sup>2)</sup>	-	-	10	1/8
	9.525(3/8)	4.826(-)	5.75	27	15.9	NO-10-32UNF	6.4	0.8	3 <sup>2)</sup>	-	-	10	1/8
15.875(5/8)	10.319(13/32)	6.350(1/4)	8.11	27.8	15.9	1/4-28UNF	7.9	0.8	4 <sup>2)</sup>	-	-	12.5	1/8
	11.112(7/16)	6.350(1/4)	8.11	31.8	19.1	1/4-28UNF	7.9	0.8	4 <sup>2)</sup>	-	-	12.5	1/8
19.050(3/4)	12.700(1/2)	9.525(3/8)	11	36.5	22.2	3/8-24UNF	9.5	0.8	4	6.35	3	15.5	3/16
22.225(7/8)	12.700(1/2)	9.525(3/8)	11	36.5	22.2	3/8-24UNF	9.5	0.8	4	6.35	3	15.5	3/16
25.400(1)	15.875(5/8)	11.112(7/16)	14	43	25.4	1/16-20UNF	12.7	0.8	4	6.35	3	19.5	1/4
28.575(1 1/8)	15.875(5/8)	11.112(7/16)	14	43	25.4	1/16-20UNF	12.7	0.8	4	6.35	3	19.5	1/4
31.750(1 1/4)	19.050(3/4)	12.700(1/2)	18.47	52.4	31.8	1/2-20UNF	15.9	0.8	6	7.94	3	25	1/4
34.925(1 3/8)	19.050(3/4)	12.700(1/2)	18.47	52.4	31.8	1/2-20UNF	15.9	0.8	6	7.94	3	25	1/4
38.100(1 1/2)	22.225(7/8)	15.875(5/8)	21	61.9	38.1	5/8-18UNF	19.1	0.8	6	9.53	4	27	5/16
41.275(1 5/8)	22.225(7/8)	15.875(5/8)	21	61.9	38.1	5/8-18UNF	19.1	0.8	6	9.53	4	27	5/16
44.450(1 3/4)	25.400(1)	19.050(3/4)	24.65	71.4	44.5	3/4-16UNF	22.2	0.8	6	11.11	4	36.5	5/16
47.625(1 7/8)	25.400(1)	19.050(3/4)	24.65	71.4	44.5	3/4-16UNF	22.2	0.8	6	11.11	4	36.5	5/16
50.800(2)	31.750(1 1/4)	22.225(7/8)	26.71	84.1	50.8	7/8-14UNF	25.4	0.8	6	12.7	5	36.5	7/16
57.150(2 1/4)	31.750(1 1/4)	22.225(7/8)	26.71	84.1	50.8	7/8-14UNF	25.4	0.8	6	12.7	5	36.5	7/16
63.500(2 1/2)	38.100(1 1/2)	25.400(1)	31.15	96.8	57.2	1-14UNF	28.6	0.8	6	14.29	5	44	1/2
69.850(2 3/4)	38.100(1 1/2)	25.400(1)	31.15	96.8	57.2	1-14UNF	28.6	0.8	6	14.29	5	44	1/2
76.200(3)	44.450(1 3/4)	31.750(1 1/4)	36.85	109.5	63.5	1 1/4-12UNF	31.8	0.8	8	15.88	5	53	5/8
82.550(3 1/4)	44.450(1 3/4)	31.750(1 1/4)	36.85	109.5	63.5	1 1/4-12UNF	31.8	0.8	8	15.88	5	53	5/8
88.900(3 1/2)	50.800(2)	34.925(1 3/8)	44.5	122.2	69.9	1 3/8-12UNF	34.9	0.8	8	17.46	5	60	5/8
101.600(4)	57.150(2 1/4)	38.100(1 1/2)	44.5	147.6	88.9	1 1/2-12UNF	38.1	0.8	8	19.05	5	63	3/4
127.000(5)	69.850(2 3/4)	50.800(2)	68.7	200	128.6	2-12UNF	65.1	0.8	8	22.23	5	89	7/8
152.400(6)	82.550(3 1/4)	63.500(2 1/2)	81.35	236.6	152.4	2 1/2-12UNF	76.2	0.8	8	25.4	5	110	1

Note 1) For bearing with spherical outer surface, the nominal number is followed by "X" code. In this case, the spherical bearing (R=500) is manufactured with the tolerance 0,-0.05 for the outer ring outer diameter D.



**Type CRV·XLL**  
(Full-complement roller and sealed type)



**Type CRV·H**  
(with hexagon hole)

Basic load ratings				Load ratings of truck				Limiting speeds		Maximum tightening torque		Bearing numbers		Mass (approx.) kg Type CRV·X
dynamic N		static kgf		N		kgf		r/min		N·m	kgf·m	Type CRV·X <sup>1)</sup>	Type CRV·XLL <sup>1)</sup>	
<i>C<sub>r</sub></i>	<i>C<sub>0r</sub></i>	<i>C<sub>r</sub></i>	<i>C<sub>0r</sub></i>	Spherical outer ring	Cylindrical outer ring	Spherical outer ring	Cylindrical outer ring	grease	oil					
3 400	3 750	350	385	2 090	790	213	81	※17 000	※22 000	2	0.2	CRV8X	CRV8XLL	0.010
3 950	4 550	405	465	2 310	790	235	81	※17 000	※22 000	2	0.2	CRV8-1X	CRV8-1XLL	0.011
5 550	7 600	565	770	3 000	1 080	310	110	※12 000	※15 000	4	0.4	CRV10X	CRV10XLL	0.020
6 200	8 700	630	885	3 300	1 080	335	110	※12 000	※15 000	4	0.4	CRV10-1X	CRV10-1XLL	0.022
8 050	13 300	825	1 360	4 600	1 380	470	140	9 000	※11 000	13	1.3	CRV12X	CRV12XLL	0.038
8 050	13 300	825	1 360	5 350	1 710	545	174	9 000	※11 000	13	1.3	CRV14X	CRV14XLL	0.048
11 700	18 900	1 190	1 920	7 400	2 060	755	210	7 100	9 200	18	1.9	CRV16X	CRV16XLL	0.080
11 700	18 900	1 190	1 920	8 350	2 430	850	248	7 100	9 200	18	1.9	CRV18X	CRV18XLL	0.096
17 700	35 000	1 810	3 600	11 400	2 840	1 160	290	5 400	7 000	24	2.4	CRV20X	CRV20XLL	0.140
17 700	35 000	1 810	3 600	12 500	3 250	1 280	330	5 400	7 000	24	2.4	CRV22X	CRV22XLL	0.165
21 100	45 500	2 150	4 650	16 300	3 600	1 660	365	4 800	6 200	51	5.2	CRV24X	CRV24XLL	0.240
21 100	45 500	2 150	4 650	17 600	4 050	1 800	410	4 800	6 200	51	5.2	CRV26X	CRV26XLL	0.280
28 400	60 500	2 900	6 150	21 600	4 400	2 200	450	4 100	5 300	92	9.3	CRV28X	CRV28XLL	0.400
28 400	60 500	2 900	6 150	23 200	4 850	2 360	495	4 100	5 300	92	9.3	CRV30X	CRV30XLL	0.440
41 000	87 500	4 200	8 950	31 000	5 300	3 150	540	3 700	4 800	150	15	CRV32X	CRV32XLL	0.650
41 000	87 500	4 200	8 950	35 000	6 200	3 550	635	3 700	4 800	150	15	CRV36X	CRV36XLL	0.780
54 500	119 000	5 600	12 200	44 500	7 200	4 550	735	3 200	4 100	230	23	CRV40X	CRV40XLL	1.20
54 500	119 000	5 600	12 200	49 000	8 250	5 000	840	3 200	4 100	230	23	CRV44X	CRV44XLL	1.34
76 500	177 000	7 800	18 000	64 000	9 150	6 500	935	2 700	3 500	435	45	CRV48X	CRV48XLL	1.92
76 500	177 000	7 800	18 000	69 000	10 000	7 050	1 020	2 700	3 500	435	45	CRV52X	CRV52XLL	2.20
84 500	214 000	8 650	21 800	86 500	11 100	8 800	1 130	2 200	2 800	580	60	CRV56X	CRV56XLL	2.92
106 000	244 000	10 800	24 900	113 000	13 200	11 500	1 350	2 200	2 800	760	78	CRV64X	CRV64XLL	4.32
189 000	520 000	19 300	53 000	165 000	17 900	16 900	1 830	1 500	1 900	1 820	190	CRV80X	CRV80XLL	8.80
260 000	675 000	26 500	68 500	240 000	22 100	24 400	2 250	1 200	1 500	3 550	360	CRV96X	CRV96XLL	15.3

Note 2) Grease replenishing hole is provided at front side only (on left side-face in the above sketch). However, in the case with "hexagon hole" no grease replenishing hole is provided.

Remarks: For the cam follower with ※marked seal, the allowable running speed is approximately 10 000 r/min.