NTN®

Bearing Units

CAT. NO. 2400-XI/E

Dimension Table

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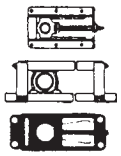
	Page		Page		Page		Page		Page		Page
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Set screw type (1)

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	Pillow blocks cast housing low center height		**UCPL2** **ASPL2**	80 112
	Pillow blocks (Steel series)		**UCPG2** **UCPG3**	84 86
	Pillow blocks (Stainless series)		**F-UCPM2**	88
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	Pillow blocks cast housing high center height		**UCHP2**	100
	Narrow pillow blocks cast housing		**UCUP2**	104
	Light pillow blocks cast housing		**ASPB2**	108
	Pillow blocks ductile cast housing		**UCPE2**	110
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Flanged units	Square flanged units cast housing		**UCF2** **UCF3** **UCFX**	120 126 132
	Square flanged units (Steel series)		**UCFG2** **UCFG3**	138 140
	Square flanged units cast housing w/ spigot joint		**UCFS3**	142
	Square flanged units w/ spigot joint (Steel series)		**UCFSG3**	148
	Round flanged units cast housing w/ spigot joint		**UCFC2** **UCFCX**	150 156
	Round flanged units w/ spigot joint (Steel series)		**UCFCG2**	162
	Rhombus flanged units cast housing		**UCFL2** **UCFL3** **UCFLX**	164 170 176
	Rhombus flanged units (Steel series)		**UCFLG2** **UCFLG3**	178 180
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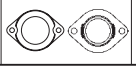
	Light rhombus flanged units cast housing		**ASFB2** **ASFD2**	194 196

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Flanged units	Rhombus flanged units ductile cast housing		**UCFE2**	198
	Round flanged units pressed steel housing		**ASPF2** **ASRPF2**	200 202
	Rhombus flanged units pressed steel housing		**ASPFL2** **ASRPFL2**	204 206
Hanger units	Hanger units cast housing		**UCHB2**	208
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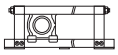
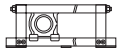
Stretcher units	Mini stretcher units		**ASPT2**	241
	Take-up stretcher units		**UCT2**	408
	Type L stretcher units		**UCL2**	410
	Type M stretcher units		**UCM2** **UCM3**	411 412

Eccentric locking collar type (1)

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Pillow blocks	Pillow blocks cast housing		**UELP2** **UELP3**	242 246
	Pillow blocks cast housing low center height		**UELPL2** **AELPL2** **JELPL2**	252 260 264
	Pillow blocks cast housing high center height		**UELHP2**	256
	Narrow pillow blocks cast housing		**UELUP2**	258
	Light pillow blocks cast housing		**AELPB2**	268
	Pillow blocks pressed steel housing		**AELPP2** **AELRPP2**	270 272
Flanged units	Square flanged units cast housing		**UELFU2** **UELF2** **UELF3**	274 278 282
	Square flanged units cast housing w/ spigot joint		**UELFS3**	288
	Round flanged units cast housing w/ spigot joint		**UELFC2**	294
	Rhombus flanged units cast housing		**UELFLU2** **UELFL2** **UELFL3**	298 302 306
	Light rhombus flanged units cast housing		**AELFB2** **AELFD2** **JELFD2**	312 314 315

Eccentric locking collar type (2)

Adapter type

Ball bearings

Bearings with solid grease

(For food machinery)

Overview

"Solid grease" is a lubricant essentially composed of lubricating grease and ultra-high polymer polyethylene. Solid grease has the same viscosity as ordinary grease at normal temperature, but as a result of a special heat treatment process, this grease solidifies retaining a large proportion of the lubricant in it. Thanks to this solidification, the grease does not easily leak from the bearing, even when the bearing is subjected to strong vibrations or centrifugal force, helping to extend bearing life.

Table 1 Major components in solid greases

Solid grease (code)	Resin	Lubricant	Operating temperature range (˚C)
General-purpose solid grease (LP03)	Ultra-high polymer polyethylene ①	Li-mineral oil grease	-20 ～ +80 (Constant use:+60 and less)
Food-grade solid grease (LP09)	Ultra-high polymer polyethylene ①	Ultra-high polymer polyethylene ②	-10 ～ +100 (Constant use:+80 and less)

① Conforms to FDA standard.
② Conforms to H-1 standard of NSF.

Features

1. Reduced lubricant leakage

Because the base oil is retained in a solid mixture, it is less likely to leak out of the bearing. During operation, temperature rise and/or centrifugal force will cause a gradual release of the base oil into the raceway groove. Eliminating grease leakage from the bearing ensures a consistent supply of lubricant and prevents contamination of the surrounding environment.

2. Superior lubrication

Bearings with solid grease resist grease leakage prolonging bearing life in applications where high centrifugal force or vibration are present. The solid lubricant does not emulsify when exposed to water also extending both grease and bearing life.

3. Low torque characteristics

The running torque of spot-pack bearings with solid grease is lower than that of bearings using standard lubricants. With conventional greases, a shearing resistance is created as the grease is channeled out of the raceway groove. Spot-pack bearings with solid grease do not experience shear resistance resulting in a lower running torque.

4. Sealing effect

Though solid grease protects a bearing against ingress of foreign matters (water, dust, etc.), it is not a sufficient means as a sealing device. Therefore, for applications that need reliable sealing performance, we recommend the use of contact type rubber seals (deep groove ball bearings, bearing units) or other seals (other bearing types).

Bearings with solid grease for food machinery

Bearing units stainless series

(Stainless bearings + Stainless steel housing)

Guards against corrosion

NTN bearing units in the stainless series feature ball bearings inserted into housings made of stainless that provide superior resistance to corrosion as compared to standard series cast iron units. This series is especially useful in a wide variety of applications because of the rust free properties of the housing.

Please refer to **Table 2** for materials of stainless series.

Maintains a clean operating environment

The solid grease lubricant in the ball bearing, solely developed by **NTN**, reduces leakage from the bearing, significantly reducing environmental pollution.

Also this grease will not homogenize when water penetrates into the bearing raceway.

Note) It is not the bearing for clean room

Table 2 Materials

Parts		Materials
Bearing	Raceways	Martensite stainless steel (equivalent to SUS440C)
	Rolling element	Martensite stainless steel (SUS440C)
	Slinger, Retainer	Austenite stainless steel (SUS304)
	Rubber seal	Nitryl rubber
	Set screw (W shape screw head)	Martensite stainless steel (SUS410)
Bearing housing		Austenite stainless steel casting (SCS13)
Cover		Austenite stainless steel (SUS304)

Note) Please refer to P14～P15 for the physical property for each material

Bearings with food solid grease for food machinery

The bearings with solid grease type P-09 boasts a high degree of safety because its heat-solidifying grease for food machinery is composed of food-grade lubricating grease that complies with the NSF's H-1 standard (permitting accidental contact with food) and super molecular weight polyethylene approved according to an FDA (US Food and Drug Administration) standard.

Interchangeability

The basic dimensions are the same as current **NTN** units and are also compatible with units from other manufacturers ISO standard.

The dimension tables for this series are shown on following pages. Pillow types are shown on page 88-89, Rhombus flange types are shown on page 182-183, The bearings are shown on page 430-431. There are specifications of the grease for food machinery and for heat-resistance in the stainless series bearing unit. Please consult **NTN** about the details.

Bearing units plastic housing series

(Stainless bearings + Glass fiber reinforced plastic housing)

Guards against corrosion

NTN bearing units in the plastic series feature ball bearings inserted into housings made of plastics that provide superior resistance to corrosion as compared to standard series cast iron units. This series is especially useful in a wide variety of applications because of the nonmagnetic and rust free properties of the housing.

Please refer to **Table 3** for materials of plastic series.

Maintains a clean operating environment

The solid grease lubricant in the ball bearing, solely developed by **NTN**, reduces leakage from the bearing, significantly reducing environmental pollution. Also, the housing will not stain, nor is there paint to peel and contaminate the environment.

Note) It is not the bearing for clean room

Table 3 Materials

Parts		Materials
Bearing	Raceways	Martensite stainless steel (equivalent to SUS440C)
	Rolling element	Martensite stainless steel (SUS440C)
	Slinger, Retainer	Austenite stainless steel (SUS304)
	Rubber seal	Nitryl rubber
	Set screw (W shape screw head)	Martensite stainless steel (SUS410)
Bearing housing	Housing	Glass reinforced Polyester
	Sleeve for set bolt	Austenite stainless steel (SUS 304)
	Nut for grease fitting	Austenite stainless steel (SUS 304)
Cover		Polypropylene
Plug		Polyethylene

Note) Please refer to P14～P15 for the physical property for each material

Light weight

Weight is reduced more than 30% to 60% over standard series units.

Water resistant

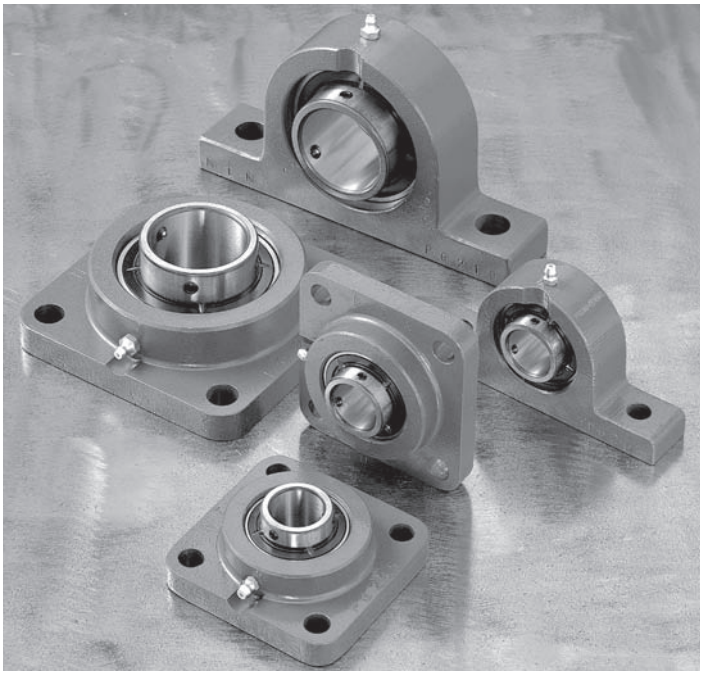
The glass filled polyester housing not only reduces corrosion but offers better water resistance.

The dimension tables for this series are shown on following pages. Pillow types are shown on page 90-91.Rhombus flange types are shown on page 184-185. The bearings are shown on page 430-431. There are specifications of the grease for food machinery and for heat-resistance in the stainless series bearing unit. Please consult **NTN** about the details.

Note) Over tightening the setting bolt may deform the plastic housing. Use the tightening torque guideline listed in **Table 11.1(2)** (P51).

Bearing units steel series

(Rolled steel housing for general structures)



Superior Housing Strength

Made of precision gas cut rolled steel, **NTN** steel housings offer superior strength characteristics when compared to cast iron and cast steel housings.

The housing material is SS400 of JIS G3101 (Mechanical properties of general structural rolled steel). please refer **Table 3.3** (page 14) for mechanical property.

Consistent Microstructure

The rolled steel microstructure is more consistent than cast iron or cast steel, reducing the risk of housing fracture under severe conditions.

Interchangeability

Rolled steel housing dimensions are consistent with cast units, allowing them to be interchanged with **NTN** standard housings and other manufacturers ISO standard.

In general, if both cast iron and steel series housings are within the same size range, the steel housings are considered safer. This is because they require a lower safety factor than ductile or cast iron housings (Please refer to **Table 4**). In addition, the design and shape of the steel series provides higher strength. (Solid base etc.)

Table 4 Safety factor

Material		Static load	Pepeated load		Impact load
			Pulsating	Reversed	
SS400	Rolled steel for structure	3	5	8	12
FC200	Gray cast iron	4	6	10	15
FCD450	Ductile cast iron	4	6	10	15
SC450	Cast steell	4	6	10	15

Table 5 Material strength

Material		Tensil strength*1 (N/mm²)
SS400	Rolled steel for structure	400
FC200	Gray cast iron	200 *2
FCD450	Ductile cast iron	450 *2
SC450	Cast steell	450 *2

*1 Minimum value of material standard
*2 Respective casting pouring sample

Applications

NTN rolled steel housings provide superior strength to cast steel and cast iron. Their ability to resist impact loads makes them suitable for applications involving heavy loads and vibration. Possible applications for **NTN** rolled steel housings include but are not limited to conveyors, trucks and overhead cranes at steel mills, mining machinery and pollution control equipment.

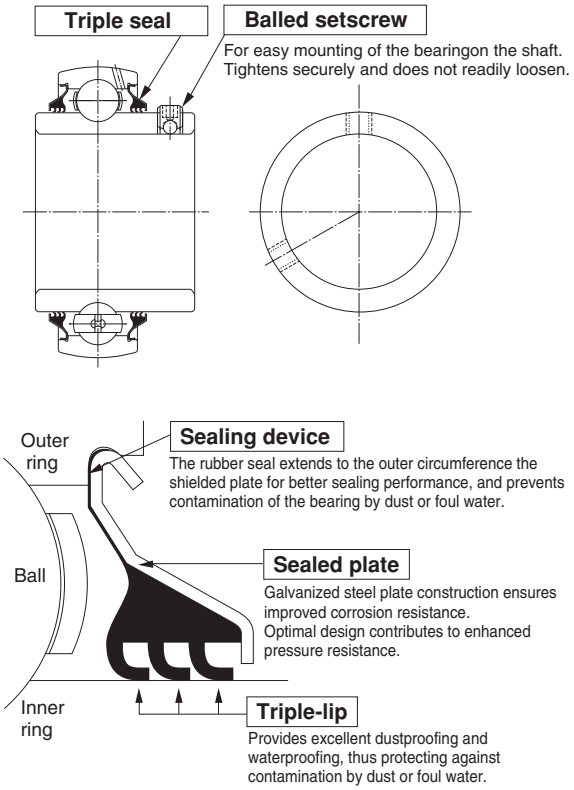
Housing shape

There are various shapes for steel series. The dimension tables for this series are shown on following pages. Pillow types are shown on page 84-87. Thick pillow types are shown on page 98-99. Square flange types are shown on page 138-141. Square flange with spigot joint types are shown on page 148-149. Round flange with spigot joint types are shown on page 162-163. Rhombus flange type are shown on page 178-181. Take-up types are shown on page 230-233.

NTN Triple-Sealed Bearings for Bearing Units

These reliable triple-sealed bearings are dustproof and waterproof.
They ensure a longer bearing life even when exposed to heavy airborne dust and splashes of foul water.

1. Construction



Types

- **Low torque triple-sealed bearing**
  (Cylindrical-bore, set screw type)
  UC201D1LLJ through **UC208D1LLJ**
  UC305D1LLJ through **UC320D1LLJ**
- **High torque triple-sealed bearing**
  (Cylindrical-bore, set screw type)
  UC201D1LLS through **UC212D1LLS**
  (Square-bore type for agricultual machines)
  1AS-11/8, **4AS09-11/4**, etc.

2. Features

Better dustproofing and waterproofing ensure a longer bearing life.

Triple-sealed bearings feature a secure bearing seal with three lips. This special seal offers reliable dustproofing and waterproofing superior to those of standard bearings used in bearing units. In addition, it ensures a longer service life, even when exposed to heavy airborne dust and splashes of foul water. (Patent pending)

Reduces maintenance cost.

A bearing life longer than that of a standard bearing unit configurations means extended maintenance intervals, greatly reduced maintenance costs (of inspection, relubrication, replacement, etc.), and increased availability of machinery.

Decreases price of the bearing unit and contributes to more compact machinery.

The triple-sealed bearing unit replaces conventional covered bearing units in certain operating conditions, greatly decreasing the cost of bearing units. In addition, if the cover is not required, the machinery can be made more compact.

Secure balled setscrew

The triple-sealed bearing is mounted on the shaft with **NTN**'s unique balled setscrew, which features an embedded ball in its tip. Compared with knurled cup point or cup-point setscrews, the balled setscrew provides much greater resistance to loosening, as it does not readily loosen due to vibration or impact.

Interchangeability

The triple-sealed bearing unit conforms to the JIS (Japanese Industrial Standard) for UC-type bearings. It is not only ready to use as a relubricable bearing, but it also replaces the conventional bearing units of **NTN** and other manufacturers. It therefore serves as a ready replacement for existing bearing units.

In the meantime, the relubricatable type is recommended to minimize the wear of the seal lip.

3. Allowable Operating Temperature Range and Speed

The triple-sealed bearing can be used in a temperature range of -15˚C to 100˚C.

- Allowable speed

Triple-sealed bearing unit$\cdots d_n$ value : 36000
High-torque triple-sealed bearing unit$\cdots d_n$ value : 21000

1. Construction

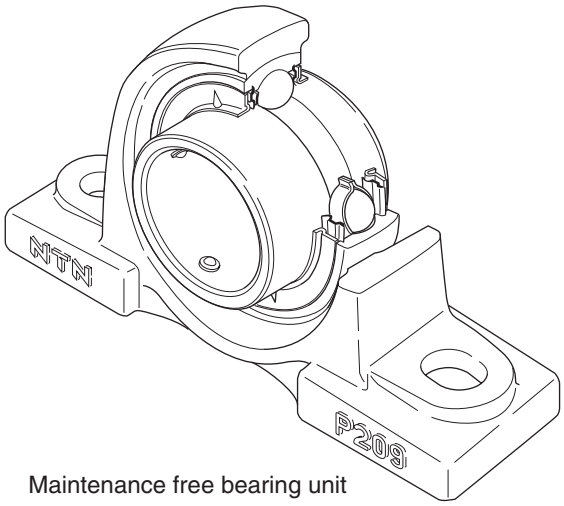
The **NTN** bearing unit is a combination of a radial ball bearing, seal, and a housing of high-grade cast iron or pressed steel, which comes in various shapes.

The outer surface of the bearing and the internal surface of the housing are spherical, so that the unit is self-aligning.

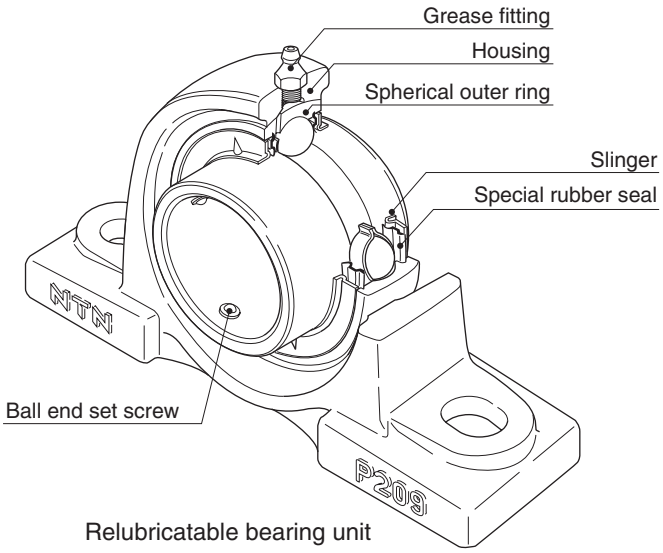
The inside construction of the ball bearing for the unit is such that steel balls and retainers of the same type as in series 62 and 63 of the **NTN** deep groove ball bearing are used. A duplex seal consisting of a combination of an oil-proof synthetic rubber seal and a slinger, unique to **NTN**, is provided on both sides.

Depending on the type, the following methods of fitting to the shaft are employed:

(1) The inner ring is fastened onto the shaft in two places by set screws.
(2) The inner ring has a tapered bore and is fitted to the shaft by means of an adapter.
(3) In the eccentric locking collar system the inner ring is fastened to the shaft by means of eccentric grooves provided at the side of the inner ring and on the collar.

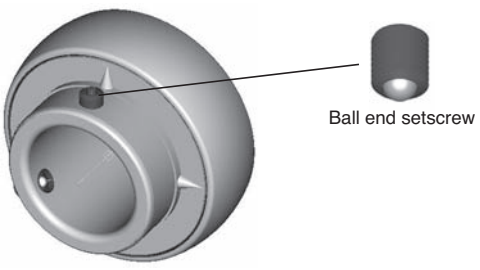


Maintenance free bearing unit



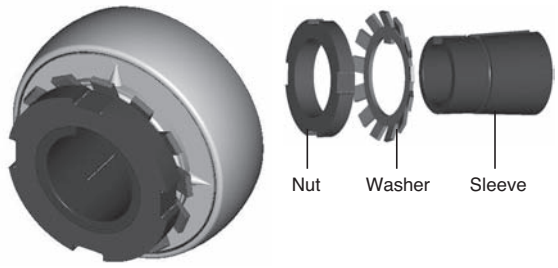
Relubricatable bearing unit

■Mounting system for bearing unit (Please refer to P56 ~ P59 for Mounting bearing unit on the shaft)



General application
Set screw system


Achieves a tighter fit to the shaft, but only for use in single direction rotation applications.
Eccentric locking collar system



Application required rotational accuracy.
Adapter system


Application required rotational accuracy.
Tight fitting system

2. Design Features and Advantages

2.1 Maintenance free type

The **NTN** Maintenance free bearing unit contains a high-grade lithium-based grease, good for use over a long period, which is ideally suited to sealed-type bearings. Also provided is an excellent sealing device, unique to **NTN**, which prevents any leakage of grease or penetration of dust and water from outside.

It is designed so that the rotation of the shaft causes the sealed-in grease to circulate through the inside space, effectively providing maximum lubrication. The lubrication effect is maintained over a long period with no need for replenishment of grease.

To summarize the advantages of the **NTN** maintenance free bearing unit:

(1) As an adequate amount of good quality grease is sealed in at the time of manufacture, there is no need for replenishment. This means savings in terms of time and maintenance costs.
(2) Since there is no need for any regreasing facilities, such as piping, a more compact design is possible.
(3) The sealed-in design eliminates the possibility of grease leakage, which could lead to stained products.

2.2 Relubricatable type

The **NTN** relubricatable type bearing unit has an advantage over other simillar units being so designed as to permit regreasing even in the case of misalignment of 2˚ to the right or left. The hole through which the grease fitting is mounted usually causes structural weakening of the housing.

However, as a result of extensive testing, in the **NTN** bearing unit the hole is positioned so as to minimize this adverse effect. In addition, the regreasing groove has been designed to minimize weakening of the housing.

While the **NTN** maintenance free type bearing unit is satisfactory for use under normal operating conditions in-doors, in the following circumstances it is necessary to use the relubricatable type bearing unit:

(1) Cases where the temperature of the bearing rises above 100˚C, 212˚F:
(2) Cases where there is excessive dust, but space does not permit using a bearing unit with a cover.
(3) Cases where the bearing unit is constantly exposed to splashes of water or any other liquid, but space does not permit using a bearing unit with a cover.
(4) Cases in which the humidity is very high, and the machine in which the bearing unit is used is run only intermittently.
(5) Cases involving a heavy load of which the C_r/P_r value is about 10 or below, and the speed is 10 rpm or below, or the movement is oscillatory.
(6) Cases where the number of revolutions is relatively high and the noise problem has to be considered; for example, when the bearing is used with the fan of an air conditioner.

2.3 Special sealing feature

2.3.1 Standard bearing units

The sealing device of the ball bearing for the **NTN** bearing unit is a combination of a heat-resistant and oil-proof synthetic rubber seal and a slinger of an exclusive **NTN** design.

The seal, which is fixed in the outer ring, is steelreinforced, and its lip, in contact with the inner ring, is designed to minimize frictional torque.

The slinger is fixed to the inner ring of the bearing with which it rotates. There is a small clearance between its periphery and the outer ring.

These two types of seals on both sides of the bearing prevent grease leakage, and foreign matter is prevented from entering the bearing from outside.

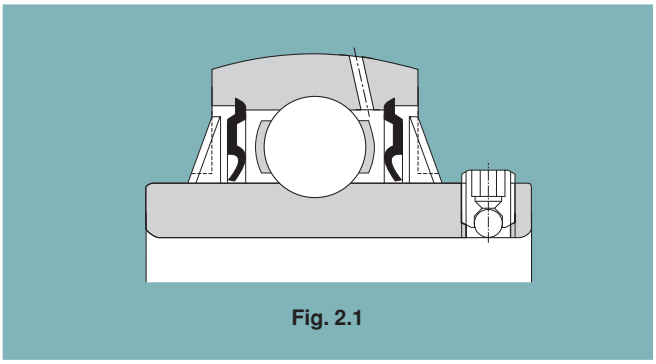


Fig. 2.1

2.3.2 Bearing units with covers

The **NTN** bearing unit with a cover consists of a standard bearing unit and an outside covering for extra protection against dust. Special consideration has been given to its design with respect to dust-proofing.

Sealing devices are provided in both the bearing and the housing, so that units of this type operate satisfactorily even in such adverse environments as flour mills, steel mills, foundries, galvanizing plants and chemical plants, where excessive dust is produced and/or liquids are used. They are also eminently suitable for outdoor environments where dust and rain are inevitable, and in heavy industrial machinery such as construction and transportation equipment.

The rubber seal of the cover contacts with the shaft by its two lips, as shown in **Fig. 2.2** and **2.3**. By filling the groove between the two lips with grease, an excellent sealing effect is obtained and, at the same time, the contacting portions of the lips are lubricated. Furthermore, the groove is so designed that when the shaft is inclined the rubber seal can move in the radial direction.

When bearing units are exposed to splashes of water rather than to dust, a drain hole (5 to 8 mm, 0.2 to 0.3 inches in diameter) is provided at the bottom of the cover, and grease should be applied to the side of the bearing itself instead of into the cover.

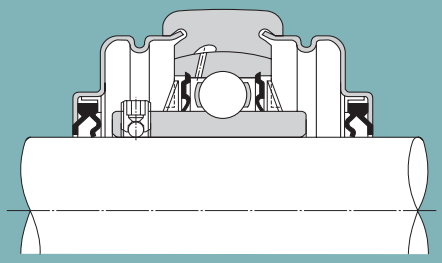


Fig. 2.2 Pressed steel cover

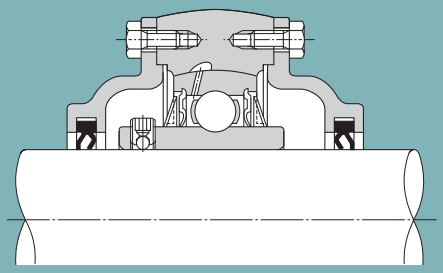


Fig. 2.3 Cast iron cover

2.4 Secure fitting

Fastening the bearing to the shaft is effected by tightening the ball-end set screw, situated on the inner ring. This is a unique **NTN** feature which prevents loosening, even if the bearing is subjected to intense vibrations and shocks.

2.5 Self-aligning

With the **NTN** bearing unit, the outer surface of the ball bearing and the inner surface of the housing are spherical, thus this bearing unit has self-aligning characteristic. Any misalignment of axis that may arise from poor workmanship on the shaft or errors in fitting will be properly adjusted.

2.6 Higher rated load capacity

The bearing used in the unit is of the same internal construction as those in **NTN** bearing series 62 and 63, and is capable of accommodating axial load as well as radial load, or composite load. The rated load capacity of this bearing is considerably higher than that of the corresponding self-aligning ball bearings used for standard plummer blocks.

2.7 Light weight yet strong housing

Housings for **NTN** bearing units come in various shapes. They consist of either high-grade cast iron, one-piece casting, or of precision finished pressed steel, the latter being lighter in weight. In either case, they are practically designed to combine lightness with maximum strength.

2.8 Easy mounting

The **NTN** bearing unit is an integrated unit consisting of a bearing and a housing.

As the bearing is prelubricated at manufacture with the correct amount of high-grade lithium base, it can be mounted on the shaft just as it is. It is sufficient to carry out a short test run after mounting.

2.9 Accurate fitting of the housing

In order to simplify the fitting of the pillow block and flange type bearing units, the housings are provided with a seat for a dowel pin, which may be utilized as needed.

2.10 Bearing replaceability

The bearing used in the **NTN** bearing unit is replaceable. In the event of bearing failure, a new bearing can be fitted to the existing housing.

3. Material

3.1 Raceway and rolling element materials

Materials with high hardness and appropriate toughness are used for the inner rings, outer rings and balls of the insert bearings since large compression forces and repetitive stresses are applied to a small contact. In general Cold-rolled steel is used for the cages. For special applications, stainless steel is also available for use in the insert bearings.

3.2 Housing materials

The most common materials used in **NTN** bearing unit housings are cast iron or steel plate, with cast iron being the standard.

For special applications, materials such as spheroidal graphite iron, structural steel, stainless steel cast iron or plastic resin are also available for use in the housings. The chemical resistance properties of glass-fiber reinforced resin are shown in **Table 3.5**.

3.2.1 Cast iron housing

NTN uses gray cast iron as the standard material for cast iron housings.

Among metallic materials cast iron has a high damping capacity, which is an ideal characteristic for mechanical components. This means cast iron, exhibits superior performance when absorbing vibration, compared with other materials. Additionally cast iron is suitable for high temperatures of up to 300C˚.

3.2.2 Steel plate housing

Cold-rolled steel sheet or hot-rolled mild steel sheet is used for steel plate housings.

Table 3.1 JIS G 5501 Mechanical properties of gray iron product

Code of material	Mechanical properties of separately casted test piece material	
	Tensile strength N/mm^2	Brinell hardness HB
FC200	Min. 200	Max. 232

Table 3.2 JIS G 5502 Mechanical properties of nodular graphite cast iron

Code of material	Mechanical properties of separately casted test piece material			
	Tensile strength N/mm^2	0.2% Proof stress N/mm^2	Elongation %	(Reference) Hardness HB
FCD450-10	Min. 450	Min. 280	Min. 10	140 - 210

Table 3.3 JIS G 3101 Mechanical properties of general structural rolled steel

Code of material	Mechanical properties			
	Steel thickness mm	Yield point or Proof stress N/mm^2	Tensile strength N/mm^2	Elongation % Test piece in ( )
SS400	Over 16 Incl. 40	Min. 235	400 - 510	21 (No. 1A)
	Over 40 Incl. 100	Min. 215		23 (No. 4)
	Over 100	Min. 205		

Table 3.4 JIS G 5152 Mechanical properties of stainless cast steel product

Code of material	Mechanical properties of separately casted test piece material			
	Tensile strength N/mm^2	0.2% Proof stress N/mm^2	Elongation %	Hardness HB
SCS13	Min. 440	Min. 185	Min. 30	Max. 183

Table 3.5 Water and chemical resistance of glass fiber reinforcing resin housing (PBT)

	Chemicals	Temperature ℃	Deterioration ratio[1] % Number of days soaked 30 days	90 days		Chemicals	Temperature ℃	Deterioration ratio[1] % Number of days soaked 30 days	90 days
Acid	Hydrochloric acid, 10%	23	89	85	Organic solven	Ethyl alcohol	23	99	96
	Sulfuric acid, 36%	23	97	97		Methyl alcohol	23	91	82
		60	84	60		Isopropyl alcohol	23	100	100
	Acetic acid 10%	23	88	88		Acetone	23	86	74
Alkaline	Potassium hydroacid, 5%	23	88	10		Methyl Ethyl Keton	23	90	80
	Sodium hydroacid, 10%	23	※	※		Ethyl acetate	23	96	86
	Ammonia hydroacid, 10%	23	96	87		Methylene chloride	23	54	54
Oil	Motor oil	23	100	100		ethylene grycole	23	100	100
	Brake oil	23	100	100	Sodium	Zinc chrolide 10%	23	97	94
	Gasoline (Regular)	23	100	100		Calcium chrolide 10%	23	98	98
		60	93	90		Sodium chrolide 5%	23	97	97

Remarks 1) Deterioration (%) is the strength after test divided by the strength before test.
The ※ symbol indicates that results could not be measured as the test piece dissolved.

Remarks 2) The values listed in the table are not guaranteed as they are the result of soaking without operating stresses on the sample. Because this strength data is general, it does not apply under all operating conditions. Actual housing strength will vary depending on the type and concentration of liquid, temperature, load, etc.

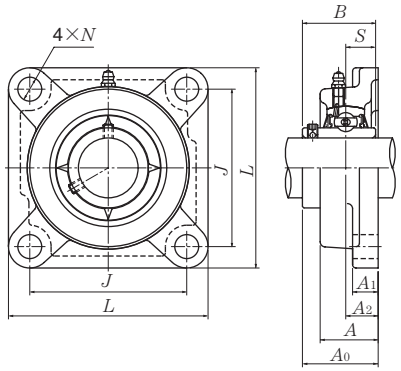
Table 3.6 Anti-Corrosion capability

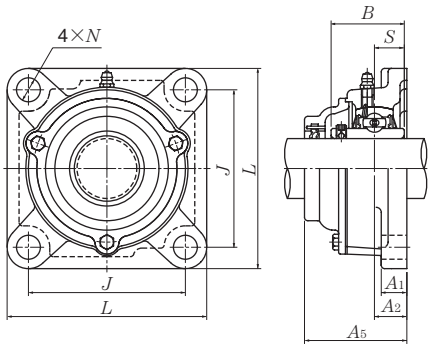
NTN recommends ratings of ◎ to ○ for optimum corrosion resistance. ◎ ○ △ ▲ × excellent ◄——► poor

Materials \ Condition	Atmosphere		Water		Acid		
	Dry	Wet	Natural water	Sodium water	Nitric acid	Sulfuric acid	Hydrochloric acid
Martensite stainless steel SUS440C, SUS410	○	△	△	▲	▲	×	×
Austenite stainless steel SUS304, SCS13	◎	◎	◎	○	◎	○	△
Polyester plastics	◎	◎	◎	◎	▲	○	○
Polypropylene, polyethylene	◎	◎	◎	◎	○	○	○
High carbon steel SUJ2	△	▲	▲	×	×	×	×
Carbon steel, Cast iron	▲	×	×	×	×	×	×

Remarks: This data is obtained by observation of the surface conditions of materials.
Note that these anti-corrosion capabilities are altered by anti-corrosion surface treatment.
Not recommended for use in liquid.

Square flanged units cast housing
Set screw type

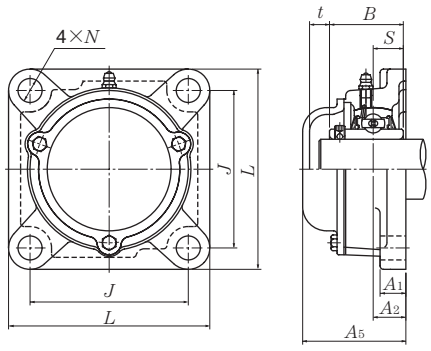




Cast dust cover type (Open end)
C-UCF…D1

Shaft dia. mm / inch	Unit number [1]	Nominal dimensions mm / inch: L	J	A_2	A_1	A	N	A_0	B	S	Bolt size mm / inch	Bearing number
25	**UCF305D1**	110	80	16	13	29	16	39	38	15	M14	UC305D1
$13/16$	**UCF305-013D1**											UC305-013D1
$7/8$	**UCF305-014D1**	$4\,11/32$	$3\,5/32$	$5/8$	$1/2$	$1\,5/32$	$5/8$	$1\,17/32$	1.4961	0.591	$1/2$	UC305-014D1
$15/16$	**UCF305-015D1**											UC305-015D1
1	**UCF305-100D1**											UC305-100D1
30	**UCF306D1**	125	95	18	15	32	16	44	43	17	M14	UC306D1
$1\,1/16$	**UCF306-101D1**											UC306-101D1
$1\,1/8$	**UCF306-102D1**	$4\,29/32$	$3\,47/64$	$45/64$	$19/32$	$1\,1/4$	$5/8$	$1\,47/64$	1.6929	0.669	$1/2$	UC306-102D1
$1\,3/16$	**UCF306-103D1**											UC306-103D1
35	**UCF307D1**	135	100	20	16	36	19	49	48	19	M16	UC307D1
$1\,1/4$	**UCF307-104D1**											UC307-104D1
$1\,5/16$	**UCF307-105D1**	$5\,5/16$	$3\,15/16$	$25/32$	$5/8$	$1\,13/32$	$3/4$	$1\,59/64$	1.8898	0.748	$5/8$	UC307-105D1
$1\,3/8$	**UCF307-106D1**											UC307-106D1
$1\,7/16$	**UCF307-107D1**											UC307-107D1
40	**UCF308D1**	150	112	23	17	40	19	56	52	19	M16	UC308D1
$1\,1/2$	**UCF308-108D1**	$5\,29/32$	$4\,13/32$	$29/32$	$21/32$	$1\,9/16$	$3/4$	$2\,13/64$	2.0472	0.748	$5/8$	UC308-108D1
$1\,9/16$	**UCF308-109D1**											UC308-109D1
45	**UCF309D1**	160	125	25	18	44	19	60	57	22	M16	UC309D1
$1\,5/8$	**UCF309-110D1**											UC309-110D1
$1\,11/16$	**UCF309-111D1**	$6\,5/16$	$4\,59/64$	$63/64$	$23/32$	$1\,23/32$	$3/4$	$2\,23/64$	2.2441	0.866	$5/8$	UC309-111D1
$1\,3/4$	**UCF309-112D1**											UC309-112D1
50	**UCF310D1**	175	132	28	19	48	23	67	61	22	M20	UC310D1
$1\,13/16$	**UCF310-113D1**											UC310-113D1
$1\,7/8$	**UCF310-114D1**	$6\,7/8$	$5\,13/64$	$1\,7/64$	$3/4$	$1\,7/8$	$29/32$	$2\,41/64$	2.4016	0.866	$3/4$	UC310-114D1
$1\,15/16$	**UCF310-115D1**											UC310-115D1
55	**UCF311D1**	185	140	30	20	52	23	71	66	25	M20	UC311D1
2	**UCF311-200D1**											UC311-200D1
$2\,1/16$	**UCF311-201D1**	$7\,9/32$	$5\,33/64$	$1\,3/16$	$25/32$	$2\,1/16$	$29/32$	$2\,51/64$	2.5984	0.984	$3/4$	UC311-201D1
$2\,1/8$	**UCF311-202D1**											UC311-202D1
$2\,3/16$	**UCF311-203D1**											UC311-203D1

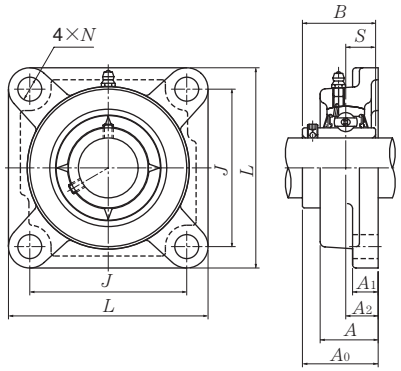
Remarks: 1) These numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "D1".
Note: Please refer to page 44 for size of grease fitting.

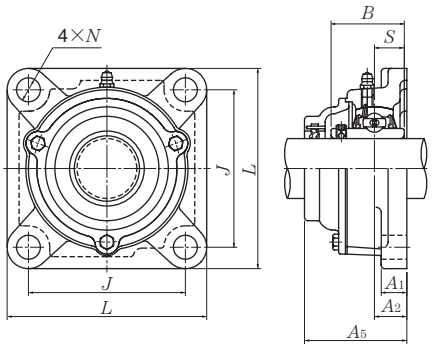


Cast dust cover type (Close end)
CM-UCF…D1

Housing [1] number	Unit number [1] cast dust cover type	Nominal dimensions mm t	Nominal dimensions inch A_5	Mass (approx.) kg UCF	Mass (approx.) lb C(CM)
F305D1	C(CM)-UCF305D1	12	56	1.1	1.4
F305D1	C(CM)-UCF305-013D1				
F305D1	C(CM)-UCF305-014D1	15/32	2 7/32	2.4	3.1
F305D1	C(CM)-UCF305-015D1				
F305D1	C(CM)-UCF305-100D1				
F306D1	C(CM)-UCF306D1	11	60	1.6	2.1
F306D1	C(CM)-UCF306-101D1				
F306D1	C(CM)-UCF306-102D1	7/16	2 3/8	3.5	4.6
F306D1	C(CM)-UCF306-103D1				
F307D1	C(CM)-UCF307D1	14	68	2.1	2.6
F307D1	C(CM)-UCF307-104D1				
F307D1	C(CM)-UCF307-105D1	35/64	2 11/16	4.6	5.7
F307D1	C(CM)-UCF307-106D1				
F307D1	C(CM)-UCF307-107D1				
F308D1	C(CM)-UCF308D1	14	76	2.7	3.4
F308D1	C(CM)-UCF308-108D1	35/64	3	6.0	7.5
F308D1	C(CM)-UCF308-109D1				
F309D1	C(CM)-UCF309D1	14	80	3.4	4.3
F309D1	C(CM)-UCF309-110D1				
F309D1	C(CM)-UCF309-111D1	35/64	3 5/32	7.5	9.5
F309D1	C(CM)-UCF309-112D1				
F310D1	C(CM)-UCF310D1	15	88	4.5	5.8
F310D1	C(CM)-UCF310-113D1				
F310D1	C(CM)-UCF310-114D1	19/32	3 15/32	9.9	13
F310D1	C(CM)-UCF310-115D1				
F311D1	C(CM)-UCF311D1	15	92	5.3	6.7
F311D1	C(CM)-UCF311-200D1				
F311D1	C(CM)-UCF311-201D1	19/32	3 5/8	12	15
F311D1	C(CM)-UCF311-202D1				
F311D1	C(CM)-UCF311-203D1				

Square flanged units cast housing
Set screw type

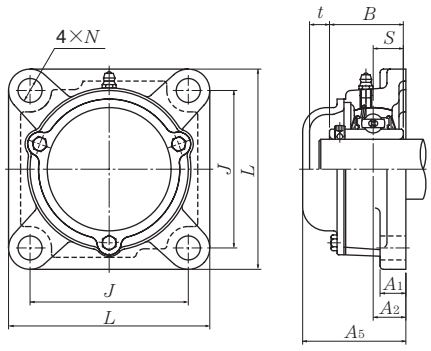




Cast dust cover type (Open end)
C-UCF…D1

Shaft dia. mm / inch	Unit number [1]	Nominal dimensions mm / inch: L	J	A_2	A_1	A	N	A_0	B	S	Bolt size mm / inch	Bearing number
60	**UCF312D1**	195	150	33	22	56	23	78	71	26	M20	UC312D1
2 1/4	**UCF312-204D1**											UC312-204D1
2 5/16	**UCF312-205D1**	7 11/16	5 29/32	1 19/64	7/8	2 7/32	29/32	3 5/64	2.7953	1.024	3/4	UC312-205D1
2 3/8	**UCF312-206D1**											UC312-206D1
2 7/16	**UCF312-207D1**											UC312-207D1
65	**UCF313D1**	208	166	33	22	58	23	78	75	30	M20	UC313D1
2 1/2	**UCF313-208D1**	8 3/16	6 17/32	1 19/64	7/8	2 9/32	29/32	3 5/64	2.9528	1.181	3/4	UC313-208D1
2 9/16	**UCF313-209D1**											UC313-209D1
70	**UCF314D1**	226	178	36	25	61	25	81	78	33	M22	UC314D1
2 5/8	**UCF314-210D1**											UC314-210D1
2 11/16	**UCF314-211D1**	8 29/32	6 1/64	1 27/64	31/32	2 13/32	63/64	3 3/16	3.0709	1.299	7/8	UC314-211D1
2 3/4	**UCF314-212D1**											UC314-212D1
75	**UCF315D1**	236	184	39	25	66	25	89	82	32	M22	UC315D1
2 13/16	**UCF315-213D1**											UC315-213D1
2 7/8	**UCF315-214D1**	9 9/32	7 1/4	1 17/32	31/32	2 19/32	63/64	3 1/2	3.2283	1.260	7/8	UC315-214D1
2 15/16	**UCF315-215D1**											UC315-215D1
3	**UCF315-300D1**											UC315-300D1
80	**UCF316D1**	250	196	38	27	68	31	90	86	34	M27	UC316D1
3 1/16	**UCF316-301D1**											UC316-301D1
3 1/8	**UCF316-302D1**	9 27/32	7 23/32	1 1/2	1 1/16	2 11/16	1 7/32	3 35/64	3.3858	1.339	1	UC316-302D1
3 3/16	**UCF316-303D1**											UC316-303D1
85	**UCF317D1**	260	204	44	27	74	31	100	96	40	M27	UC317D1
3 1/4	**UCF317-304D1**											UC317-304D1
3 5/16	**UCF317-305D1**	10 1/4	8 1/32	1 47/64	1 1/16	2 29/32	1 7/32	3 15/16	3.7795	1.575	1	UC317-305D1
3 7/16	**UCF317-307D1**											UC317-307D1
90	**UCF318D1**	280	216	44	30	76	35	100	96	40	M30	UC318D1
3 7/16	**UCF318-307D1**	11 1/32	8 1/2	1 47/64	1 3/16	3	1 3/8	3 15/16	3.7795	1.575	1 1/8	UC318-307D1
3 1/2	**UCF318-308D1**											UC318-308D1

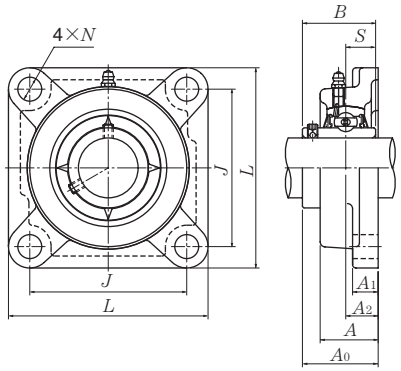
Remarks: 1) These numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "D1".
Note: Please refer to page 44 for size of grease fitting.

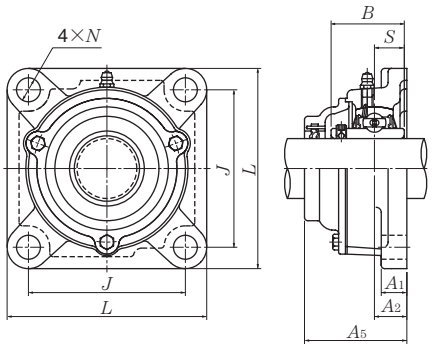


Cast dust cover type (Close end)
CM-UCF…D1

Housing [1] number	Unit number [1] cast dust cover type	Nominal dimensions mm t	Nominal dimensions inch A_5	Mass (approx.) kg UCF	Mass (approx.) lb C(CM)
F312D1	C(CM)-UCF312D1	16	100	6.3	7.8
F312D1	C(CM)-UCF312-204D1				
F312D1	C(CM)-UCF312-205D1	5/8	3 15/16	14	17
F312D1	C(CM)-UCF312-206D1				
F312D1	C(CM)-UCF312-207D1				
F313D1	C(CM)-UCF313D1	19	103	8.0	9.7
F313D1	C(CM)-UCF313-208D1	3/4	4 1/16	18	21
F313D1	C(CM)-UCF313-209D1				
F314D1	C(CM)-UCF314D1	19	106	9.4	11
F314D1	C(CM)-UCF314-210D1				
F314D1	C(CM)-UCF314-211D1	3/4	4 3/16	21	24
F314D1	C(CM)-UCF314-212D1				
F315D1	C(CM)-UCF315D1	19	114	11	13
F315D1	C(CM)-UCF315-213D1				
F315D1	C(CM)-UCF315-214D1	3/4	4 1/2	24	29
F315D1	C(CM)-UCF315-215D1				
F315D1	C(CM)-UCF315-300D1				
F316D1	C(CM)-UCF316D1	19	116	14	16
F316D1	C(CM)-UCF316-301D1				
F316D1	C(CM)-UCF316-302D1	3/4	4 9/16	31	35
F316D1	C(CM)-UCF316-303D1				
F317D1	C(CM)-UCF317D1	21	129	15	19
F317D1	C(CM)-UCF317-304D1				
F317D1	C(CM)-UCF317-305D1	13/16	5 3/32	33	42
F317D1	C(CM)-UCF317-307D1				
F318D1	C(CM)-UCF318D1	21	129	19	23
F318D1	C(CM)-UCF318-307D1	13/16	5 3/32	42	51
F318D1	C(CM)-UCF318-308D1				

Square flanged units cast housing
Set screw type

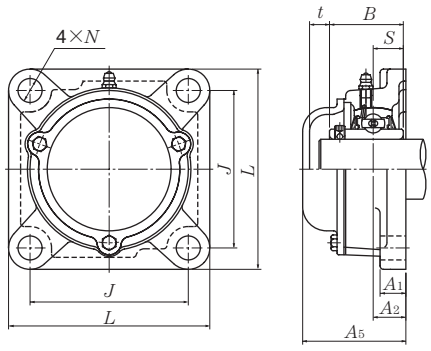




Cast dust cover type (Open end)
C-UCF…D1

Shaft dia. mm / inch	Unit number [1]	Nominal dimensions mm / inch: L	J	A_2	A_1	A	N	A_0	B	S	Bolt size mm / inch	Bearing number
95	**UCF319D1**	290	228	59	30	94	35	121	103	41	M30	UC319D1
$3\frac{5}{8}$	**UCF319-310D1**											UC319-310D1
$3\frac{11}{16}$	**UCF319-311D1**	$11\frac{13}{32}$	$8\frac{31}{32}$	$2\frac{21}{64}$	$1\frac{3}{16}$	$3\frac{11}{16}$	$1\frac{3}{8}$	$4\frac{49}{64}$	4.0551	1.614	$1\frac{1}{8}$	UC319-311D1
$3\frac{3}{4}$	**UCF319-312D1**											UC319-312D1
100	**UCF320D1**	310	242	59	32	94	38	125	108	42	M33	UC320D1
$3\frac{13}{16}$	**UCF320-313D1**											UC320-313D1
$3\frac{7}{8}$	**UCF320-314D1**	$12\frac{7}{32}$	$9\frac{17}{32}$	$2\frac{21}{64}$	$1\frac{1}{4}$	$3\frac{11}{16}$	$1\frac{1}{2}$	$4\frac{59}{64}$	4.2520	1.654	$1\frac{1}{4}$	UC320-314D1
$3\frac{15}{16}$	**UCF320-315D1**											UC320-315D1
4	**UCF320-400D1**											UC320-400D1
105	**UCF321D1**	310	242	59	32	94	38	127	112	44	M33	UC321D1
110	**UCF322D1**	340	266	60	35	96	41	131	117	46	M36	UC322D1
120	**UCF324D1**	370	290	65	40	110	41	140	126	51	M36	UC324D1
130	**UCF326D1**	410	320	65	45	115	41	146	135	54	M36	UC326D1
140	**UCF328D1**	450	350	75	55	125	41	161	145	59	M36	UC328D1

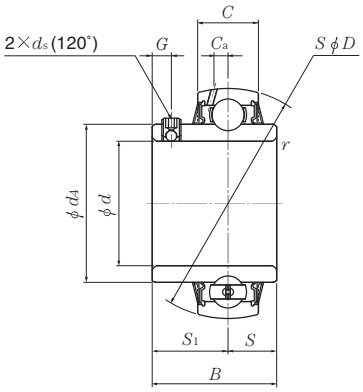
Remarks: 1) These numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "D1".
Note: Please refer to page 44 for size of grease fitting.

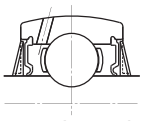


Cast dust cover type (Close end)
CM-UCF…D1

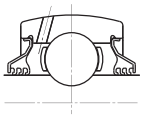
Housing [1] number	Unit number [1] cast dust cover type	Nominal dimensions mm		Nominal dimensions inch		Mass (approx.) kg		Mass (approx.) lb
		t	A_5	t	A_5	UCF	C(CM)	C(CM)
F319D1	C(CM)-UCF319D1	20	149			22	25	
F319D1	C(CM)-UCF319-310D1							
F319D1	C(CM)-UCF319-311D1			$25/32$	$5\,7/8$	49	55	
F319D1	C(CM)-UCF319-312D1							
F320D1	C(CM)-UCF320D1	20	154			27	32	
F320D1	C(CM)-UCF320-313D1							
F320D1	C(CM)-UCF320-314D1			$25/32$	$6\,1/16$	60	71	
F320D1	C(CM)-UCF320-315D1							
F320D1	C(CM)-UCF320-400D1							
F321D1	C(CM)-UCF321D1	20	156			26	32	
F322D1	C(CM)-UCF322D1	20	160			34	40	
F324D1	C(CM)-UCF324D1	22	172			48	56	
F326D1	C(CM)-UCF326D1	22	178			63	73	
F328D1	C(CM)-UCF328D1	21	192			90	100	

Ball bearings
Set screw type





Standard: Seal + Slinger



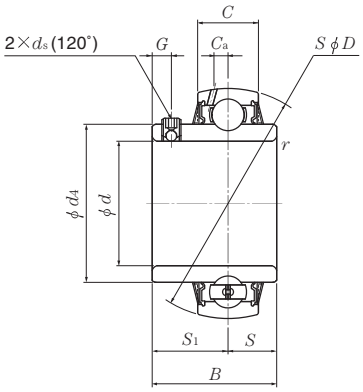
Triple Sealed
UCxxD1LLJ
Example : UC305D1LLJ

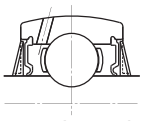
Shaft dia. mm / inch	Bearing number	Nominal dimensions										
		mm						inch				
		d	D	B	C	r_s min.	S	S_1	G	ds	d_4	C_a
25	**UC305D1**	25	62	38	20	1.5	15	23	6	M6×0.75	36.8	5.0
13/16	**UC305-013D1**	0.8125										
7/8	**UC305-014D1**	0.8750	2.4409	1.4961	0.7874	0.059	0.591	0.906	0.236	1/4-28UNF	1.4488	0.197
15/16	**UC305-015D1**	0.9375										
1	**UC305-100D1**	1.0000										
30	**UC306D1**	30	72	43	23	1.5	17	26	6	M6×0.75	44.9	5.6
1 1/16	**UC306-101D1**	1.0625										
1 1/8	**UC306-102D1**	1.1250	2.8346	1.6929	0.9055	0.059	0.669	1.024	0.236	1/4-28UNF	1.7677	0.220
1 3/16	**UC306-103D1**	1.1875										
35	**UC307D1**	35	80	48	25	2	19	29	8	M8×1	49.4	5.7
1 1/4	**UC307-104D1**	1.2500										
1 5/16	**UC307-105D1**	1.3125	3.1496	1.8898	0.9843	0.079	0.748	1.142	0.315	5/16-24UNF	1.9449	0.224
1 3/8	**UC307-106D1**	1.3750										
1 7/16	**UC307-107D1**	1.4375										
40	**UC308D1**	40	90	52	27	2	19	33	10	M10×1.25	56	6.1
1 1/2	**UC308-108D1**	1.5000	3.5433	2.0472	1.0630	0.079	0.748	1.299	0.394	3/8-24UNF	2.2047	0.240
1 9/16	**UC308-109D1**	1.5625										
45	**UC309D1**	45	100	57	29	2	22	35	10	M10×1.25	63.5	7.1
1 5/8	**UC309-110D1**	1.6250										
1 11/16	**UC309-111D1**	1.6875	3.9370	2.2441	1.1417	0.079	0.866	1.378	0.394	3/8-24UNF	2.5000	0.280
1 3/4	**UC309-112D1**	1.7500										
50	**UC310D1**	50	110	61	32	2.5	22	39	12	M12×1.5	70.6	7.9
1 13/16	**UC310-113D1**	1.8125										
1 7/8	**UC310-114D1**	1.8750	4.3307	2.4016	1.2598	0.098	0.866	1.535	0.472	1/2-20UNF	2.7795	0.311
1 15/16	**UC310-115D1**	1.9375										
55	**UC311D1**	55	120	66	34	2.5	25	41	12	M12×1.5	76.6	8.5
2	**UC311-200D1**	2.0000										
2 1/16	**UC311-201D1**	2.0625	4.7244	2.5984	1.3386	0.098	0.984	1.614	0.472	1/2-20UNF	3.0157	0.335
2 1/8	**UC311-202D1**	2.1250										
2 3/16	**UC311-203D1**	2.1875										

Remarks: 1) For inch series bearings, the f_0 factor for calculating equivalent radial load is the same as the metric series.

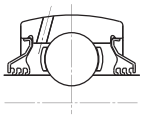
Basic load ratings		Factor[1)]	Mass (approx.)	
N	lbf		kg	lb
dynamic C_r	static C_{or}	f_0		
21 200	10 900	12.6	0.35	0.88
4 750	2 460		0.84	0.79
26 700	15 000	13.3	0.56	1.34
6 000	3 400		1.28	1.23
33 500	19 100	13.1	0.70	1.70
7 500	4 300		1.63	1.57
40 500	24 000	13.2	0.96	2.23
9 150	5 400		2.14	
53 000	32 000	13.1	1.28	3.06
11 900	7 200		2.98	2.87
62 000	38 500	13.2	1.68	3.95
13 900	8 600		3.84	3.70
71 500	45 000	13.2	2.08	4.96
16 100	10 100		4.81	4.67
				4.50

Ball bearings
Set screw type





Standard: Seal + Slinger



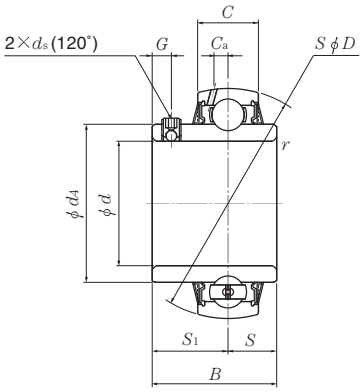
Triple Sealed
UCxxD1LLJ
Example : UC305D1LLJ

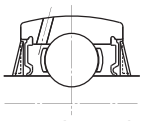
Shaft dia. mm / inch	Bearing number	Nominal dimensions										
		mm: d	mm: D	mm: B	mm: C	mm: r_s min.	inch: S	inch: S_1	inch: G	inch: ds	inch: d_4	inch: C_a
60	**UC312D1**	60	130	71	36	2.5	26	45	12	M12×1.5	82.7	9.0
2 1/4	**UC312-204D1**	2.2500										
2 5/16	**UC312-205D1**	2.3125	5.1181	2.7953	1.4173	0.098	1.024	1.772	0.472	1/2-20UNF	3.2559	0.354
2 3/8	**UC312-206D1**	2.3750										
2 7/16	**UC312-207D1**	2.4375										
65	**UC313D1**	65	140	75	39	2.5	30	45	12	M12×1.5	88.2	9.4
2 1/2	**UC313-208D1**	2.5000	5.5118	2.9528	1.5354	0.098	1.181	1.772	0.472	1/2-20UNF	3.4724	0.370
2 9/16	**UC313-209D1**	2.5625										
70	**UC314D1**	70	150	78	41	2.5	33	45	12	M12×1.5	94.8	10
2 5/8	**UC314-210D1**	2.6250										
2 11/16	**UC314-211D1**	2.6875	5.9055	3.0709	1.6142	0.098	1.299	1.772	0.472	1/2-20UNF	3.7323	0.394
2 3/4	**UC314-212D1**	2.7500										
75	**UC315D1**	75	160	82	43	2.5	32	50	14	M14×1.5	101.3	10.5
2 13/16	**UC315-213D1**	2.8125										
2 7/8	**UC315-214D1**	2.8750	6.2992	3.2283	1.6929	0.098	1.260	1.969	0.551	9/16-18UNF	3.9882	0.413
2 15/16	**UC315-215D1**	2.9375										
3	**UC315-300D1**	3.0000										
80	**UC316D1**	80	170	86	45	2.5	34	52	14	M14×1.5	107.9	11.1
3 1/16	**UC316-301D1**	3.0625										
3 1/8	**UC316-302D1**	3.1250	6.6929	3.3858	1.7717	0.098	1.339	2.047	0.551	9/16-18UNF	4.2480	0.437
3 3/16	**UC316-303D1**	3.1875										
85	**UC317D1**	85	180	96	47	3	40	56	16	M16×1.5	114.4	11.5
3 1/4	**UC317-304D1**	3.2500										
3 5/16	**UC317-305D1**	3.3125	7.0866	3.7795	1.8504	0.118	1.575	2.205	0.630	5/8-18UNF	4.5039	0.453
3 7/16	**UC317-307D1**	3.4375										
90	**UC318D1**	90	190	96	49	3	40	56	16	M16×1.5	120.9	12.2
3 7/16	**UC318-307D1**	3.4375	7.4803	3.7795	1.9291	0.118	1.575	2.205	0.630	5/8-18UNF	4.7598	0.480
3 1/2	**UC318-308D1**	3.5000										

Remarks: 1) For inch series bearings, the f_0 factor for calculating equivalent radial load is the same as the metric series.

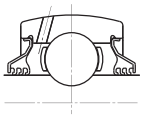
Basic load ratings		Factor[1)]	Mass (approx.)	
N	lbf		kg	lb
dynamic C_r	static C_{or}	f_0		
82 000	52 000	13.2	2.60	6.06
18 400	11 700		5.89	5.68
				5.51
92 500	60 000	13.2	3.25	7.36
20 800	13 400			7.14
104 000	68 000	13.2	3.86	9.06
23 400	15 300			8.82
				8.60
113 000	77 000	13.2	4.70	11.0
25 500	17 400			10.7
				10.5
				10.2
123 000	86 500	13.3	5.60	12.6
27 600	19 500			12.3
				12.1
133 000	97 000	13.3	6.70	15.2
29 800	21 800			14.9
				14.2
143 000	107 000	13.3	7.60	17.3
32 000	24 100			16.9

Ball bearings
Set screw type





Standard: Seal + Slinger



Triple Sealed
UCxxD1LLJ
Example : UC305D1LLJ

Shaft dia. mm / inch	Bearing number	Nominal dimensions										
		mm						inch				
		d	D	B	C	r_s min.	S	S_1	G	ds	d_4	C_a
95	UC319D1	95	200	103	51	3	41	62	16	M16×1.5	127.5	12.7
3 5/8	UC319-310D1	3.6250										
3 11/16	UC319-311D1	3.6875	7.8740	4.0551	2.0079	0.118	1.614	2.441	0.630	5/8-18UNF	5.0197	0.5
3 3/4	UC319-312D1	3.7500										
100	UC320D1	100	215	108	55	3	42	66	18	M18×1.5	135.6	14
3 13/16	UC320-313D1	3.8125										
3 7/8	UC320-314D1	3.8750	8.4646	4.2520	2.1654	0.118	1.654	2.598	0.709	5/8-18UNF	5.3386	0.551
3 15/16	UC320-315D1	3.9375										
4	UC320-400D1	4.0000										
105	UC321D1	105	225	112	57	3	44	68	18	M18×1.5	142.1	14.6
110	UC322D1	110	240	117	59	3	46	71	18	M18×1.5	151.7	15.6
120	UC324D1	120	260	126	63	3	51	75	18	M18×1.5	165.2	15.5
130	UC326D1	130	280	135	67	4	54	81	20	M20×1.5	178.3	16.6
140	UC328D1	140	300	145	71	4	59	86	20	M20×1.5	190.4	17.8

Remarks: 1) For inch series bearings, the f_0 factor for calculating equivalent radial load is the same as the metric series.

Basic load ratings		Factor[1)]	Mass (approx.)	
N	lbf		kg	lb
dynamic C_r	static C_{or}	f_0		
153 000	119 000	13.3	8.70	19.9
34 500	26 600		19.5	19.1
173 000	141 000	13.2	10.8	24.7
39 000	31 500		24.2	23.8
				23.4
184 000	153 000	13.2	12.2	
205 000	179 000	13.1	14.3	
207 000	185 000	13.5	18.5	
229 000	214 000	13.6	23.0	
253 000	246 000	13.6	28.5	