

| <div>Housings</div> <div>Bearings</div> |                                                                                                 | Case Iron Housings                                                                |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                     | Pressed Steel Plate Housings                                                        |                                                                                     |                                                                                     |                                                                                     |
|-----------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|                                         |                                                                                                 |  |  |  |  |  |  |  |  |  |  |
|                                         |                                                                                                 | P,P2M,PK,LP                                                                       | PA,PG,PA2A                                                                        | F,FX,FU<br>FS                                                                     | FL,FLU<br>FLX,LR,FD                                                               | FC                                                                                | T,ST                                                                                | PP                                                                                  | PFL                                                                                 | PF                                                                                  | PFT                                                                                 |
| Setscrew Type                           | <br>UC2        | UCP2<br>UCP2M<br>UCPK2                                                            | UCPA2<br>UCPA2A<br>UCPG2                                                          | UCF2<br>UCFU2                                                                     | UCFL2<br>UCFLU2                                                                   | UCFC2                                                                             | UCT2<br>UCST2                                                                       |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | C-1                                                                                             | B-2,B-3,B-10                                                                      | B18~20                                                                            | B-22,B-28                                                                         | B-37,B-43                                                                         | B-55                                                                              | B-60,B-62                                                                           |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | <br>UCX        | UCPX                                                                              |                                                                                   | UCFX                                                                              | UCFLX                                                                             |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | C-3                                                                                             | B-12                                                                              |                                                                                   | B-27                                                                              | B-40                                                                              |                                                                                   |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | <br>UC3        | UCP3                                                                              |                                                                                   | UCF3<br>UCFS3                                                                     | UCFL3                                                                             |                                                                                   | UCT3                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | C-4                                                                                             | B-13                                                                              |                                                                                   | B-31,B-34                                                                         | B-46                                                                              |                                                                                   | B-61                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | <br>SB2,SB2G   | SBP2G<br>SBLP2G                                                                   |                                                                                   | SBF2G                                                                             | SBFL2G<br>SBLF2G<br>SBFD2G                                                        |                                                                                   |                                                                                     | SBPP2                                                                               | SBPFL2                                                                              | SBPF2                                                                               | SBPFT2                                                                              |
| C-13                                    | B-8,B-16                                                                                        |                                                                                   |                                                                                   | B-42,B-49,B-51                                                                    |                                                                                   |                                                                                   | B-21                                                                                | B-54                                                                                | B-58                                                                                | B-59                                                                                |                                                                                     |
| Eccentric Locking Collar Type           | <br>NA2       | NAP2<br>NAP2M<br>NAPK2                                                            |                                                                                   | NAF2<br>NAFU2                                                                     | NAFL2<br>NAFLU2                                                                   | NAFC2                                                                             | NAT2                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | C-5                                                                                             | B-4,B-5,B-11                                                                      |                                                                                   | B-23,B-29                                                                         | B-38,B-44                                                                         | B-56                                                                              | B-63                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | <br>NA3      | NAP3                                                                              |                                                                                   | NAF3<br>NAFS3                                                                     | NAFL3                                                                             |                                                                                   | NAT3                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | C-6                                                                                             | B14                                                                               |                                                                                   | B-32,B-35                                                                         | B-47                                                                              |                                                                                   | B-64                                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|                                         | <br>SA2,SA2G | SAP2G<br>SALP2G                                                                   |                                                                                   | SAF2G<br>SAFU2G                                                                   | SAFL2G<br>SAFLU2G<br>SALF2G<br>SAFD2G                                             |                                                                                   |                                                                                     | SAPP2                                                                               | SAPFL2                                                                              | SAPF2                                                                               | SAPFT2                                                                              |
|                                         | C-12                                                                                            | B9,B-16                                                                           |                                                                                   | B-25,B-30                                                                         | B-41,B-45,B-49,B-51                                                               |                                                                                   |                                                                                     | B-21                                                                                | B-54                                                                                | B-58                                                                                | B-59                                                                                |
| Adapter Type                            | <br>UK2      | UK2P+H<br>UKP2M+H                                                                 |                                                                                   | UKF2+H                                                                            | UKFL2+H                                                                           | UKFC2+H                                                                           | UKT2+H                                                                              |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
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|                                         | <br>UK3      | UKP3+H                                                                            |                                                                                   | UKF3+H<br>UKFS3+H                                                                 | UKFL3+H                                                                           |                                                                                   | UKT3+H                                                                              |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
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## Others

|                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                |                              |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--------------------------------|------------------------------|
|  |  |  |  |  |  |  |  |  |                                                                                       | Farm Implement Bearings        |                              |
| UCPH2                                                                              | SALFTC2G<br>SBLFTC2G                                                                | SAPFTD2G<br>SBPFTD2G                                                                | SAFCT2G<br>SBFCT2G                                                                  | UCC2<br>UCC3                                                                        | UCFB2                                                                               | UCFA2                                                                               | UCHA2                                                                               | Pressed Housing<br>Agricultural<br>Disk Bearings                                    |                                                                                       |                                |                              |
| B-17                                                                               | B-50                                                                                | B-52                                                                                | B-53                                                                                | B67-68                                                                              | B-69                                                                                | B-70                                                                                | B-71                                                                                | B-72                                                                                |                                                                                       | C-17,C-18,C-19                 |                              |
|  |  |  |  |  |  |  |  |  |  | Eccentric<br>Locking<br>Collar | Adapter<br>Steeve<br>Locking |
| UC2T                                                                               | HC2                                                                                 | RB2                                                                                 | ER2<br>SER2                                                                         | ER2T                                                                                | GRA2<br>SA0                                                                         | CSB2                                                                                | CSA0<br>CSA2<br>RA2                                                                 | CS2<br>ORAE                                                                         | NAA3                                                                                  | A200<br>A300                   | H2300                        |
| C-2                                                                                | C-5                                                                                 | C-1                                                                                 | C-9,C-11                                                                            | C-10                                                                                | C-14,C-15                                                                           | C-13                                                                                | C-12,C-14,C-15                                                                      | C-16                                                                                | C-15                                                                                  | C-20,C-21                      | C-22                         |

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## 1 .Features of TR Ball Bearing Units

Spherical outside surface ball bearing units consist of inserts and housings, based on the methods of mounting the units to shafts, they can be divided into three types: the setscrews type, the adapter sleeve locking type and the eccentric locking collar type.

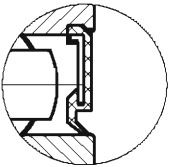
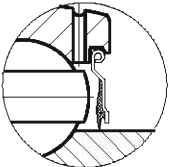
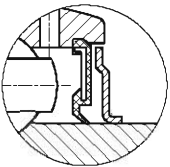
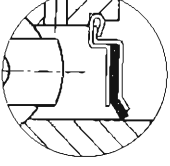
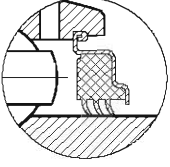
The housings have two types: Grey or Ductile Cast iron housings and pressed steel plate housings.

Spherical outside surface self-aligning ball bearing units are compact in design with perfect sealing devices.

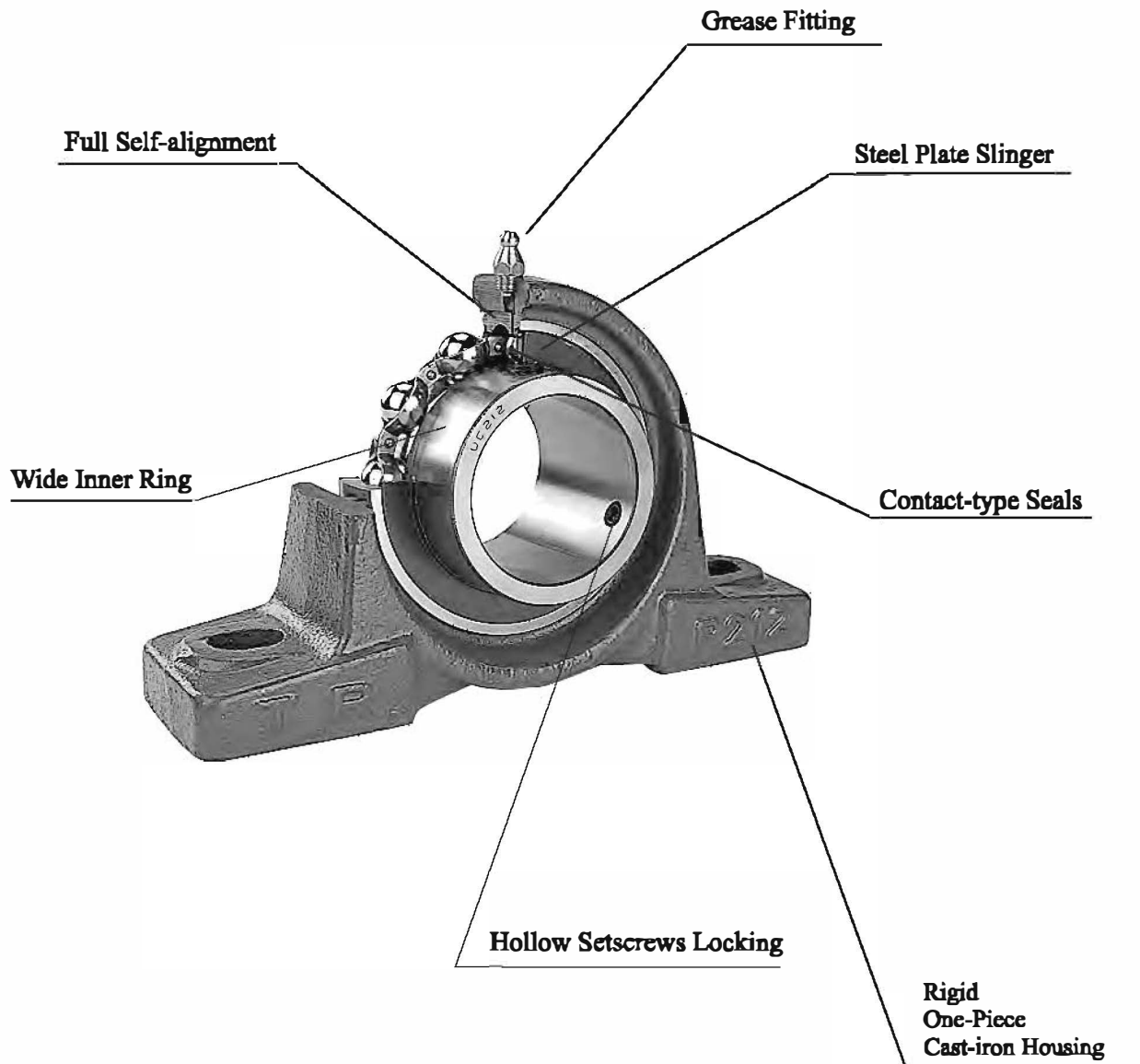
All TR ball bearing units have contact-type seals at both sides. The seals will vary according to the different types of bearings. By selecting the sealing devices, which is most suitable to the application condition, long bearing life can be guaranteed.

Sealing Devices:

Table 1.

|                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Single-layer seal</b><br>  | <p>Synthetic rubber is baked to the core piece. It is inserted into the groove of the outer ring and then fitted on the inner ring outer diameter, thus it has low friction, high property in oil resistance and good mechanical stability.</p>                                                                                                               |
| <b>Single-layer seal</b><br> | <p>This consists of a pressed steel seal with a vulcanized synthetic rubber sealing lip baked inside. The seal forms a tiny clearance with the outer diameter of the inner ring, thus can provide efficient protection against the dust, sand or other contaminants.</p>                                                                                      |
| <b>Dual seals</b><br>        | <p>Oil seal is fixed in the outer ring inner diameter groove, and the slinger is set at the inner ring outer surface. In addition, the simultaneous revolution with inner ring generates the wind pressure for dust-proof property. This constitutes the ideal labyrinth, so effective dust-proof property can be guaranteed.</p>                             |
| <b>F Seal</b><br>            | <p>This type encloses a synthetic rubber washer between two metal caps. Due to the three pieces design with protective outer shroud ,the sealing is excellent.</p>                                                                                                                                                                                            |
| <b>Triple-lid seal</b><br>   | <p>This type consists of a metal cap and synthetic rubber seal, which are baked together to form a single seal. Seal lips have enough tightening allowance. In addition, the lip layers are of triple construction and outside matters, such as dust, water, etc., are shut out. This sealing system shows its outstanding function under bad conditions.</p> |

## 2. Structure of Pillow Blocks



- Cast iron housing ... of one-piece rigid structure and easy for fixing.
- Wide inner ring ... for rigidity and more effective setscrews locking.
- Hollow setscrews ... two hollow setscrews 120° apart on the inner ring ensure easy and firm mounting on a shaft. Inner ring has been treated through special heat treatment.
- Steel plate slinger ... one on each side of the bearing by which dust can be efficiently excluded.
- Contact-type seals ... at both sides of bearing units.
- Grease fitting ... from which grease can be added .
- Full Self-alignment... when the bearing undergoes inevitable deformations or proper alignment can not be achieved during mounting.

## 3. Types of Ball Bearing Units:

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>1. Pillow blocks</b></p> <p>UCP2,NAP2,UKP2+H,SBP2G,SAP2G<br/>UCP2M,NAP2M,UKP2M+H<br/>UCPK2,NAPK2<br/>UCPX,SALP2G,SBLP2G<br/>UCP3,NAP3,UKP3+H</p> <p>There are various series of pillow blocks:P200, P200M, P300, PK200, PX00, LP200</p> <p>They can be mounted with different kinds of bearings, making them the most extensively used among ball bearing units.</p>                                                                                                                                                                                                                                                                                                         |
|    | <p><b>2. High center height pillow blocks</b></p> <p>UCPH2,NAPH2,UKPH2+H</p> <p>It is one type of pillow blocks with a higher center height.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|   | <p><b>3 Tapped-base pillow blocks</b></p> <p>UCPA2,NAPA2,UKPA2+H<br/>UCPA2A<br/>UCPG2</p> <p>It has compact structure, saving mounting space. It can be fitted with bolts from the underneath of the base.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|  | <p><b>4. Square flange units</b></p> <p>UCF2, NAF2, NKF2+H, SAF2G<br/>UCFX, SBF2G, UCFU2, NAFU2, SAPU2G<br/>UCF3, NAF3, UKF3+H</p> <p>These bearing units are designed to fix at the sides of the machine which are vertical to the center of the shafts by means of 4 bolts. The mounting method is widely used in the machines. The setscrews, the eccentric locking collar and the adapter sleeve bearings have the same mounting method as the P housings do.</p> <p>Series:F200,FX00,FU200<br/>Square flange cartridge units</p> <p>UCFS3, NAFS3, UKFS3+H</p> <p>These bearing units are installed in the holes on the side of the places where concentricity is demanded</p> |
|  | <p><b>5. Round flanged cartridge units</b></p> <p>UCFC2,NAFC2,UKFC2+H</p> <p>These bearing units are installed in the holes on the side of the places where <b>concentricity</b> is demanded.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>6. Oval flange units</b>      UCFL2,NAFL2,UCFLX,SAFL2G,UCFLU2,NAFLU2<br/>SAFLU2G,UKFL2+H,SBFL2G<br/>UCFL3,NAFL3,UKFL3+H</p> <p>Series: FL200, FL300, FLU200, FLX00</p>                                                                                                                                                                                                                                               |
|    | <p><b>7. LF,LFTC,FD,PFTD and PFTD-G type two-bolt flange units are for use with SB (or SB-G) and SA (or SA-G) type inserts only</b></p> <p>SALF2G,SBLF2G,SALFTC2G,SBLFTC2G<br/>SAFD2G,SBFD2G<br/>SAPFTD2,SBPFTD2,or SAPFTD2G,SBPFTD2G<br/>SAFCT2,SBFCT2,or SAFCT2G,SBFCT2G</p> <p>LF,LFTC,FD      Material:      Bolt<br/>PFTD,FCT      Grey iron      Configuration:<br/>Ductile iron      Round hole<br/>Square hole</p> |
|   | <p><b>8. Flange bracket units</b>      UCFB2</p> <p>This type has three set holes on only one side of the flange. This type of bearing unit is used where the mounting space is limited, and the housing can be fixed on only one side.</p>                                                                                                                                                                                |
|  | <p><b>9. Adjustable flange units</b>      UCFA2</p> <p>This type has a two-bolt base with one side adjustable, enabling distance from center of shaft to be varied</p>                                                                                                                                                                                                                                                     |
|  | <p><b>10. Take up units</b>      UCT2,NAT2<br/>UCST2<br/>UCT3,NAT3</p> <p>It can slide on a fixed track, enabling free alignment of the center of the shaft. With different grooves, there are two series: T200, ST200.</p>                                                                                                                                                                                                |
|  | <p><b>11. Circular flange units</b>      UCC2<br/>UCC3</p> <p>This type has a cylinder surface that meets tolerance demands. It can be used for non-bearing orientational support or central positioning for long shafts.</p>                                                                                                                                                                                              |
|  | <p><b>12. Hanging flange units</b>      UCHA2</p> <p>This type is applied to conveying machines connected by pipe threads.</p>                                                                                                                                                                                                                                                                                             |

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>13.Pressed housing pillow blocks</b></p> <p style="text-align: right;"><b>SAPP2, SBPP2</b></p> <p>Pressed housings are with light weight and simple structure and consists of two pieces of pressed steel plates. This type is applied to the machine whose rotating speed is lower or medium, or the machine with light load. The inserts for the pressed housings are usually SA or SB series.</p>                                                                                                                                                                                    |
|    | <p><b>14.Pressed housing round flange units</b></p> <p style="text-align: right;"><b>SAPF2, SBPF2</b></p> <p>This type consists of two pieces of pressed steel plates, mounted with SA2 or SB2. It has light weight and simple structure, which is applied to the machine of which the rotating speed is low or medium, or the machine load is light .</p>                                                                                                                                                                                                                                    |
|  | <p><b>15.Pressed housing flange units</b></p> <p style="text-align: right;"><b>SAPFT2, SBPFT2</b></p> <p>This type has the same function as the pressed round flange housing. It can be used where the mounting space is limited, because it takes smaller space.</p>                                                                                                                                                                                                                                                                                                                         |
|  | <p><b>16.Pressed housing oval flange units</b></p> <p style="text-align: right;"><b>SAPFL2, SBPFL2</b></p> <p>This type has only two bolt holes. It needs much smaller mounting space. Its function is the same as the above-mentioned pressed flange housings.</p>                                                                                                                                                                                                                                                                                                                           |
|  | <p><b>17.Pressed housing agricultural disk bearings</b></p> <p style="text-align: right;"> <b>ST491A,ST491B,DHU45R-209,ST209-1 <math>\frac{1}{8}</math></b><br/> <b>DHU55R-211,DHU40S-211,FD211-1 <math>\frac{1}{2}</math></b><br/> <b>ST211-1 <math>\frac{3}{4}</math></b><br/> <b>ST211-2 <math>\frac{3}{16}</math></b> </p> <p>This type consists of a housing made of high-quality carbon structural steel plates through pressing, and an agricultural disk bearing with triple seals. It can be used under adverse circumstances. It can be relubricated through the grease nipple.</p> |

## 4. Ball Bearing Inserts

The spherical outside ball bearing inserts are sealed at both sides. The internal structure dimensions, chromium bearing steel balls and retainers are same as those of the deep groove ball bearings.

### 4.1 Material of Bearing Rings and Balls.

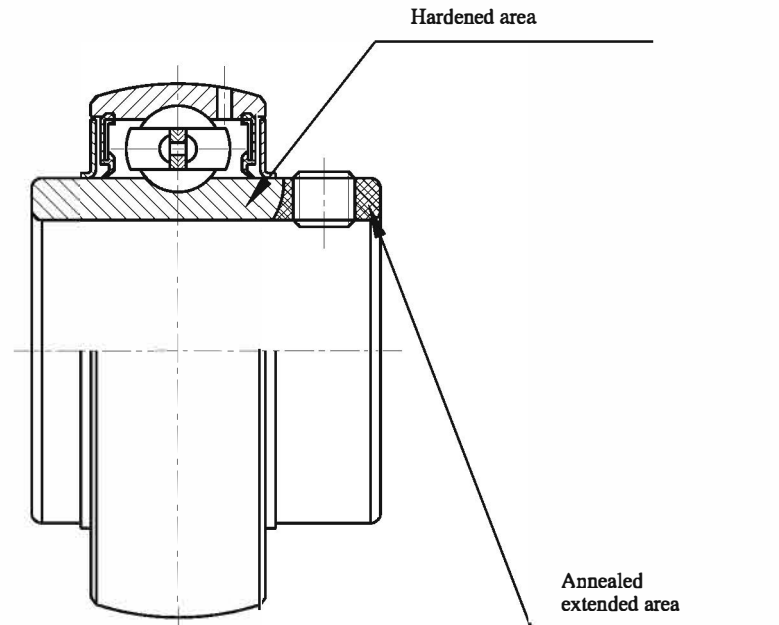
The bearing rings and balls are made of GCr15 chromium bearing steel of which the chemical composition are shown in table 2.

Table 2. (%)

| C         | Cr        | Si        | Mn        | S      | P      |
|-----------|-----------|-----------|-----------|--------|--------|
| 0.95-1.05 | 1.30-1.65 | 0.15-0.35 | 0.20-0.40 | ≤0.020 | ≤0.027 |

The hardness of the bearing ring is 59HRC~64HRC, of the ball is 61HRC~66HRC, with high wear resistance and contact fatigue strength.

The inner rings of setscrew type bearings(US,RB,SB,CSB,ER,SER series)are special heat treated .Therefore,the raceway of the inner ring is hardened completely through the ring,while the setscrews hole zone on the extended ends of the inner rings are softened ,so that the setscrew hole zone would not break under high torque.



## 4.2 Bearings Tolerances

### 4.2.1 Outer Rings Tolerances

The outer rings tolerances, which are shown in Table 3 , are the same as those for deep groove bearings.

**Table 3. Outer rings tolerances** ( $\mu\text{m}$ )

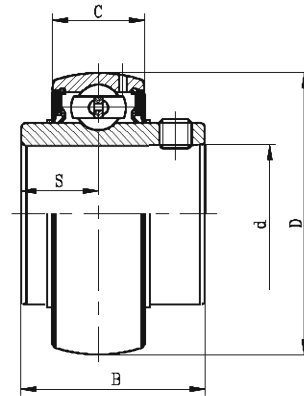
| D<br>(mm) |       | $\Delta D_{mp}$ |     | $K_{ca}$ |
|-----------|-------|-----------------|-----|----------|
| over      | incl. | high            | low | max.     |
| 30        | 50    | 0               | -11 | 20       |
| 50        | 80    | 0               | -13 | 25       |
| 80        | 120   | 0               | -15 | 35       |
| 120       | 150   | 0               | -18 | 40       |
| 150       | 180   | 0               | -25 | 45       |
| 180       | 250   | 0               | -30 | 50       |

Notes: (1)  $\Delta D_{mp}$  = the deviation of a single plane mean

outside diameter of the outer ring.

(2)  $K_{ca}$  = Radial runout of assembled bearing outer ring.

(3) D = Nominal outer ring outside diameter.



### 4.2.2 Inner Rings Tolerances

The inner rings tolerances are different from those of deep groove bearings. The values are shown in Table 4 and Table 5.

1) Tolerances for cylindrical bore bearing inner rings

**Table 4. Cylindrical bore inner rings tolerances** ( $\mu\text{m}$ )

| d<br>(mm) |       | $\Delta d_{mp}$ |     | $K_{ia}$ | $\Delta B_s$ |      |
|-----------|-------|-----------------|-----|----------|--------------|------|
| over      | incl. | high            | low | max.     | high         | low  |
| 10        | 18    | +18             | 0   | 12       | 0            | -120 |
| 18        | 30    | +21             | 0   | 15       | 0            | -120 |
| 30        | 50    | +25             | 0   | 18       | 0            | -120 |
| 50        | 80    | +30             | 0   | 22       | 0            | -150 |
| 80        | 120   | +35             | 0   | 28       | 0            | -200 |
| 120       | 180   | +40             | 0   | 35       | 0            | -250 |

Notes: (1) d = Nominal bore diameter

(2)  $\Delta d_{mp}$  = The deviation of a single plane mean bore diameter of the inner rings

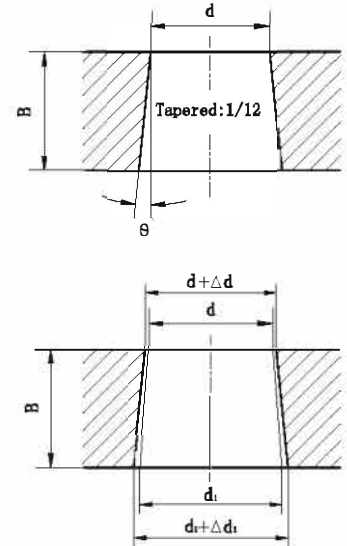
(3)  $K_{ia}$  = Radial runout of assembled bearing inner ring

(4)  $\Delta B_s$  = The deviation of a single width of inner ring

## 2) Tapered Bore Inner Rings Tolerances

Table 5. Tolerances on inner rings of tapered bore bearings ( $\mu\text{m}$ )

| d<br>(mm) |        | $\Delta d_{mp}$ |     | $\Delta d_{imp} - \Delta d_{mp}$ |      |
|-----------|--------|-----------------|-----|----------------------------------|------|
| >         | $\leq$ | high            | low | max.                             | min. |
| 18        | 30     | +33             | 0   | +21                              | 0    |
| 30        | 50     | +39             | 0   | +25                              | 0    |
| 50        | 80     | +46             | 0   | +30                              | 0    |
| 80        | 120    | +54             | 0   | +35                              | 0    |
| 120       | 180    | +63             | 0   | +40                              | 0    |



Notes: (1) d = Nominal bore diameter

(2)  $d_1$  = Theoretical diameter of larger end of tapered bore

$d_1$  is obtained by following formula:

$$d_1 = d + 0.083333 B$$

(3) B = Nominal inner ring width

(4)  $\theta$  = The nominal taper angle =  $2^\circ 23' 9.4'' = 2.38594^\circ$

(5)  $\Delta d_{mp}$  = Single plane mean bore diameter deviation

in theoretical diameter of smaller end of bore

(6)  $\Delta d_{imp}$  = Single plane mean bore diameter deviation in

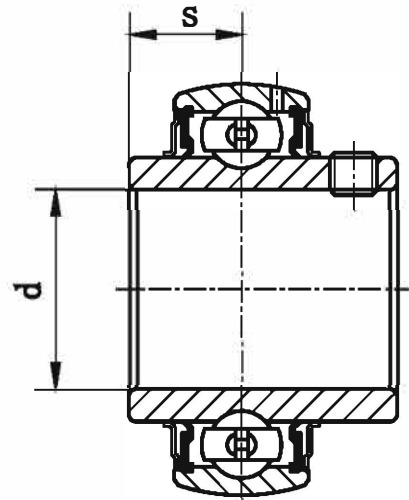
theoretical diameter of larger end of bore

### 4.2.3 Tolerances for Distance "S" From Center Line of Outer Ring to Side of Inner Ring

Tolerances for distance "S" between the radial plane passing through center of spherical surface of outer ring and a side of inner ring are shown in table 6.

Table 6. ( $\mu\text{m}$ )

| Nominal bore diameter<br>d(mm) |        | Deviation<br>$\Delta S$ |
|--------------------------------|--------|-------------------------|
| >                              | $\leq$ |                         |
| 10                             | 50     | $\pm 200$               |
| 50                             | 80     | $\pm 250$               |
| 80                             | 120    | $\pm 300$               |
| 120                            | 180    | $\pm 350$               |



## 4.3 Radial Internal Clearance of Bearings

The radial internal clearance for the spherical outside surface ball bearings is usually greater than that of the same sizes of deep groove ball bearings. The clearance for the cylindrical bore bearings is shown in Table 7, (basic group which is equivalent to ISO9628:1992.) While the clearance for the taper bore bearings is shown in Table 8.

**Table 7. Radial internal clearance of cylindrical bore bearings** ( $\mu\text{m}$ )

| Nominal bore diameter<br>d (mm) |     | Clearance (with setscrews or eccentric locking collars) |      |             |      |         |      |
|---------------------------------|-----|---------------------------------------------------------|------|-------------|------|---------|------|
|                                 |     | Group 2                                                 |      | Basic group |      | Group 3 |      |
| >                               | ≤   | min.                                                    | max. | min.        | max. | min.    | max. |
| 10                              | 18  | 3                                                       | 18   | 10          | 25   | 18      | 33   |
| 18                              | 24  | 5                                                       | 20   | 12          | 28   | 20      | 36   |
| 24                              | 30  | 5                                                       | 20   | 12          | 28   | 23      | 41   |
| 30                              | 40  | 6                                                       | 20   | 13          | 33   | 28      | 46   |
| 40                              | 50  | 6                                                       | 23   | 14          | 36   | 30      | 51   |
| 50                              | 65  | 8                                                       | 28   | 18          | 43   | 38      | 61   |
| 65                              | 80  | 10                                                      | 30   | 20          | 51   | 46      | 71   |
| 80                              | 100 | 12                                                      | 36   | 24          | 58   | 53      | 84   |
| 100                             | 120 | 15                                                      | 41   | 28          | 66   | 61      | 97   |
| 120                             | 140 | 18                                                      | 48   | 33          | 81   | 71      | 114  |

**Table 8. Radial internal clearance of tapered bore bearings** ( $\mu\text{m}$ )

| Nominal bore diameter<br>d (mm) |     | Clearance with tapered bore (UK200, UK300) |      |             |      |         |      |
|---------------------------------|-----|--------------------------------------------|------|-------------|------|---------|------|
|                                 |     | Group 2                                    |      | Basic group |      | Group 3 |      |
| >                               | ≤   | min.                                       | max. | min.        | max. | min.    | max. |
| 10                              | 18  | 10                                         | 25   | 18          | 33   | 25      | 45   |
| 18                              | 24  | 12                                         | 28   | 20          | 36   | 28      | 48   |
| 24                              | 30  | 12                                         | 28   | 23          | 41   | 30      | 53   |
| 30                              | 40  | 13                                         | 33   | 28          | 46   | 40      | 64   |
| 40                              | 50  | 14                                         | 36   | 30          | 51   | 45      | 73   |
| 50                              | 65  | 18                                         | 43   | 38          | 61   | 55      | 90   |
| 65                              | 80  | 20                                         | 51   | 46          | 71   | 65      | 105  |
| 80                              | 100 | 24                                         | 58   | 53          | 84   | 75      | 120  |
| 100                             | 120 | 28                                         | 66   | 61          | 97   | 90      | 140  |
| 120                             | 140 | 33                                         | 81   | 71          | 114  | 105     | 160  |

Notes: When the internal clearance of a bearing is measured, deformation occurs under loading. Therefore, to obtain the measuring value clearance, add the below correction clearance to the radial clearance above.

**Table 9.**

| Bore dia.<br>d (mm) |     | Measuring load | Radial clearance correction amount ( $\mu\text{m}$ ) |        |                |
|---------------------|-----|----------------|------------------------------------------------------|--------|----------------|
| >                   | <   | (N)            | C <sub>2</sub>                                       | Normal | C <sub>3</sub> |
| 10                  | 18  | 25             | 4                                                    | 4      | 5              |
| 18                  | 30  | 50             | 5                                                    | 5      | 6              |
| 30                  | 50  | 50             | 4                                                    | 4      | 5              |
| 50                  | 80  | 100            | 6                                                    | 7      | 7              |
| 80                  | 100 | 150            | 8                                                    | 8      | 9              |

## 5. Bearing Housings

### 5.1 Material for Cast Iron Housings

The material for cast iron housings are HT200(grey cast iron) and QT450-10(ductile cast iron). Ductile cast iron housings are only applied to PFTD2 and FCT2 series. The material for pressed housings is 08 or 10 cold-rolled steel plate.

### 5.2. Tolerances for Housings

#### 5.2.1 Tolerances for Housing Bores

Table 10.

| Nominal bore diameter<br>Da(mm) |        | Deviation of bore diameter $\Delta D_{am}$ |     |                          |     |                          |     |
|---------------------------------|--------|--------------------------------------------|-----|--------------------------|-----|--------------------------|-----|
|                                 |        | Tolerance range level H7                   |     | Tolerance range level J7 |     | Tolerance range level K7 |     |
| >                               | $\leq$ | high                                       | low | high                     | low | high                     | low |
| 30                              | 50     | +25                                        | 0   | +14                      | -11 | +7                       | -18 |
| 50                              | 80     | +30                                        | 0   | +18                      | -12 | +9                       | -21 |
| 80                              | 120    | +35                                        | 0   | +22                      | -13 | --                       | --  |
| 120                             | 180    | +40                                        | 0   | +26                      | -14 | --                       | --  |
| 180                             | 250    | +46                                        | 0   | +30                      | -16 | --                       | --  |
| 250                             | 315    | +52                                        | 0   | +36                      | -16 | --                       | --  |

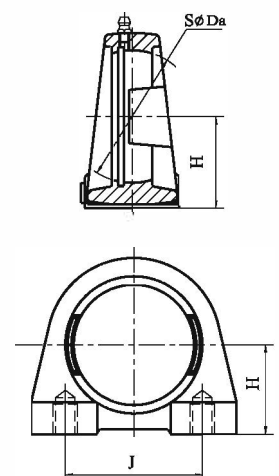
Notes: For TR standard products 201 to 209, X05 to X08, 305 to 309 and 321 to 328 please refer to level H7. 210 to 220, X09 to X20 and 310 to 320 please refer to level J7.

#### 5.2.2 Tolerances for Pillow Block Housings

Tolerances for pillow block housings are shown in Table 11.

Table 11.

| Housings No.<br>P, PK, AK, LP, PH, PA, PA2A, PG                                                                  | Deviations<br>$\Delta H$ | (mm)                                  |                          |
|------------------------------------------------------------------------------------------------------------------|--------------------------|---------------------------------------|--------------------------|
|                                                                                                                  |                          | Housings No.                          | Deviations<br>$\Delta H$ |
| P203-210, PX05-X09, P305-310, P204M-210M<br>PK203-210, LP201-208, PH203-210<br>PK203-210, LP204A-210A, PG204-208 | $\pm 0.15$               | PA203-210<br>PA204A-210A<br>PG204-208 | $\pm 0.70$               |
| P211-218, PX10-X18, P311-319, P211M-214M<br>PK211-213, PH211-215, PA211-213                                      | $\pm 0.20$               | PA211-213                             | $\pm 1.00$               |
| P220, PX20, P320-328                                                                                             | $\pm 0.30$               |                                       |                          |



5.2.3 Tolerances for Flange Type Housings are shown in Table 12.

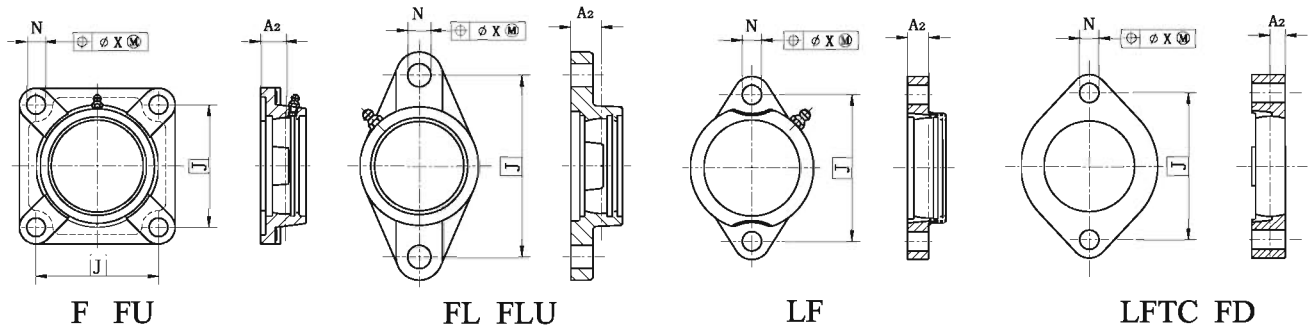


Table 12.

(mm)

| Housings No. |       |         |         |     |      |     | Deviations $\Delta A_2$ |       | Tolerances of position for mounting bolt holes |
|--------------|-------|---------|---------|-----|------|-----|-------------------------|-------|------------------------------------------------|
| F, FU        | F, FL | FL, FLU | FX, FLX | LF  | LFTC | FD  | high                    | low   | $X \leq$                                       |
| 204          | 305   | 205     | X05     | 203 | 20   | 204 | +0.5                    | -0.5  | 0.7                                            |
| 205          | 306   | 206     | X06     | 204 | 25   | 205 |                         |       |                                                |
| 206          | 307   | 207     | X07     | 205 | 30   | 206 |                         |       |                                                |
| 207          | 308   | 208     | X08     | 206 | 35   | 207 |                         |       |                                                |
| 208          | 309   | 209     | X09     | 207 | 40   | --- |                         |       |                                                |
| 209          | 310   | 210     | X10     | --- | ---  | --- |                         |       |                                                |
| 210          | ---   | ---     | ---     | --- | ---  | --- | +0.80                   | -0.80 | 1.0                                            |
| 211          | 311   | 211     | X11     | --- | ---  | --- |                         |       |                                                |
| 212          | 312   | 212     | X12     | --- | ---  | --- |                         |       |                                                |
| 213          | 313   | 213     | X13     | --- | ---  | --- |                         |       |                                                |
| 214          | 314   | 214     | X14     | --- | ---  | --- |                         |       |                                                |
| 215          | 315   | 215     | X15     | --- | ---  | --- |                         |       |                                                |
| 216          | 316   | 216     | X16     | --- | ---  | --- |                         |       |                                                |
| 217          | 317   | 217     | X17     | --- | ---  | --- |                         |       |                                                |
| 218          | 318   | 218     | X18     | --- | ---  | --- |                         |       |                                                |
| --           | 319   | --      | --      | --- | ---  | --- |                         |       |                                                |
| ---          | 320   | ---     | X20     | --- | ---  | --- |                         |       |                                                |
| ---          | 322   | ---     | ---     | --- | ---  | --- |                         |       |                                                |
| ---          | 324   | ---     | ---     | --- | ---  | --- |                         |       |                                                |
| ---          | 326   | ---     | ---     | --- | ---  | --- |                         |       |                                                |
| ---          | 328   | ---     | ---     | --- | ---  | --- |                         |       |                                                |

PFTD, FCT

\*Re-lub. Type PFTD, FCT Housings

Available too.

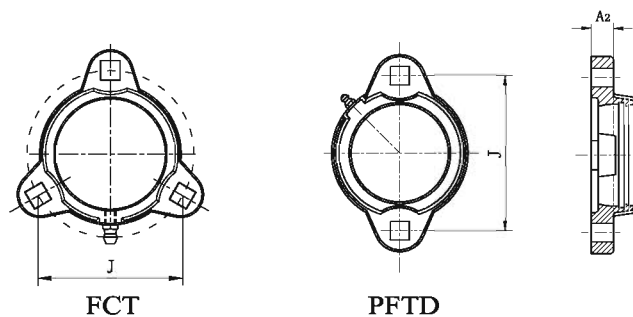


Table 13.

(mm)

|                                  |                                    |                                |
|----------------------------------|------------------------------------|--------------------------------|
| PFTD203~PFTD207<br>FCT203~FCT207 | $+0.50 \geq \Delta A_2 \geq -0.50$ | $+1.0 \geq \Delta J \geq -1.0$ |
|----------------------------------|------------------------------------|--------------------------------|

Tolerances for round flange type housings are shown in Table 14.

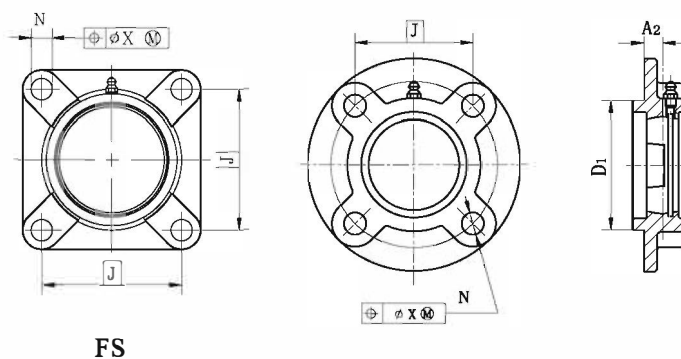


Table 14. (mm)

| Housings<br>No.            | Deviation<br>△A <sub>2</sub> |       | Deviation<br>△D <sub>1</sub> |        | Radial runout of<br>spigot joint | Tolerance of position for<br>mounting bolt holes<br>X |
|----------------------------|------------------------------|-------|------------------------------|--------|----------------------------------|-------------------------------------------------------|
|                            | high                         | low   | high                         | low    | max                              | max                                                   |
| FC203-FC206<br>FS305       | +0.50                        | -0.50 | 0                            | -0.046 | 0.2                              | 0.7                                                   |
| FC207-FC210<br>FS306-FS308 |                              |       | 0                            | -0.054 |                                  |                                                       |
| FS309-FS310                |                              |       |                              |        |                                  |                                                       |
| FC211-FC217<br>FS311-FS313 | +0.80                        | -0.80 | 0                            | -0.063 | 0.3                              | 1.0                                                   |
| FC218<br>FS314-FS318       |                              |       | 0                            | -0.072 | 0.4                              |                                                       |
| FS320-FS322                |                              |       | 0                            | -0.081 |                                  |                                                       |
| FS324-FS328                |                              |       | 0                            | -0.089 |                                  |                                                       |

Tolerances for special type flange units are shown in Table 15.

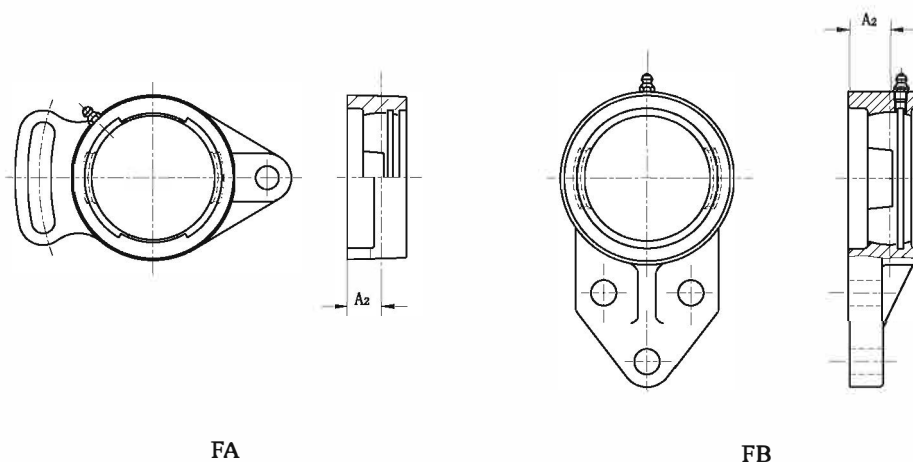


Table 15. (mm)

| Housings No. |             | Deviation $\Delta A_2$ |        |
|--------------|-------------|------------------------|--------|
|              |             | high                   | low    |
| FA203-FA210  | FB203-FB210 | +0.50                  | - 0.50 |
| FA211-FA213  | FB211-FB213 | +0.80                  | - 0.80 |

## 5.2.4 Tolerances for Cartridge Type Housings

Tolerances for Cartridge type housings are shown in Table 16.

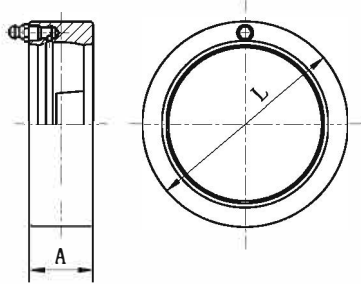


Table 16.

( $\mu\text{m}$ )

| Hosing<br>No | Deviation of outside diameter▲L |               | Radial runoul of<br>spjgot joint | Deviation▲A |       |
|--------------|---------------------------------|---------------|----------------------------------|-------------|-------|
|              | C2 series(Hs)                   | C3 series(Hs) |                                  |             |       |
|              | high                            | low           |                                  | max.        | high  |
| C203-C205    | 0                               | -0.030        | 0.2                              | +0.2        | -0.2  |
| C206-C210    | 0                               | -0.035        |                                  |             |       |
| C305-C308    |                                 |               |                                  |             |       |
| C309-C310    | 0                               | -0.040        | 0.3                              | +0.25       | -0.25 |
| C211-C216    |                                 |               |                                  |             |       |
| C311-C314    |                                 |               |                                  |             |       |
| C315-C318    | 0                               | -0.046        | 0.4                              | +0.3        | -0.3  |
| C319         |                                 |               |                                  |             |       |
| C320-C322    | 0                               | -0.052        |                                  |             |       |
| C324-C328    | 0                               | -0.057        |                                  |             |       |

## 5.2.5 Tolerances for Take-up Type Housings

Tolerances for Take-up type housings are shown in Table 17.

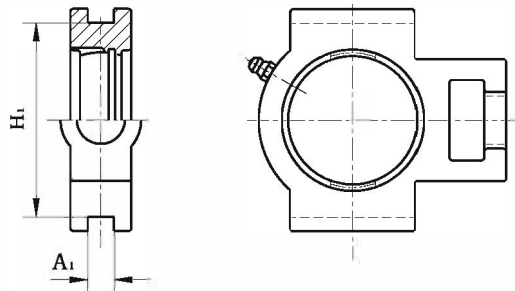


Table 17.

(mm)

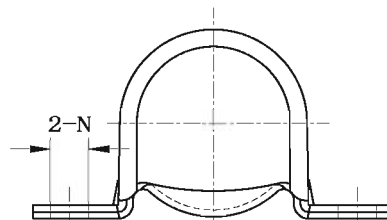
| Hosing No              | Deviations $\Delta A1$ |       | Deviations $\Delta H1$ |       | Parallelism of H1 sliding slot |
|------------------------|------------------------|-------|------------------------|-------|--------------------------------|
|                        | high                   | low   | high                   | low   | max.                           |
| T203-T210<br>T305-T310 | +0.2                   | 0     | 0                      | -0.5  | 0.5                            |
| T211-T218<br>T311-T318 | +0.3                   | 0     | 0                      | -0.8  | 0.6                            |
| T319-T322              | +0.3                   | 0     | 0                      | -0.8  | 0.7                            |
| T324-T328              | +0.3                   | 0     | 0                      | -0.8  | 0.8                            |
| ST204-ST210            | +0.5                   | -0.25 | +0.25                  | -0.25 | 0.5                            |
| ST211-ST212            | +1.0                   | -0.25 | +0.4                   | -0.4  | 0.6                            |

## 5.3. Pressed Housings.

### 5.3.1. Tolerances for Pressed Pillow Type Housings.

Table 18. (mm)

| Housings No. | Deviation of mounting bolt hole diameter $\Delta N$ |       |
|--------------|-----------------------------------------------------|-------|
|              | high                                                | low   |
| PP203-PP207  | +0.25                                               | -0.25 |



### 5.3.2 .Tolerances for Pressed Round and Oval Flange Type Housings.

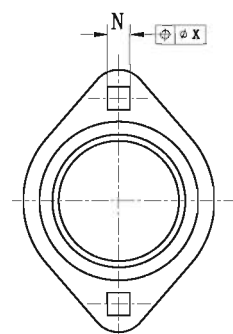
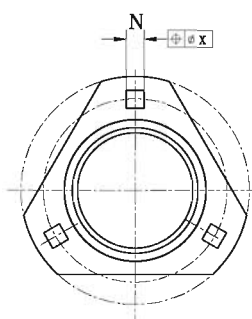
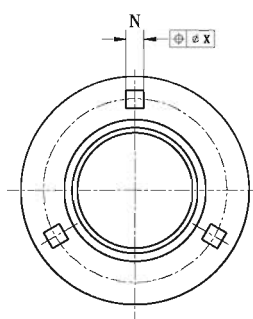


Table 19. (mm)

| Housings No.                                  | Deviation of length of square for mounting bolt hole $\Delta N$ |       | Tolerances of position for mounting bolt holes X |
|-----------------------------------------------|-----------------------------------------------------------------|-------|--------------------------------------------------|
|                                               | high                                                            | low   |                                                  |
| PF203~PF208<br>PFT203~PFT208<br>PFL203~PFL208 | +0.25                                                           | -0.25 | 0.4                                              |

## 6. Selection of Ball Bearing Units

The bearing size is usually selected according to the load applied to the bearing, the required bearing life and reliability. As a technical index of the bearing capacity, there are two types of basic load rating: basic dynamic load rating and basic static load rating.

The load applied to the bearing when operating under rapid rotation ( $n > 10 \text{ r/min}$ ) is defined as basic dynamic load rating  $C$ , while the load applied to the bearing when operating under static circumstances, slow rotation or oscillation ( $n \leq 10 \text{ r/min}$ ) is defined as basic static load rating  $C_0$ .

Ball bearings are classified as concentric bearings because they mainly bear radial force. Therefore, the load applied to the bearing is called radial basic dynamic load rating  $C_r$ , or radial basic static load rating  $C_{0r}$ .

The above two load ratings  $C_r$  and  $C_{0r}$  are shown in the bearing tables (page C-1~C-19).

Normally, the life of a rolling bearing is an important element of selecting bearings. Here the usually said bearing life refers to the bearing fatigue life. If the bearing operates properly (with suitable load, correct mounting and fine lubrication), the main damage would be fatigue flaking due to the repeating action of variable load charged on the contact area, which is inevitable. However, with different applications and demands, damages can also come from increasing noise and vibration, inaccuracy caused by abrasion, and lubricating grease aging after some time's operation. The bearing will be disabled or fail to meet a specific kind of mechanical demand under such damages. The life before disability is defined respectively as noise life, abrasion life, and lubricating grease life.

Beside the above lives, the bearing can also be disabled by sintering, breakage or cracking, sealing failure, etc. These should be defined as bearing failure. It can be caused by inappropriate choice of bearings, faulty design, mounting, operation and maintenance, which should be distinguished from the bearing life.

### 6.1 Basic Load Rating and Life

**Basic dynamic load rating:** The basic dynamic load rating is defined as the constant load applied to a bearings with stationary outer rings that the inner rings can endure for a rating life of one million revolutions ( $10^6 \text{ rev.}$ ).

**Life:** The life of a rolling bearing is defined as the total number of revolutions which the bearing is capable of enduring before the first evidence of fatigue flaking develops on any one of the rings or rolling elements.

**Reliability :** The reliability is the percentage of the bearing of a group of apparently identical bearings operating under identical conditions which can expect to attain or exceed a certain defined life. The reliability of an individual bearing is the probability of the bearing to attain or exceed a defined life.

**Basic rating life  $L_{10}$  :** For a group of apparently identical rolling bearings operating under identical conditions, the basic rating life is defined as the total number of revolutions that 90% of the bearings can be expected to complete or exceed.

The basic rating life  $L_{10}$  estimation for ball bearings with different speeds and  $\frac{C_r}{P_r}$  ratios is shown in page A-32.

## 6.2 Bearings Selection According to Basic Dynamic Load Rating

### 6.2.1 Basic Rating Life

The fatigue rating of deep groove ball bearings is calculated by following formula:

$$L_{10} = \left( \frac{C}{P} \right)^3$$

$$\text{or } \frac{C}{P} = L_{10}^{1/3}$$

Where  $L_{10}$  = basic rating life ( $10^6$  r )

$C$  = basic dynamic load rating (N)

$P$  = equivalent dynamic bearing load (N)

The basic dynamic load rating  $C$  is a hypothetical constant load with a fixed direction under which the bearing can attain a basic rating life of one million revolutions. For radial bearing, the load refers to the radial load.

The equivalent dynamic bearing load  $P$  is a constant load with a fixed direction under which the bearing life is identical to that of the bearing operating under actual load.

For a bearing operating with a constant rotation speed ,  
the basic rating life can be expressed in terms of operating hours:

$$L_{10h} = \frac{10^6}{60n} \left( \frac{C}{P} \right)^3$$

OR

$$L_{10h} = \frac{10^6}{60n} L_{10}$$

$$\frac{16666}{n} \left( \frac{C}{P} \right)^3$$

Where  $L_{10h}$  = basic rating life (h)

$n$  = bearing operating speed of rotation (r/min)

For easier calculation, 500 hours as base of rating life is taken,  
and the speed factor  $f_n$  and the life factor  $f_h$  is introduced :

$$f_n = \left( \frac{33\frac{1}{3}}{n} \right)^{1/3}$$

$$f_h = \left( \frac{L_{10h}}{500} \right)^{1/3}$$

In this way, the formula is simplified to

$$C = \frac{f_h}{f_n} P$$

The values of  $f_n$  and  $f_h$  can be found in

Fig.1 by referring to the operation speed  $n$

and the anticipated bearing service life  $L_{10h}$ .

Then, with the radial load (or the equivalent

dynamic bearing load ), the basic dynamic

load rating can be determined. By this way,

the bearing size can be determined according

to the basic dynamic load rating value in the bearings Table.(Please refer to page C-1~C-19).

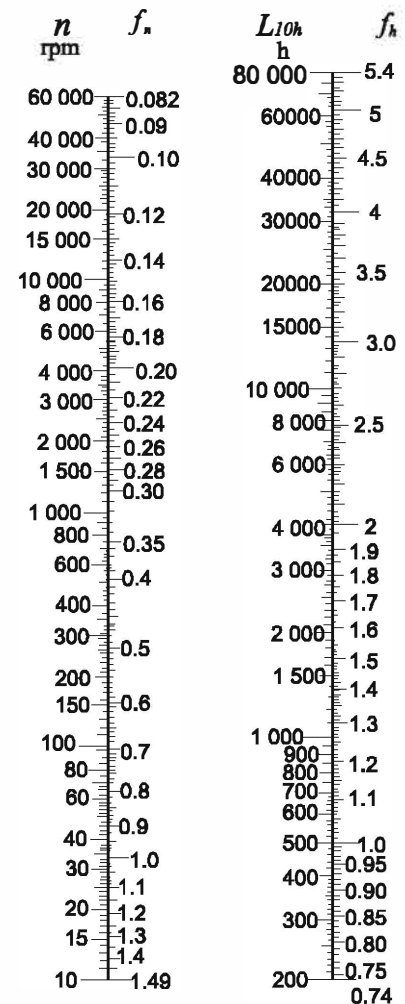


Fig.1

If the bearing operates under indeterminate loads and rotation speed, the following formula should be applied when calculating the bearing life:

$$P_m = \sqrt[3]{\frac{1}{N} \int_0^N P^3 dN}$$

Where  $P_m$  = mean equivalent dynamic bearing load (N)

$P$  = equivalent dynamic bearing load (N)

$N$  = total revolution numbers within one load changing cycle (r)

## 6.2.2 Anticipated Bearing Service Life

When selecting a bearing, one should usually predetermine an appropriate service life according to the relevant machine type, operating conditions and reliability requirement. Generally speaking, the anticipated bearing service life can be determined by referring to the maintenance period of a machine.

## 6.2.3 Calculation Method of Equivalent Dynamic Bearing Load $P$

The basic equivalent dynamic bearing load is determined under a hypothetical condition. When calculating the bearing life, the actual load has to be converted into equivalent dynamic bearing load which is in conformity with the load condition determining the equivalent dynamic load rating.

General equation for calculating the equivalent dynamic bearing load:

$$P = X F_r + Y F_a$$

Where:  $P$  = equivalent dynamic bearing load (N)

$F_r$  = actual radial load (N)

$F_a$  = actual axial load (N)

$X$  = radial factor

$Y$  = thrust factor

The values of X and Y are determined by the ratio between the applied axial load  $F_a$  and the basic static load rating  $C_0$ . The axial load which the spherical outside surface bearings can carry is determined by the mounting method of the bearings on the shafts.

For the setscrews locking type or eccentric locking collar type bearings, if flexible shafts are applied and the setscrews are tightened enough (See Table 34 for reference torque), the axial load  $F_a$  which the bearing can carry must not surpass 20% of the radial load  $F_r$ .

For the adapter sleeve locking type bearing, if the nuts are properly tightened, the axial load  $F_a$  can be maximum 15% to 20% of the radial load.

The values of radial and thrust factors X and Y for spherical outside surface ball bearings can be obtained from the following table:

Table 20.

| $\frac{F_a}{C_0}$ | $\frac{F_a}{F_r} \leq e$<br>$p = F_r$ |   | Clearance for group 2 |     |      | Clearance for normal group |      |      | Clearance for group 3 |      |      |
|-------------------|---------------------------------------|---|-----------------------|-----|------|----------------------------|------|------|-----------------------|------|------|
|                   |                                       |   | $\frac{F_a}{F_r} > e$ |     | e    | $\frac{F_a}{F_r} > e$      |      | e    | $\frac{F_a}{F_r} > e$ |      | e    |
|                   | X                                     | Y | X                     | Y   |      | X                          | Y    |      | X                     | Y    |      |
| 0.025             | 1                                     | 0 | 0.56                  | 2.0 | 0.22 | 0.46                       | 1.75 | 0.31 | 0.44                  | 1.42 | 0.4  |
| 0.04              | 1                                     | 0 | 0.56                  | 1.8 | 0.24 | 0.46                       | 0.62 | 0.33 | 0.44                  | 1.36 | 0.42 |
| 0.07              | 1                                     | 0 | 0.56                  | 1.6 | 0.27 | 0.46                       | 1.46 | 0.36 | 0.44                  | 1.27 | 0.44 |
| 0.13              | 1                                     | 0 | 0.56                  | 1.4 | 0.31 | 0.46                       | 1.30 | 0.41 | 0.44                  | 1.16 | 0.48 |
| 0.25              | 1                                     | 0 | 0.56                  | 1.2 | 0.37 | 0.46                       | 1.14 | 0.46 | 0.44                  | 1.05 | 0.53 |
| 0.5               | 1                                     | 0 | 0.56                  | 1   | 0.44 | 0.46                       | 1    | 0.54 | 0.44                  | 1    | 0.56 |

When twist load is applied to the bearings, the equivalent dynamic bearing load is calculated by:

$$P_m = f_m \cdot P$$

Where  $P_m$  = equivalent dynamic bearing load when considering twist load

$f_m$  = twist load factor, which is defined as follows:

when the twist load is small:  $f_m = 1.5$

when the twist load is big:  $f_m = 2$

When shocking load is applied to the bearings, the equivalent dynamic bearing load can be calculated by the following equation:

$$P_d = f_d \cdot P$$

Where  $P_d$  = equivalent dynamic bearing load when considering shocking load

$f_d$  = shocking load factor, which is defined as follows:

When no shocking load or minor shocking load is applied:

$$f_d = 1 \sim 1.2$$

When adequate shocking load is applied:

$$f_d = 1.2 \sim 1.8$$

## 6.3 Example of Bearing Size Selection

One ball bearing is to operate at a rotation speed of 1000 r/min under only a radial load of  $F_r = 3000$  N, with a basic rating life of at least 20000 hours, select the bearing size.

From the required rotation speed, it can be found that:

$$f_n = 0.322 \text{ (Fig 1. shows about 0.32)}$$

From the required basic rating life (anticipated service life), at least 20000 hours, it can be found that:

$$f_h = 3.42 \text{ (Fig 1. shows about 3.4)}$$

Under only a radial load, i.e.,

$$P = F_r = 3000 \text{ (N)}$$

Therefore,

$$\begin{aligned} C &= \frac{f_h}{f_n} P \\ &= \frac{3.42}{0.322} \times 3000 = 31863 \text{ (N)} \end{aligned}$$

A simplified way to calculate the bearing life can be applied by using Fig 2.

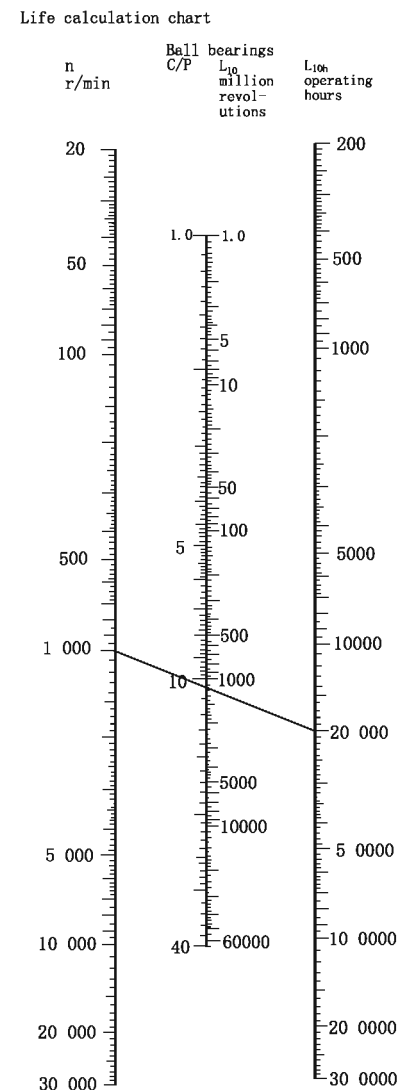


Fig.2

By connecting  $n(1000\text{r/min})$  and the required basic rating life  $L_{10b}$  (20000 hours) with a straight line, it can be found that  $C/P$  value is 10.6, As is known,  $P = F_r = 3000 \text{ N}$ , thus the required basic dynamic load rating is:

$$\frac{C}{P} = 10.6$$

$$C = 10.6P$$

$$= 10.6 \times 3000 = 31800 \text{ (N)}$$

In this way, we can select the bearing from the bearing table. (Please refer to page C-1 ~ C-19)

## 6.4 Adjusted Rating Life Equation

The basic rating life  $L_{10}$  calculated with the bearing life calculation formula can be applied to calculate the rating life of bearings made of ordinary bearings steel (i.e., bearing life with reliability of 90%).

But some occasions may require a more accurate and reliable life calculation, taking the bearing's quality and operating conditions into consideration. In this case, the adjusted rating life  $L_{nm}$  can be applied.

The adjusted rating life  $L_{nm}$  equation is as follows:

$$L_{nm} = a_1 a_{iso} L_{10}$$

Life adjustment factor for reliability  $a_1$  is shown in Table 21.

Table 21.

| Reliability | $L_{nm}$  | $A_1$ |
|-------------|-----------|-------|
| 90          | $L_{10m}$ | 1     |
| 95          | $L_{5m}$  | 0.64  |
| 96          | $L_{4m}$  | 0.55  |
| 97          | $L_{3m}$  | 0.47  |
| 98          | $L_{2m}$  | 0.37  |
| 99          | $L_{1m}$  | 0.25  |

Life adjustment factor for system approaches  $a_{iso}$  is defined by the following factors:

- Material (such as cleanliness, hardness, surface structure, fatigue limit, temperature response);
- Lubrication (such as viscosity, bearing rotation, bearing size, type of lubricant, additive);
- Environment (such as pollution level, humidity);
- Impurity (such as hardness, size, shape, material);
- Internal stress in the ring (during production or ring interference after mounting);
- Mounting (such as assembling and disassembling damage, non-concentricity);
- Bearing load.

It means that any changes of the above factors will affect the bearing life directly. So when selecting bearings, all kinds of factors should be taken into consideration to calculate a proper factor, so that the chosen bearing can fulfill an expected need.

## 7. Lubrication and Operating Temperature

### 7.1 Lubricants

The bearings are filled with the lubricating grease (lithium grease NO.2) that is used in large-medium size of motor bearings. Its physical and chemical properties are shown in Table 22.

Table 22.

|                                                |                                                       |                                               |
|------------------------------------------------|-------------------------------------------------------|-----------------------------------------------|
| Density<br>(1/10mm)                            | Without operation                                     | 265~295                                       |
| Dropping point ( °C )                          |                                                       | ≥175                                          |
| Mechanical impurities<br>(pc/cm <sup>3</sup> ) | 10-25 μ m<br>25-75 μ m<br>25~125 μ m<br>above 125 μ m | Within 5000<br>Within 3000<br>Within 500<br>0 |

### 7.2 Operating Temperature.

The bearings usually operate below the temperature of 120°C (the measuring temperature of the outer ring is 100°C ). Grease life reduction has to be taken into account when the bearings continue to operate at a temperature above 70°C.

The lowest operating temperature should not be lower than -20°C.

For higher or lower temperature application, please consult us for further information.

### 7.3 Relubricate Period

Under normal operating condition, the grease should conform to the life of the bearings. Relubricatable type bearing units must be periodically greased to assure long life.

The greasing interval is dependent on the bearing running speed, operating temperatures and ambient conditions.

The following table shows the standard relubrication period. (Table 23)

Table 23.

| dn Value                          | Cleanliness               | Temperature            |                         | Greasing interval                 |
|-----------------------------------|---------------------------|------------------------|-------------------------|-----------------------------------|
|                                   |                           | °C                     | °F                      |                                   |
| 40,000 and below                  | Clean                     | -15~65<br>Up to 65~100 | +5~150<br>Up to 150~210 | 6 to 12 month<br>2 to 6 month     |
| Up to 40,000<br>~70,000 and below | Clean                     | -15~65<br>Up to 65~100 | +5~150<br>Up to 150~210 | 2 to 6 month<br>1 month           |
| Any dn value                      | Dirty                     | Up to 65<br>Over 65    | Up to 150<br>Over 150   | 1 wk.to 1 month<br>1 day to 2 wk. |
| Any dn value                      | Very Dirty                | Any temp               | Any temp                | 1 day to 1 wk.                    |
| Any dn value                      | Exposed to water splashes | Any temp               | Any temp                | Every day                         |

The amount of filling grease during relubrication please refer to Table 24.

Table 24.

| Bearing No.                 | Filling grease amount (g) | Bearing No.        | Filling grease amount(g) |
|-----------------------------|---------------------------|--------------------|--------------------------|
| UC201S~203S, NA201S~203S    | 1.0                       | UC305, NA305,UK305 | 4.1                      |
| UC201~204, NA201~204        | 1.4                       | UC306, NA306,UK306 | 5.5                      |
| UC205, NA205, UK205         | 1.7                       | UC307, NA307,UK307 | 7.8                      |
| UC206, NA206, UK206, UCX05  | 2.9                       | UC305, NA305,UK305 | 10.0                     |
| UC207, NA207, UK207, UCX06  | 3.9                       | UC308, NA308,UK308 | 14.7                     |
| UC208, NA208, UK208 , UCX07 | 5.0                       | UC309, NA309,UK309 | 18.1                     |
| UC209, NA209, UK209, UCX08  | 6.0                       | UC311, NA311,UK311 | 23                       |
| UC210, NA210, UK210, UCX09  | 6.9                       | UC312, NA312,UK312 | 28                       |
| UC211, NA211, UK211, UCX 10 | 9.4                       | UC313, NA313,UK313 | 36                       |
| UC212, NA212, UK212, UCX11  | 12.6                      | UC314, NA314,UK314 | 43                       |
| UC213, NA213, NUK213,UCX 12 | 15.5                      | UC315, NA315,UK315 | 53                       |
| UC214, NA214, UK214, UCX13  | 19.3                      | UC316, NA316,UK316 | 60                       |
| UC215, NA215, UK215, UCX14  | 19.5                      | UC317, NA317,UK317 | 72                       |
| UC216, NA216, UK216, UCX15  | 26                        | UC318, NA318,UK317 | 86                       |
| UC217, NA217, UK217, UCX16  | 31                        | UC319, NA319,UK319 | 105                      |
| UC218, NA218, UK218, UCX17  | 40                        | UC320, NA320,UK320 | 126                      |
| UC220, NA220, UCX18         | 48                        | UC322, UK322       | 178                      |
| UCX20                       | 67                        | UC324, UK324       | 227                      |
|                             |                           | UC306, UK326       | 278                      |
|                             |                           | UC328, UK328       | 342                      |

## Notes:

(1)For TR bearings,the original amount of grease accounts for 30~40% ofthe bearing's available volume.

It is suggested that the amount of filling grease should refer to the original amount to avoid abnormal heat or lubricating grease leak caused by excessive filling grease.

(2)The amount of filling grease for bearings with triple seals is 1.5 times as much as the figures in the table.

(3)For bearings operating in a low speed,to improve their dust proof capacity,the amount of filling grease can be 2 times as much as the figures in the table.

## 7.4. Grease Fittings

TR bearing units are , as a general rule, provided with a grease fitting made of bronze or steel, as shown in Table 25.

Grease fitting dimensions and designation of applicable bearing units are given in Table 26.

Table 25.

| Housings No.                       | Grease fitting type and dimension |
|------------------------------------|-----------------------------------|
| 203~210 ,305~307,X05~X09           | A,Type,M6x1                       |
| P204M~P207M,C203~C216, C305~C316   |                                   |
| 211~210,308~328, X10~X20,C317~C328 | A, Type,M8x1                      |
| P208M~P214M                        | A,Type,G1/8                       |

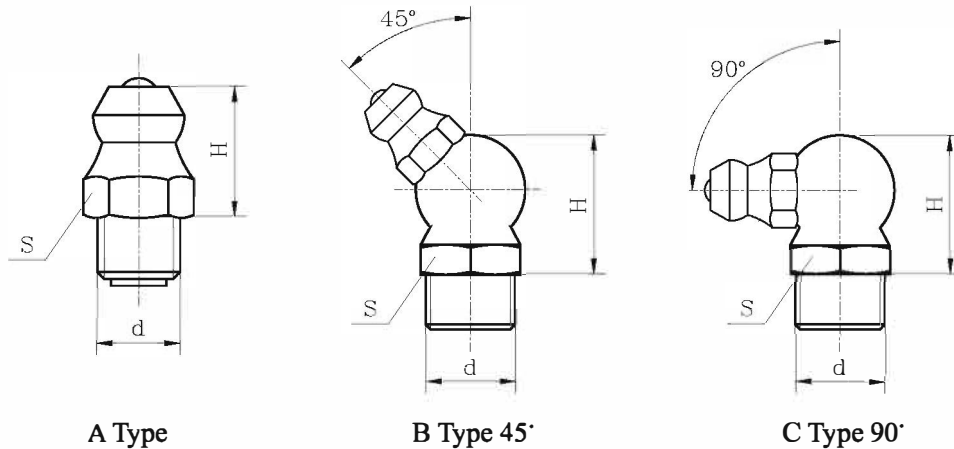


Table 26. Grease nipple dimensions and designations of applicable bearing units

| Grease fitting Type | d         | H(mm) | S(mm) |
|---------------------|-----------|-------|-------|
| A Type              | M6X1      | 8.5   | 7     |
|                     | M8X1      | 10.5  | 10    |
|                     | 1/4-28UNF | 8.5   | 7     |
|                     | 1/8-27NPT | 9.5   | 11    |
|                     | G1/8      | 10.5  | 11    |
| B Type 45°          | M6X1      | 15    | 10    |
|                     | M8X1      | 15    | 10    |
|                     | 1/4-28UNF | 15    | 10    |
|                     | 1/8-27NPT | 15    | 10    |
| B Type 90°          | M6X1      | 15    | 10    |
|                     | M8X1      | 15    | 10    |
|                     | 1/4-28UNF | 15    | 10    |
|                     | 1/8-27NPT | 14.5  | 10    |

## 8. Limiting Speed

The limiting speed of the ball bearing units are mainly determined by the fit between the bearings and the shafts. Under normal conditions, the fit for the setscrews type and eccentric locking collar type bearing unit is h7. h8 or h9 fit is applied when with light load and slow speed, while tighter fit j7 is applied when with heavy load and high speed. The shaft applied to the adapter sleeve bearing is h9 class, with IT5 class tolerances.

The speed ratings for ball bearing of series CS2(00)-2RS and CS3(00)-2RS are the same as deep groove ball bearings which are shown in Table 27.

The limiting speeds for the ball bearing units with different fits are shown in Table29.

| d<br>(mm) | 200 Series       |      |      |      | 300 Series       |      |      |     | CS200<br>CS300 |           |
|-----------|------------------|------|------|------|------------------|------|------|-----|----------------|-----------|
|           | Shaft Tolerances |      |      |      | Shaft Tolerances |      |      |     | 200Series      | 300Series |
|           | j7(h9/IT5)       | h7   | h8   | h9   | j7(h9/IT5)       | h7   | h8   | h9  |                |           |
| 12        | 6700             | 5300 | 3800 | 1400 | --               | --   | --   | --  | --             | --        |
| 15        | 6700             | 5300 | 3800 | 1400 | --               | --   | --   | --  | 11000          | --        |
| 17        | 6700             | 5300 | 3800 | 1400 | --               | --   | --   | --  | 10000          | --        |
| 20        | 6000             | 4800 | 3400 | 1200 | --               | --   | --   | --  | 9000           | --        |
| 25        | 5600             | 4000 | 3000 | 1000 | 5000             | 3600 | 2600 | 900 | 8000           | 7000      |
| 30        | 4500             | 3400 | 2400 | 850  | 4300             | 3000 | 2200 | 800 | 6700           | 6300      |
| 35        | 4000             | 3000 | 2000 | 750  | 3800             | 2800 | 2000 | 700 | 6000           | 5600      |
| 40        | 3600             | 2600 | 1900 | 670  | 3400             | 2400 | 1700 | 630 | 5600           | 5000      |
| 45        | 3200             | 2400 | 1700 | 600  | 3000             | 2200 | 1500 | 560 | 5000           | 4500      |
| 50        | 3000             | 2200 | 1600 | 560  | 2600             | 2000 | 1400 | 500 | 4800           | 4300      |
| 55        | 2600             | 2000 | 1400 | 500  | 2400             | 1800 | 1300 | 450 | --             | --        |
| 60        | 2400             | 1800 | 1200 | 450  | 2200             | 1700 | 1100 | 430 | --             | --        |
| 65        | 2200             | 1700 | 1100 | 430  | 2000             | 1500 | 1100 | 400 | --             | --        |
| 70        | 2200             | 1600 | 1100 | 400  | 1900             | 1400 | 1000 | 360 | --             | --        |
| 75        | 2000             | 1500 | 1000 | 380  | 1800             | 1300 | 900  | 340 | --             | --        |
| 80        | 1900             | 1400 | 950  | 340  | 1700             | 1200 | 850  | 320 | --             | --        |
| 85        | 1800             | 1300 | 900  | 320  | 1600             | 1100 | 800  | 300 | --             | --        |
| 90        | 1700             | 1200 | 800  | 300  | 1500             | 1100 | 750  | 280 | --             | --        |
| 95        | --               | --   | --   | --   | 1400             | 1000 | 700  | 260 | --             | --        |
| 100       | --               | --   | --   | --   | 1300             | 950  | 670  | 240 | --             | --        |
| 105       | --               | --   | --   | --   | 1200             | 900  | 630  | 220 | --             | --        |
| 110       | --               | --   | --   | --   | 1200             | 800  | 600  | 200 | --             | --        |
| 120       | --               | --   | --   | --   | 1100             | 750  | 530  | 190 | --             | --        |
| 130       | --               | --   | --   | --   | 1000             | 670  | 480  | 180 | --             | --        |
| 140       | --               | --   | --   | --   | 900              | 600  | 430  | 160 | --             | --        |

Note: 1. The h9/IT5 column fit for adapter sleeve type ball bearing units, and the rest j7~h9 column fit for the setscrews type and eccentric locking collar type ball bearing units.

2.The limiting speeds of ball bearings units with triple seals are 20% to 25% of the above figures.

## 9. Shafts Design

The ball bearing units are provided with hexagonal setscrews to fix the shafts. Under normal operating conditions, the inner rings are mounted on shafts by means of a loose fit to ensure convenience of shaft installation. In this case, the dimensional accuracy of the shafts is shown in Table 28.

**Table 28. Dimensional accuracy of the shafts to be used in the cylindrical bore bearings (Loose fit) ( $\mu\text{m}$ )**

| Shafts<br>Diameter<br>(mm) |       | Deviation of tolerance in shaft |      |                  |      |                       |      |                |      |      |      |
|----------------------------|-------|---------------------------------|------|------------------|------|-----------------------|------|----------------|------|------|------|
|                            |       | for lower speed                 |      | for medium speed |      | for rather high speed |      | for high speed |      |      |      |
|                            |       | h9                              |      | h8               |      | h7                    |      | j6             |      | h6   |      |
| over                       | Incl. | max.                            | min. | max.             | min. | max.                  | min. | max.           | min. | max. | min. |
| 10                         | 18    | 0                               | -43  | 0                | -27  | 0                     | -18  | +8             | -3   | 0    | -11  |
| 18                         | 30    | 0                               | -52  | 0                | -33  | 0                     | -21  | +9             | -4   | 0    | -13  |
| 30                         | 50    | 0                               | -62  | 0                | -39  | 0                     | -25  | +11            | -5   | 0    | -16  |
| 50                         | 80    | 0                               | -74  | 0                | -46  | 0                     | -30  | +12            | -7   | 0    | -19  |
| 80                         | 120   | 0                               | -87  | 0                | -54  | 0                     | -35  | +13            | -9   | 0    | -22  |

When the ball bearing units are used at a high speed or under heavy load, the inner rings of the ball bearings should be mounted to the shafts by means of a tight fit. As shown in Table 29.

**Table 29. Dimensional accuracy of the shafts to be used in the cylindrical bore bearings (Tight fit) ( $\mu\text{m}$ )**

| Shaft<br>Diameter<br>(mm) |       | Deviation of tolerance in shaft |      |                   |      |               |      |            |      |
|---------------------------|-------|---------------------------------|------|-------------------|------|---------------|------|------------|------|
|                           |       | higher speed                    |      | rather heavy load |      | highest speed |      | heavy load |      |
|                           |       | m6                              |      | m7                |      | n6            |      | n7         |      |
| over                      | Incl. | max.                            | min. | max.              | min. | max.          | min. | max.       | min. |
| 10                        | 18    | +18                             | +7   | +25               | +7   | +23           | +12  | +30        | +12  |
| 18                        | 30    | +21                             | +8   | +29               | +8   | +28           | +15  | +36        | +15  |
| 30                        | 50    | +25                             | +9   | +34               | +9   | +33           | +17  | +42        | +17  |
| 50                        | 80    | +30                             | +11  | +41               | +11  | +39           | +20  | +50        | +20  |
| 80                        | 120   | +35                             | +13  | +48               | +13  | +45           | +23  | +58        | +23  |

Some bearings can be installed to the shafts by means of adapter sleeves. In this method, the bearing bore is made of 1:12 taper and the corresponding tapered adapter sleeves are applied. This is a convenient method that can be used as the intermediate bearings of a long shaft. In this case, the dimensional accuracy of shafts is shown in Table 30.

**Table 30** Dimensional accuracy of shafts to be used in tapered bore bearings. (um)

| Shafts Diameter<br>(mm) |       | Deviation of tolerance <b>for shafts</b> |      |                 |      |
|-------------------------|-------|------------------------------------------|------|-----------------|------|
|                         |       | for short shafts                         |      | for long shafts |      |
|                         |       | h9                                       |      | h10             |      |
| over                    | incl. | max.                                     | min. | max.            | min. |
| 10                      | 18    | 0                                        | -43  | 0               | -70  |
| 18                      | 30    | 0                                        | -52  | 0               | -84  |
| 30                      | 50    | 0                                        | -62  | 0               | -100 |
| 50                      | 80    | 0                                        | -74  | 0               | -120 |
| 80                      | 120   | 0                                        | -87  | 0               | -140 |
| 120                     | 180   | 0                                        | -100 | 0               | -160 |

Most industrial fans operate at high speeds. The inner ring of the ball bearing units should be mounted to the shafts by means of h5 or j5 fit. As shown in following table.

**Table 31** Dimensional accuracy of shafts to fans used in bearing units (um)

| Shaft diameter<br>(mm) |     | Deviation of tolerance in shaft |      |      |      |
|------------------------|-----|---------------------------------|------|------|------|
|                        |     | h5                              |      | j5   |      |
|                        |     | max.                            | min. | max. | min. |
| 18                     | 30  | 0                               | -9   | +5   | -4   |
| 30                     | 50  | 0                               | -11  | +6   | -5   |
| 50                     | 80  | 0                               | -13  | +6   | -7   |
| 80                     | 100 | 0                               | -15  | +6   | -9   |

## 10. Mounting of Bearings on Shafts

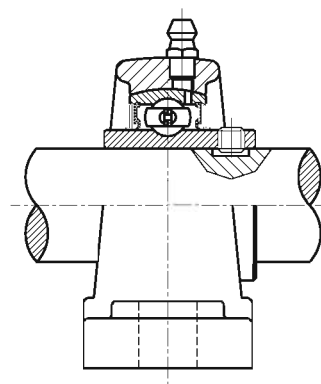
### 10.1 Setscrews Locking Type Bearings

There are two setscrews located at two places on one side of the wide inner ring  $120^\circ$  apart with which the bearings can be mounted to the shafts. When mounting the bearings to the shafts, the torque shown in the following table is recommended to tighten the setscrews to shafts.

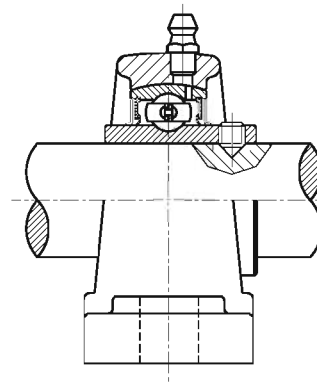
Table 32. Proper tightening torque of setscrews

| Bearings No. |             |             |  | Setscrews |       | Tightening torque |           |
|--------------|-------------|-------------|--|-----------|-------|-------------------|-----------|
|              |             |             |  | (mm)      | (in.) | (N m)             | (lbf in.) |
| UC201~UC203  |             | SB201~SB203 |  | M5X0.8    | 3.9   | 10-32UNF          | 32        |
| UC204~UC206  | UC305~UC306 | SB204~SB207 |  | M6X1      | 4.9   | 1/4-28UNF         | 43        |
| UC207~UC209  | UC307       | SB208~SB211 |  | M8X1      | 8.0   | 5/16-24UNF        | 70.5      |
| UC210~UC212  | UC308~UC309 | SB212       |  | M10X1.25  | 16.8  | 3/8-24UNF         | 148       |
| UC213        |             |             |  | M12X1.25  | 27.1  | 3/8-24UNF         | 148       |
| UC214~UC217  | UC310~UC314 |             |  | M12X1.25  | 29.4  | 7/16-20UNF        | 235       |
| UC218        |             |             |  | M12X1.25  | 34.3  | 1/2-20UNF         | 260       |
|              | UC315~UC326 |             |  | M14X1.5   | 54.2  | 1/2-20UNF         | 300       |
|              | UC317~UC319 |             |  | M16X1.5   | 58.0  | 5/8-18UNF         | 478       |
|              | UC320~UC324 |             |  | M18X1.5   | 78.0  | 5/8-18UNF         | 496       |
|              | UC326~UC328 |             |  | M20X1.5   |       |                   |           |

In case of either the vibration is caused to the bearing; or 1) the alternating movement takes place, 2) the load applied to the bearings is large, 3) The shafts rotation speed is rapid, it is desired to provide with the filed seat or concave section at the part where the setscrews contact with the shafts. If large thrust load is charged, it is recommended that joggling tightened with nuts be used to install the bearings most effectively to the shafts. As shown in Fig. 3.



File the shaft surface where the setscrews are positioned



Make a concave section at the shaft surface where the setscrews are positioned

Fig.3

## 10.2 Adapter Sleeves Locking Type Bearings

The inner ring bore of this type of bearings has a taper of 1:12. The sleeves are installed to an arbitrary position. After the shake proof washers are inserted, the correct nuts tightening condition can be obtained if they are tightened enough by hand and then rotated by 2/5 to 3/5 revolution with a spanner.

After tightening the nuts, bend the shake proof washers within the slots. Otherwise, the nuts may loosen and creep may happen between the shaft and sleeves.

It is necessary to ensure that the nuts are not over tightened. As shown in Fig. 4.

## 10.3 Eccentric Locking Collar Type Bearings

The eccentric part of the collars mates with the inner rings of the bearings which is made eccentric with the collars. When locked to the shafts by hand in direction of the shafts rotation, the eccentric locking collars tighten automatically to the shafts by force of working radial loads. Then, lock the setscrews provided on the collar to fix the eccentric collars to the shafts.

## 10.4 Mounting Method of Housings

The desired installation order is: first install the housing, then the shaft and bearing. The bearing units can be easily installed, in principle, at any place. However, in order to have a long service life, it is desired that the mounting base is flat and rigid.

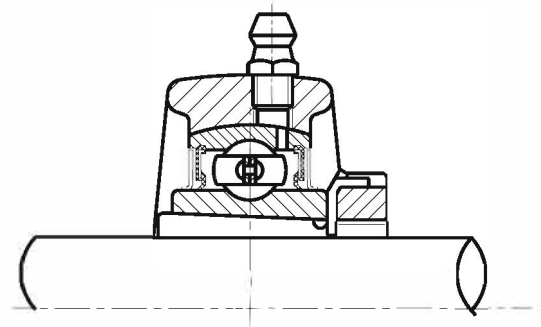


Fig.4.

The pillow block type and flange type housings are desired that the angle between the surface on which the housing is mounted and the shaft be maintained to a tolerance of  $\pm 2^\circ$  (Fig.5).

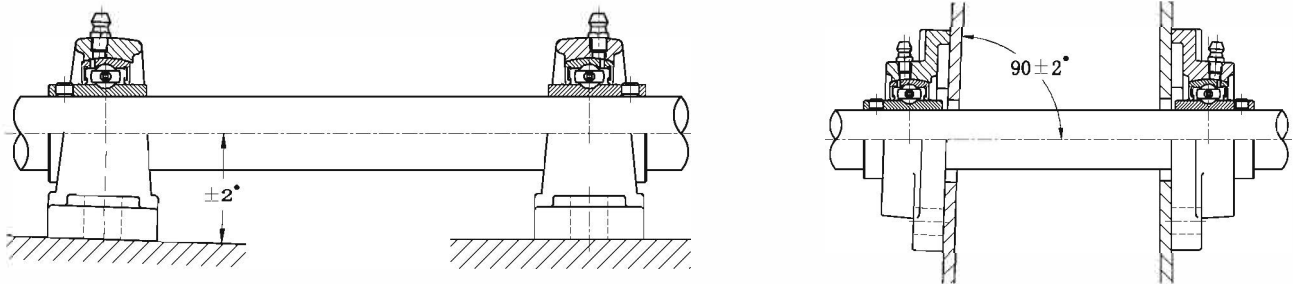


Fig.5.

## 10.5 Mounting Method of Take-up Units

The Take-up units are mounted on two parallel slides, bearing centers to be adjusted by adjustable bolts. The relevant parts dimensions are shown as Fig.6.

Mounting tolerances are shown in Table 33. Table 34. and Table 35.

Table 33. (mm)

| Take-up No. | H' $\pm 0.5$ | A' | d  | D  | N  |
|-------------|--------------|----|----|----|----|
| T204        | 77           | 11 | 16 | 28 | 12 |
| T205        | 77           | 11 | 16 | 28 | 12 |
| T206        | 90           | 11 | 18 | 32 | 12 |
| T207        | 90           | 11 | 18 | 32 | 12 |
| T208        | 103          | 15 | 24 | 42 | 14 |
| T209        | 103          | 15 | 24 | 42 | 14 |
| T210        | 103          | 15 | 24 | 42 | 14 |
| T211        | 131          | 20 | 30 | 56 | 20 |
| T212        | 131          | 20 | 30 | 56 | 26 |
| T213        | 152          | 24 | 36 | 60 | 26 |
| T214        | 152          | 24 | 36 | 60 | 26 |
| T215        | 152          | 24 | 36 | 60 | 26 |
| T216        | 167          | 24 | 36 | 60 | 26 |
| T217        | 175          | 28 | 42 | 65 | 30 |

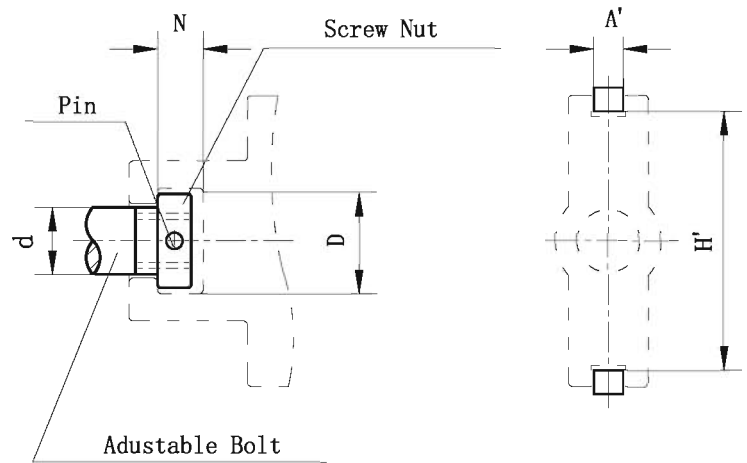


Fig.6

Table 34. (mm)

| Take-up No. | H' $\pm 0.5$ | A'   | d  | D  | N  |
|-------------|--------------|------|----|----|----|
| ST204       | 77           | 12.5 | 16 | 28 | 12 |
| ST205       | 77           | 12.5 | 16 | 28 | 12 |
| ST206       | 90           | 12.5 | 18 | 32 | 12 |
| ST207       | 90           | 12.5 | 18 | 32 | 12 |
| ST208       | 103          | 16.5 | 24 | 42 | 14 |
| ST209       | 103          | 16.5 | 24 | 42 | 14 |
| ST210       | 103          | 16.5 | 24 | 42 | 14 |
| ST211       | 131          | 25   | 30 | 56 | 20 |
| ST212       | 131          | 25   | 30 | 56 | 26 |

Table 35. (mm)

| Take-up No. | H' $\pm 0.5$ | A' | d  | D   | N  |
|-------------|--------------|----|----|-----|----|
| T305        | 81           | 11 | 22 | 32  | 12 |
| T306        | 91           | 15 | 24 | 38  | 14 |
| T307        | 101          | 15 | 26 | 40  | 16 |
| T308        | 103          | 16 | 28 | 46  | 18 |
| T309        | 113          | 16 | 30 | 50  | 20 |
| T310        | 126          | 18 | 32 | 55  | 22 |
| T311        | 141          | 20 | 34 | 60  | 24 |
| T312        | 151          | 20 | 36 | 64  | 24 |
| T313        | 161          | 24 | 38 | 64  | 26 |
| T314        | 172          | 24 | 42 | 75  | 28 |
| T315        | 182          | 24 | 42 | 75  | 28 |
| T316        | 194          | 28 | 46 | 90  | 34 |
| T317        | 206          | 30 | 46 | 90  | 34 |
| T318        | 216          | 30 | 50 | 95  | 38 |
| T319        | 230          | 32 | 50 | 95  | 38 |
| T320        | 242          | 32 | 52 | 100 | 38 |
| T322        | 262          | 36 | 55 | 110 | 42 |
| T324        | 287          | 42 | 60 | 120 | 48 |
| T326        | 322          | 46 | 65 | 130 | 52 |
| T328        | 352          | 46 | 70 | 140 | 56 |

## 11. Bearing Inserts — Life Estimation for Different Speeds and $\frac{C_r}{P_r}$ Ratios.

Table 36.

| $L_{10h}$<br>(hours) | $C_r/P_r$<br>when speed n=<br>(r/min) |      |      |      |      |      |      |      |      |      |      |      |      |      |      |      |
|----------------------|---------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
|                      | 50                                    | 100  | 200  | 300  | 500  | 750  | 900  | 1000 | 1500 | 1800 | 2000 | 2500 | 3000 | 4000 | 5000 | 6000 |
| 500                  | 1.14                                  | 1.45 | 1.82 | 2.08 | 2.47 | 2.82 | 3.00 | 3.11 | 3.56 | 3.78 | 3.91 | 4.22 | 4.48 | 4.93 | 5.32 | 5.65 |
| 1000                 | 1.44                                  | 1.82 | 2.29 | 2.62 | 3.11 | 3.56 | 3.78 | 3.91 | 4.48 | 4.76 | 4.93 | 5.31 | 5.65 | 6.21 | 6.70 | 7.11 |
| 1500                 | 1.65                                  | 2.08 | 2.62 | 3.00 | 3.56 | 4.08 | 4.31 | 4.48 | 5.13 | 5.45 | 5.65 | 6.10 | 6.46 | 7.11 | 7.65 | 8.15 |
| 2000                 | 1.82                                  | 2.29 | 2.88 | 3.30 | 3.91 | 4.48 | 4.76 | 4.93 | 5.65 | 6.00 | 6.21 | 6.69 | 7.11 | 7.81 | 8.43 | 8.96 |
| 3000                 | 2.08                                  | 2.62 | 3.30 | 3.78 | 4.48 | 5.13 | 5.42 | 5.65 | 6.46 | 6.85 | 7.11 | 7.66 | 8.14 | 8.96 | 9.65 | 10.3 |
| 5000                 | 2.47                                  | 3.11 | 3.91 | 4.48 | 5.32 | 6.08 | 6.46 | 6.70 | 7.66 | 8.14 | 8.43 | 9.09 | 9.65 | 10.6 | 11.5 | 12.2 |
| 7500                 | 2.82                                  | 3.56 | 4.48 | 5.13 | 6.06 | 6.96 | 7.37 | 7.66 | 8.77 | 9.32 | 9.65 | 10.4 | 11.1 | 12.2 | 13.1 | 13.9 |
| 10000                | 3.11                                  | 3.91 | 4.93 | 5.65 | 6.70 | 7.66 | 8.14 | 8.43 | 9.65 | 10.3 | 10.6 | 11.4 | 12.2 | 13.4 | 14.5 | 15.3 |
| 15000                | 3.56                                  | 4.48 | 5.65 | 6.46 | 7.66 | 8.77 | 9.28 | 9.65 | 11.1 | 11.7 | 12.2 | 13.1 | 13.9 | 15.3 | 16.5 | 17.5 |
| 20000                | 3.91                                  | 4.93 | 6.21 | 7.11 | 8.43 | 9.65 | 10.3 | 10.6 | 12.2 | 12.9 | 13.4 | 14.4 | 15.3 | 16.8 | 18.2 | 19.3 |
| 30000                | 4.48                                  | 5.65 | 7.11 | 8.14 | 9.65 | 11.1 | 11.7 | 12.2 | 13.9 | 14.8 | 15.3 | 16.5 | 17.5 | 19.3 | 20.8 | 22.1 |
| 40000                | 4.93                                  | 6.21 | 7.81 | 8.96 | 10.6 | 12.2 | 12.9 | 13.4 | 15.3 | 16.3 | 16.8 | 18.2 | 19.3 | 21.2 | 22.9 | 24.3 |
| 60000                | 5.65                                  | 7.11 | 8.96 | 10.3 | 12.2 | 13.9 | 14.8 | 15.3 | 17.5 | 18.6 | 19.3 | 20.8 | 22.1 | 24.3 | 26.2 | 27.8 |
| 80000                | 6.21                                  | 7.81 | 9.83 | 11.3 | 13.4 | 15.3 | 16.3 | 16.8 | 19.3 | 20.5 | 21.2 | 22.9 | 24.3 | 26.7 | 28.8 | 30.7 |

Life estimation for UC212 insert bearing with steady radial load  $F_r = 3250$  N at a speed of 1500 r/min.

The dynamic load rating  $C_r$  of the inset bearing UC212 from page C-1 is 47800 N.

Since the bearing is not subject to axial load, the equivalent load  $P_r = F_r \times f_d = 3250$  N  $\times$  1.2 = 3900 N (When no shocking load or minor shocking load, shocking load factor  $f_d = 1 \sim 1.2$ ).

Using the load ratio tables, an approximate life can be obtained by locating the nearest  $C_r/P_r$  value in the appropriate r/min column.

$$\text{Therefore for } C_r/P_r = \frac{47800}{3900} = 12.256$$

Under the  $n = 1500$  r/min column, the nearest  $C_r/P_r$  value is 12.2 with give an approximate life of 20000 hours.

## DIMENSION TABLE

### Contents of ball bearing units and insert Bearings

#### Pillow blocks

|                     |      |
|---------------------|------|
| UCP2 .....          | B-2  |
| UCP2M .....         | B-3  |
| NAP2 .....          | B-4  |
| NAP2M .....         | B-5  |
| UKP2+H .....        | B-6  |
| UKP2M+H .....       | B-7  |
| SBP2G .....         | B-8  |
| SAP2G .....         | B-9  |
| UCPK2 .....         | B-10 |
| NAPK2 .....         | B-11 |
| UCPX .....          | B-12 |
| UCP3 .....          | B-13 |
| NAP3 .....          | B-14 |
| UKP3+H .....        | B-15 |
| SALP2G,SBLP2G ..... | B-16 |
| UCPH2 .....         | B-17 |
| UCPA2 .....         | B-18 |
| UCPA2A .....        | B-19 |
| UCPG2 .....         | B-20 |
| SAPP2,SBPP2 .....   | B-21 |

#### Square flange units

|               |      |
|---------------|------|
| UCF2 .....    | B-22 |
| NAF2 .....    | B-23 |
| UKF2+H .....  | B-24 |
| SAF2G .....   | B-25 |
| SBF2G .....   | B-26 |
| UCFX .....    | B-27 |
| UCFU2 .....   | B-28 |
| NAFU2 .....   | B-29 |
| SAFU2G .....  | B-30 |
| UCF3 .....    | B-31 |
| NAF3 .....    | B-32 |
| UKF3+H .....  | B-33 |
| UCFS3 .....   | B-34 |
| NAFS3 .....   | B-35 |
| UKFS3+H ..... | B-36 |

#### Oval flange units

|                         |      |
|-------------------------|------|
| UCFL2 .....             | B-37 |
| NAFL2 .....             | B-38 |
| UKFL2+H .....           | B-39 |
| UCFLX .....             | B-40 |
| SAFL2G .....            | B-41 |
| SBFL2G .....            | B-42 |
| UCFLU2 .....            | B-43 |
| NAFLU2 .....            | B-44 |
| SAFLU2G .....           | B-45 |
| UCFL3 .....             | B-46 |
| NAFL3 .....             | B-47 |
| UKFL3+H .....           | B-48 |
| SALF2G,SBLF2G .....     | B-49 |
| SALFTC2G,SBLFTC2G ..... | B-50 |
| SAFD2G,SBFD2G .....     | B-51 |
| SBPFTD2G,SAPFTD2G ..... | B-52 |
| SAFCT2G,SBFCT2G .....   | B-53 |
| SBPFL2,SAPFL2 .....     | B-54 |

#### Round flange units

|                     |      |
|---------------------|------|
| UCFC2 .....         | B-55 |
| NAFC2 .....         | B-56 |
| UKFC2+H .....       | B-57 |
| SBPF2,SAPF2 .....   | B-58 |
| SBPFT2,SAPFT2 ..... | B-59 |

#### Take-up units

|              |      |
|--------------|------|
| UCT2 .....   | B-60 |
| UCT3 .....   | B-61 |
| UCST2 .....  | B-62 |
| NAT2 .....   | B-63 |
| NAT3 .....   | B-64 |
| UKT2+H ..... | B-65 |
| UKT3+H ..... | B-66 |

#### Other

|                                                  |      |
|--------------------------------------------------|------|
| UCC2 .....                                       | B-67 |
| UCC3 .....                                       | B-68 |
| UCFB2 .....                                      | B-69 |
| UCFA2 .....                                      | B-70 |
| UCHA2 .....                                      | B-71 |
| Pressed Housing Agricultural Disk Bearings ..... | B-72 |

#### Insert Bearings

|                          |      |
|--------------------------|------|
| UC2,RB2 .....            | C-1  |
| UC2T .....               | C-2  |
| UCX .....                | C-3  |
| UC3 .....                | C-4  |
| NA2,HC2 .....            | C-5  |
| NA3 .....                | C-6  |
| UK2 .....                | C-7  |
| UK3 .....                | C-8  |
| ER2 .....                | C-9  |
| ER2T .....               | C-10 |
| SER2 .....               | C-11 |
| SA2,SA2G,CSA1,CSA2 ..... | C-12 |
| SB2,SB2G,CSB2 .....      | C-13 |
| GRA2,GRA2G,RA2 .....     | C-14 |
| SA0,CSA0 .....           | C-15 |
| NAA3 .....               | C-15 |
| CS2 .....                | C-16 |
| ORAE .....               | C-16 |

|                                                |      |
|------------------------------------------------|------|
| Disc Bearings For Agricultural Machinery ..... | C-17 |
|------------------------------------------------|------|

|                                                |      |
|------------------------------------------------|------|
| Disc Bearings For Agricultural Machinery ..... | C-18 |
|------------------------------------------------|------|

|                             |      |
|-----------------------------|------|
| Hex-bore Ball Bearing ..... | C-19 |
|-----------------------------|------|

#### Eccentric Locking Collars

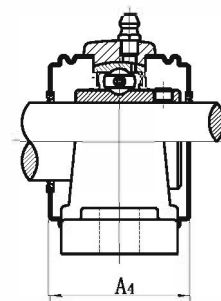
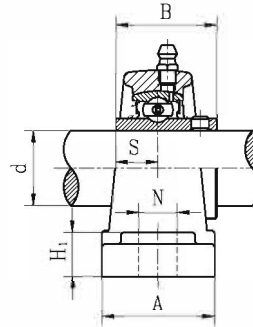
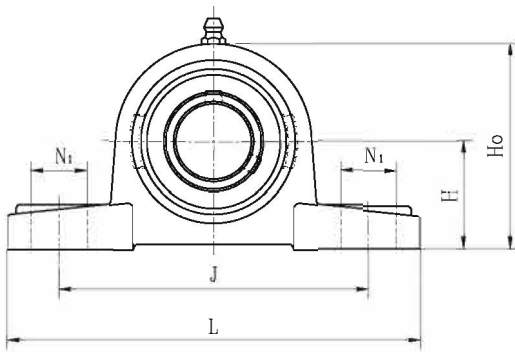
|            |      |
|------------|------|
| A200 ..... | C-20 |
| A300 ..... | C-21 |

#### Adapters

|             |      |
|-------------|------|
| H2300 ..... | C-22 |
|-------------|------|

#### Appendices

|                                                    |     |
|----------------------------------------------------|-----|
| Conversion factors for British and S.I.Units ..... | D-1 |
| Metric-inch conversion table .....                 | D-1 |
| Inch-mm conversion table .....                     | D-2 |
| Temperature conversion table .....                 | D-3 |
| kgf-N conversion table .....                       | D-4 |
| kg-lb conversion table .....                       | D-5 |
| A table of mounted units references .....          | D-6 |



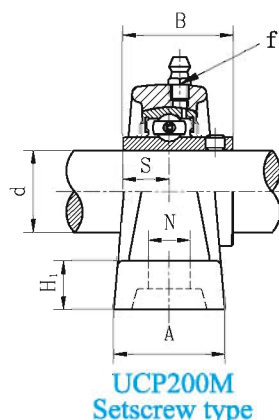
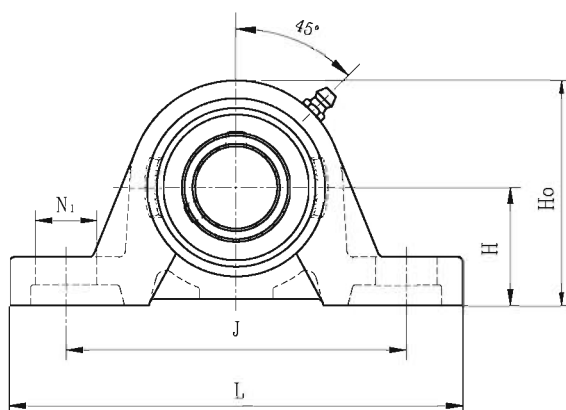
**UCP2**  
Setscrew type

**S-UCP200E1**  
**SM-UCP200E1**  
With end cover

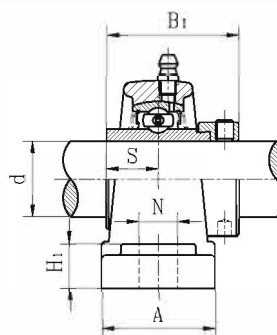
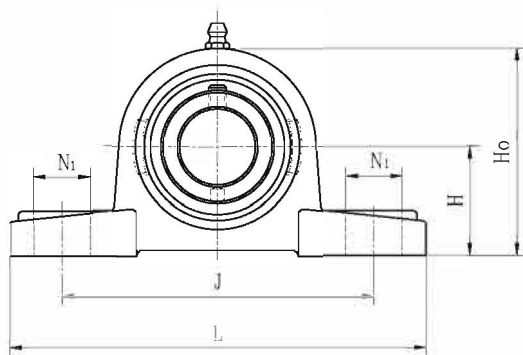
| Unit No.                                                | Shaft Dia.                         |                | Dimensions(mm). |     |     |    |    |                |                |                |      |      |                | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            | Available |                |
|---------------------------------------------------------|------------------------------------|----------------|-----------------|-----|-----|----|----|----------------|----------------|----------------|------|------|----------------|-----------|--------------------------------------------------------|-------------|----------------------|-----------|----------------|
|                                                         | d                                  |                | H               | L   | J   | A  | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B    | A <sub>4</sub> |           |                                                        |             |                      | N         | N <sub>1</sub> |
|                                                         | (in.)                              | (mm)           |                 |     |     |    |    |                |                |                |      |      |                |           |                                                        |             |                      |           |                |
| UCP201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 30.2            | 125 | 96  | 32 | 12 | 16             | 13             | 57             | 11.5 | 27.4 | --             | M10       | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S | P203S       | 0.53<br>0.52<br>0.51 | --        | --             |
| UCP201<br>201-8<br>202<br>202-10<br>203<br>203-11       | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 30.2            | 127 | 96  | 37 | 13 | 19             | 14             | 60.7           | 12.7 | 31   | --             | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11       | P203        | 0.72<br>0.70<br>0.69 | --        | --             |
| UCP204-12<br>204                                        | 3/4                                | 20             | 33.3            | 127 | 96  | 37 | 13 | 16             | 14             | 65             | 12.7 | 31   | 45             | M10       | UC204-12<br>204                                        | P204        | 0.69                 | 13        | 19             |
| UCP205-14<br>205-15<br>205<br>205-16                    | 7/8<br>15/16<br>1                  | 25             | 36.5            | 140 | 105 | 38 | 13 | 19             | 15             | 71             | 14.3 | 34   | 48             | M10       | UC205-14<br>205-15<br>205<br>205-16                    | P205        | 0.82                 | --        | --             |
| UCP206-18<br>206<br>206-19<br>206-20                    | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 42.9            | 160 | 121 | 44 | 14 | 19             | 16             | 83             | 15.9 | 38.1 | 52             | M12       | UC206-18<br>206<br>206-19<br>206-20                    | P206        | 1.22                 | 17        | 21             |
| UCP207-20<br>207-21<br>207-22<br>207<br>207-23          | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 47.6            | 167 | 126 | 48 | 15 | 19             | 17             | 93             | 17.5 | 42.9 | 59             | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23          | P207        | 1.61                 | 17        | 21             |
| UCP208-24<br>208-25<br>208                              | 1-1/2<br>1-9/16                    | 40             | 49.2            | 180 | 136 | 52 | 15 | 21             | 18             | 100            | 19   | 49.2 | 68             | M12       | UC208-24<br>208-25<br>208                              | P208        | 1.99                 | 17        | 23             |
| UCP209-26<br>209-27<br>209-28<br>209                    | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 54              | 190 | 146 | 54 | 15 | 21             | 20             | 108            | 19   | 49.2 | 70             | M12       | UC209-26<br>209-27<br>209-28<br>209                    | P209        | 2.36                 | 17        | 23             |
| UCP210-30<br>210-31<br>210                              | 1-7/8<br>1-15/16                   | 50             | 57.2            | 204 | 159 | 57 | 19 | 22             | 21             | 114            | 19   | 51.6 | 75             | M16       | UC210-30<br>210-31<br>210                              | P210        | 2.73                 | --        | --             |
| UCP211-32<br>211-34<br>211<br>211-35                    | 2<br>2-1/8<br>2-3/16               | 55             | 63.5            | 217 | 172 | 60 | 19 | 22             | 22             | 126            | 22.2 | 55.6 | 78             | M16       | UC211-32<br>211-34<br>211<br>211-35                    | P211        | 3.42                 | --        | --             |
| UCP212-36<br>212<br>212-38<br>212-39                    | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 69.9            | 238 | 186 | 66 | 19 | 25             | 24             | 138            | 25.4 | 65.1 | 91             | M16       | UC212-36<br>212<br>212-38<br>212-39                    | P212        | 4.66                 | --        | --             |
| UCP213-40<br>213                                        | 2-1/2                              | 65             | 76.2            | 262 | 203 | 70 | 23 | 29             | 26             | 151            | 25.4 | 65.1 | 98             | M20       | UC213-40<br>213                                        | P213        | 5.95                 | 25        | 29             |
| UCP214-44<br>214                                        | 2-3/4                              | 70             | 79.4            | 266 | 210 | 72 | 23 | 29             | 27             | 157            | 30.2 | 74.6 | --             | M20       | UC214-44<br>214                                        | P214        | 6.56                 | 25        | 29             |
| UCP215<br>215-48                                        | 3                                  | 75             | 82.6            | 274 | 217 | 74 | 25 | 29             | 28             | 164            | 33.3 | 77.8 | --             | M20       | UC215<br>215-48                                        | P215        | 7.43                 | --        | --             |
| UCP216                                                  |                                    | 80             | 88.9            | 292 | 232 | 78 | 25 | 30             | 30             | 175            | 33.3 | 82.6 | --             | M20       | UC216                                                  | P216        | 8.83                 | --        | --             |
| UCP217-52<br>217                                        | 3-1/4                              | 85             | 95.2            | 310 | 247 | 83 | 25 | 30             | 32             | 187            | 34.1 | 85.7 | --             | M20       | UC217-52<br>217                                        | P217        | 10.8                 | --        | --             |
| UCP218-56<br>218                                        | 3-1/2                              | 90             | 101.6           | 326 | 262 | 88 | 27 | 30             | 33             | 200            | 39.7 | 96   | --             | M22       | UC218-56<br>218                                        | P218        | 12.8                 | 27        | 33             |
| UCP220<br>220-64                                        | 4                                  | 100            | 115             | 380 | 305 | 95 | 30 | 36             | 40             | 225            | 42   | 108  | --             | M24       | UC220<br>220-64                                        | P220        | 26.3                 | --        | --             |

Note: Grease fittings can locate at 45° position of housings front right side.

# PILLOW BLOCKS WITH WEBBED HOUSINGS



| Unit No.                                            | Shaft Dia.                         |      | Dimensions(mm). |     |       |    |      |                |                |                |      |      |      | Bolt Size | Bearing No.                                   | Housing No. | Mass (kg) |
|-----------------------------------------------------|------------------------------------|------|-----------------|-----|-------|----|------|----------------|----------------|----------------|------|------|------|-----------|-----------------------------------------------|-------------|-----------|
|                                                     | d                                  |      | H               | L   | J     | A  | N    | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B    | f    |           |                                               |             |           |
|                                                     | (in.)                              | (mm) |                 |     |       |    |      |                |                |                |      |      |      |           |                                               |             |           |
| UCP204-12M<br>204M                                  | 3/4                                | 20   | 33.3            | 127 | 97    | 32 | 11.5 | 20.5           | 14             | 64             | 12.7 | 31   | M6   | M10       | UC204-12<br>204                               | P204M       | 0.62      |
| UCP205-14M<br>205-15M<br>205M<br>205-16M            | 7/8<br>15/16<br>1                  | 25   | 36.5            | 130 | 102   | 36 | 11.5 | 19.5           | 16             | 70             | 14.3 | 34   | M6   | M10       | UC205-14<br>205-15<br>205<br>205-16           | P205M       | 0.80      |
| UCP206-18M<br>206M<br>206-19M<br>206-20M            | 1-1/8<br>1-3/16<br>1-1/4           | 30   | 42.9            | 152 | 117.5 | 40 | 14   | 23.5           | 17             | 82             | 15.9 | 38.1 | M6   | M12       | UC206-18<br>206<br>206-19<br>206-20           | P206M       | 1.17      |
| UCP207-20M<br>207-21M<br>207-22M<br>207M<br>207-23M | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35   | 47.6            | 160 | 126   | 45 | 14   | 21             | 19             | 93             | 17.5 | 42.9 | M6   | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23 | P207M       | 1.61      |
| UCP208-24M<br>208-25M<br>208M                       | 1-1/2<br>1-9/16                    | 40   | 49.2            | 175 | 135.5 | 48 | 14   | 24.5           | 19             | 99             | 19   | 49.2 | G1/8 | M12       | UC208-24<br>208-25<br>208                     | P208M       | 1.89      |
| UCP209-26M<br>209-27M<br>209-28M<br>209M            | 1-5/8<br>1-11/16<br>1-3/4          | 45   | 54              | 187 | 143.5 | 48 | 14   | 22.5           | 21             | 107            | 19   | 49.2 | G1/8 | M12       | UC209-26<br>209-27<br>209-28<br>209           | P209M       | 2.26      |
| UCP210-30M<br>210-31M<br>210M                       | 1-7/8<br>1-15/16                   | 50   | 57.2            | 203 | 157   | 54 | 18   | 26             | 22             | 114            | 19   | 51.6 | G1/8 | M16       | UC210-30<br>210-31<br>210                     | P210M       | 2.69      |
| UCP211-32M<br>211-34M<br>211M<br>211-35M            | 2<br>2-1/8<br>2-3/16               | 55   | 63.5            | 219 | 171.5 | 60 | 18   | 27.5           | 24             | 125            | 22.2 | 55.6 | G1/8 | M16       | UC211-32<br>211-34<br>211<br>211-35           | P211M       | 3.65      |
| UCP212-36M<br>212M<br>212-38M<br>212-39M            | 2-1/4<br>2-3/8<br>2-7/16           | 60   | 69.9            | 240 | 190.5 | 60 | 18   | 29.5           | 26.5           | 137            | 25.4 | 65.1 | G1/8 | M16       | UC212-36<br>212<br>212-38<br>212-39           | P212M       | 4.79      |
| UCP213-40M<br>213M                                  | 2-1/2                              | 65   | 76.2            | 257 | 203   | 65 | 22   | 35             | 29             | 150            | 25.4 | 65.1 | G1/8 | M20       | UC213-40<br>213                               | P213M       | 5.81      |
| UCP214-44M<br>214M                                  | 2-3/4                              | 70   | 79.4            | 260 | 210   | 65 | 22   | 30             | 29             | 155            | 30.2 | 74.6 | G1/8 | M20       | UC214-44<br>214                               | P214M       | 6.34      |

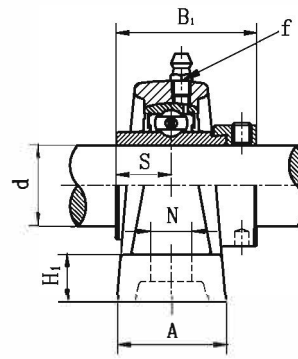
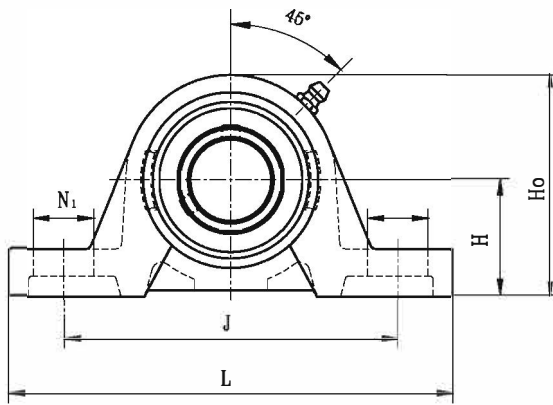


## NAP2 Eccentric Locking Collar type

| Unit No.                                                | Shaft Dia.                         |                | Dimensions(mm). |     |     |    |    |    |    |      |      |       | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            | Available |    |
|---------------------------------------------------------|------------------------------------|----------------|-----------------|-----|-----|----|----|----|----|------|------|-------|-----------|--------------------------------------------------------|-------------|----------------------|-----------|----|
|                                                         | (in.)                              | (mm)           | H               | L   | J   | A  | N  | N1 | H1 | Ho   | S    | B1    |           |                                                        |             |                      | N         | N1 |
| NAP201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 30.2            | 125 | 96  | 32 | 12 | 16 | 13 | 57   | 13.9 | 37.3  | M10       | NA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S | P203S       | 0.64<br>0.63<br>0.61 | --        | -- |
| NAP201<br>201-8<br>202<br>202-10<br>203<br>203-11       | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 30.2            | 127 | 96  | 37 | 13 | 19 | 14 | 60.7 | 17   | 43.5  | M10       | NA201<br>201-8<br>202<br>202-10<br>203<br>203-11       | P203        | 0.79<br>0.76<br>0.75 | --        | -- |
| NAP204-12<br>204                                        | 3/4                                | 20             | 33.3            | 127 | 96  | 37 | 13 | 16 | 14 | 65   | 17   | 43.5  | M10       | NA204-12<br>204                                        | P204        | 0.74                 | 13        | 19 |
| NAP205-14<br>205-15<br>205<br>205-16                    | 7/8<br>15/16<br>1                  | 25             | 36.5            | 140 | 105 | 38 | 13 | 19 | 15 | 71   | 17.4 | 44.3  | M10       | NA205-14<br>205-15<br>205<br>205-16                    | P205        | 0.87                 | --        | -- |
| NAP206-18<br>206<br>206-19<br>206-20                    | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 42.9            | 160 | 121 | 44 | 14 | 19 | 16 | 83   | 18.2 | 48.3  | M12       | NA206-18<br>206<br>206-19<br>206-20                    | P206        | 1.29                 | 17        | 21 |
| NAP207-20<br>207-21<br>207-22<br>207<br>207-23          | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 47.6            | 167 | 126 | 48 | 15 | 19 | 17 | 93   | 18.8 | 51.1  | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23          | P207        | 1.68                 | 17        | 21 |
| NAP208-24<br>208-25<br>208                              | 1-1/2<br>1-9/16                    | 40             | 49.2            | 180 | 136 | 52 | 15 | 21 | 18 | 100  | 21.4 | 56.3  | M12       | NA208-24<br>208-25<br>208                              | P208        | 2.10                 | 17        | 23 |
| NAP209-26<br>209-27<br>209-28<br>209                    | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 54              | 189 | 146 | 54 | 15 | 21 | 20 | 108  | 21.4 | 56.3  | M12       | NA209-26<br>209-27<br>209-28<br>209                    | P209        | 2.48                 | 17        | 23 |
| NAP210-30<br>210-31<br>210                              | 1-7/8<br>1-15/16                   | 50             | 57.2            | 204 | 159 | 57 | 19 | 22 | 21 | 114  | 24.6 | 62.7  | M16       | NA210-30<br>210-31<br>210                              | P210        | 2.90                 | --        | -- |
| NAP211-32<br>211-34<br>211<br>211-35                    | 2<br>2-1/8<br>2-3/16               | 55             | 63.5            | 217 | 172 | 60 | 19 | 22 | 22 | 126  | 27.7 | 71.3  | M16       | NA211-32<br>211-34<br>211<br>211-35                    | P211        | 3.67                 | --        | -- |
| NAP212-36<br>212<br>212-38<br>212-39                    | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 69.9            | 238 | 186 | 66 | 19 | 25 | 24 | 138  | 30.9 | 77.7  | M16       | NA212-36<br>212<br>212-38<br>212-39                    | P212        | 4.94                 | --        | -- |
| NAP213-40<br>213                                        | 2-1/2                              | 65             | 76.2            | 262 | 203 | 70 | 23 | 29 | 26 | 151  | 34.1 | 85.7  | M20       | NA213-40<br>213                                        | P213        | 6.34                 | 25        | 29 |
| NAP214-44<br>214                                        | 2-3/4                              | 70             | 79.4            | 266 | 210 | 72 | 23 | 29 | 27 | 157  | 34.1 | 85.7  | M20       | NA214-44<br>214                                        | P214        | 6.60                 | 25        | 29 |
| NAP215<br>215-48                                        | 3                                  | 75             | 82.6            | 274 | 217 | 74 | 25 | 29 | 28 | 164  | 37.3 | 92.1  | M20       | NA215<br>215-48                                        | P215        | 7.89                 | --        | -- |
| NAP216                                                  |                                    | 80             | 88.9            | 292 | 232 | 78 | 25 | 30 | 30 | 175  | 37.3 | 95.2  | M20       | NA216                                                  | P216        | 9.45                 | --        | -- |
| NAP217-52<br>217                                        | 3-1/4                              | 85             | 95.2            | 310 | 247 | 83 | 25 | 30 | 32 | 187  | 23.4 | 73.2  | M20       | NA217-52<br>217                                        | P217        | 11.1                 | --        | -- |
| NAP218-56<br>218                                        | 3-1/2                              | 90             | 101.6           | 326 | 262 | 88 | 27 | 30 | 33 | 200  | 24.5 | 72.5  | M22       | NA218-56<br>218                                        | P218        | 12.76                | 27        | 33 |
| NAP220                                                  |                                    | 100            | 115             | 380 | 305 | 95 | 30 | 36 | 40 | 225  | 50   | 125.4 | M24       | NA220                                                  | P220        | 12.76                | --        | -- |

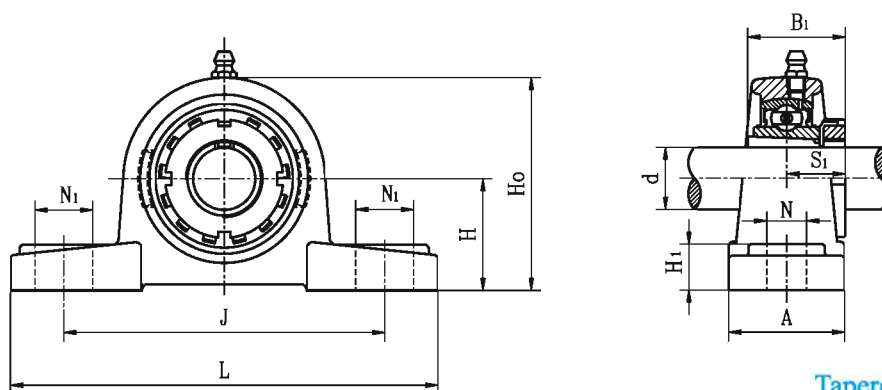
Note: Grease fittings can locate at 45° position of housings front right side.

# PILLOW BLOCKS WITH WEBBED HOUSINGS



**NAP200M**  
Eccentric Locking Collars Type

| Unit No.                                            | Shaft Dia.                         |      | Dimensions(mm). |     |       |    |      |                |                |                |      |                |      | Bolt Size | Bearing No.                                   | Housing No. | Mass (kg) |
|-----------------------------------------------------|------------------------------------|------|-----------------|-----|-------|----|------|----------------|----------------|----------------|------|----------------|------|-----------|-----------------------------------------------|-------------|-----------|
|                                                     | d<br>(in.)                         | (mm) | H               | L   | J     | A  | N    | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B <sub>1</sub> | f    |           |                                               |             |           |
| NAP204-12M<br>204M                                  | 3/4                                | 20   | 33.3            | 127 | 97    | 32 | 11.5 | 20.5           | 14             | 64             | 17   | 43.5           | M6   | M10       | NA204-12<br>204                               | P204M       | 0.67      |
| NAP205-14M<br>205-15M<br>205M<br>205-16M            | 7/8<br>15/16<br>1                  | 25   | 36.5            | 130 | 102   | 36 | 11.5 | 19.5           | 16             | 70             | 17.4 | 44.3           | M6   | M10       | NA205-14<br>205-15<br>205<br>205-16           | P205M       | 0.85      |
| NAP206-18M<br>206M<br>206-19M<br>206-20M            | 1-1/8<br>1-3/16<br>1-1/4           | 30   | 42.9            | 152 | 117.5 | 40 | 14   | 23.5           | 17             | 82             | 18.2 | 48.3           | M6   | M12       | NA206-18<br>206<br>206-19<br>206-20           | P206M       | 1.24      |
| NAP207-20M<br>207-21M<br>207-22M<br>207M<br>207-23M | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35   | 47.6            | 160 | 126   | 45 | 14   | 21             | 19             | 93             | 18.8 | 51.1           | M6   | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23 | P207M       | 1.68      |
| NAP208-24M<br>208-25M<br>208M                       | 1-1/2<br>1-9/16                    | 40   | 49.2            | 175 | 135.5 | 48 | 14   | 24.5           | 19             | 99             | 21.4 | 56.3           | G1/8 | M12       | NA208-24<br>208-25<br>208                     | P208M       | 2.00      |
| NAP209-26M<br>209-27M<br>209-28M<br>209M            | 1-5/8<br>1-11/16<br>1-3/4          | 45   | 54              | 187 | 143.5 | 48 | 14   | 22.5           | 21             | 107            | 21.4 | 56.3           | G1/8 | M12       | NA209-26<br>209-27<br>209-28<br>209           | P209M       | 2.38      |
| NAP210-30M<br>210-31M<br>210M                       | 1-7/8<br>1-15/16                   | 50   | 57.2            | 203 | 157   | 54 | 18   | 26             | 22             | 114            | 24.6 | 62.7           | G1/8 | M16       | NA210-30<br>210-31<br>210                     | P210M       | 2.86      |
| NAP211-32M<br>211-34M<br>211M<br>211-35M            | 2<br>2-1/8<br>2-3/16               | 55   | 63.5            | 219 | 171.5 | 60 | 18   | 27.5           | 24             | 125            | 27.7 | 71.3           | G1/8 | M16       | NA211-32<br>211-34<br>211<br>211-35           | P211M       | 3.90      |
| NAP212-36M<br>212M<br>212-38M<br>212-39M            | 2-1/4<br>2-3/8<br>2-7/16           | 60   | 69.9            | 240 | 190.5 | 60 | 18   | 29.5           | 26.5           | 137            | 30.9 | 77.7           | G1/8 | M16       | NA212-36<br>212<br>212-38<br>212-39           | P212M       | 5.07      |
| NAP213-40M<br>213M                                  | 2-1/2                              | 65   | 76.2            | 257 | 203   | 65 | 22   | 35             | 29             | 150            | 34.1 | 85.7           | G1/8 | M20       | NA213-40<br>213                               | P213M       | 6.20      |
| NAP214-44M<br>214M                                  | 2-3/4                              | 70   | 79.4            | 260 | 210   | 65 | 22   | 30             | 29             | 155            | 34.1 | 85.7           | G1/8 | M20       | NA214-44<br>214                               | P214M       | 6.38      |

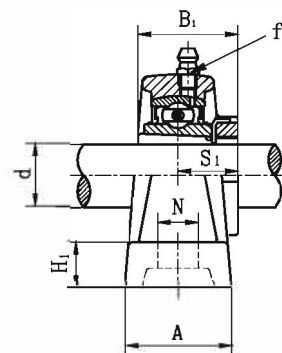
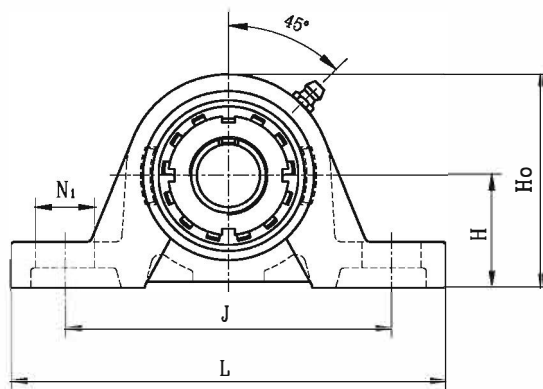


**UKP2+H**  
Tapered bore, adapter type

| Unit No.                                               | Shaft Dia.                |      | Dimensions(mm). |     |     |    |    |                |                |                |                |                | Bolt Size | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) | Available |                |
|--------------------------------------------------------|---------------------------|------|-----------------|-----|-----|----|----|----------------|----------------|----------------|----------------|----------------|-----------|-------------|-------------|-------------------------------------|-----------|-----------|----------------|
|                                                        | d                         |      | H               | L   | J   | A  | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S <sub>1</sub> | B <sub>1</sub> |           |             |             |                                     |           | N         | N <sub>1</sub> |
|                                                        | (in.)                     | (mm) |                 |     |     |    |    |                |                |                |                |                |           |             |             |                                     |           |           |                |
| UKP205+HE2305<br>205+H2305                             | 3/4                       | 20   | 36.5            | 140 | 105 | 38 | 13 | 19             | 15             | 71             | 18.5           | 35             | M10       | UK205       | P205        | HE2305<br>H2305                     | 0.86      | --        | --             |
| UKP206+HS2306<br>206+HA2306<br>206+H2306<br>206+HE2306 | 7/8<br>15/16<br>1         | 25   | 42.9            | 160 | 121 | 44 | 14 | 19             | 16             | 83             | 20.5           | 38             | M12       | UK206       | P206        | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.29      | 17        | 21             |
| UKP207+HS2307<br>207+H2307<br>207+HA2307               | 1-1/8<br>1-3/16           | 30   | 47.6            | 167 | 126 | 48 | 15 | 19             | 17             | 93             | 22.5           | 43             | M12       | UK207       | P207        | HS2307<br>H2307<br>HA2307           | 1.66      | 17        | 21             |
| UKP208+HE2308<br>208+HS2308<br>208+H2308               | 1-1/4<br>1-3/8            | 35   | 49.2            | 180 | 136 | 52 | 15 | 21             | 18             | 100            | 24.5           | 46             | M12       | UK208       | P208        | HE2308<br>HS2308<br>H2308           | 2.05      | 17        | 23             |
| UKP209+HA2309<br>209+HE2309<br>209+H2309               | 1-7/16<br>1-1/2           | 40   | 54              | 190 | 146 | 54 | 15 | 21             | 20             | 108            | 26             | 50             | M12       | UK209       | P209        | HA2309<br>HE2309<br>H2309           | 2.47      | 17        | 23             |
| UKP210+HS2310<br>210+HA2310<br>210+HE2310<br>210+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 57.2            | 204 | 159 | 57 | 19 | 22             | 21             | 114            | 27.5           | 55             | M16       | UK210       | P210        | HS2310<br>HA2310<br>HE2310<br>H2310 | 2.91      | --        | --             |
| UKP211+HS2311<br>211+HA2311<br>211+H2311<br>211+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 63.5            | 217 | 172 | 60 | 19 | 22             | 22             | 126            | 28.5           | 59             | M16       | UK211       | P211        | HS2311<br>HA2311<br>H2311<br>HE2311 | 3.58      | --        | --             |
| UKP212+HS2312<br>212+H2312                             | 2-1/8                     | 55   | 69.9            | 238 | 186 | 66 | 19 | 25             | 24             | 138            | 31             | 62             | M16       | UK212       | P212        | HS2312<br>H2312                     | 4.76      | --        | --             |
| UKP213+HA2313<br>213+HE2313<br>213+H2313<br>213+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 76.2            | 262 | 203 | 70 | 23 | 29             | 26             | 151            | 32             | 65             | M20       | UK213       | P213        | HA2313<br>HE2313<br>H2313<br>HS2313 | 6.03      | 25        | 29             |
| UKP215+HA2315<br>215+HE2315<br>215+H2315               | 2-7/16<br>2-1/2           | 65   | 82.6            | 274 | 217 | 74 | 25 | 29             | 28             | 164            | 35.5           | 73             | M20       | UK215       | P215        | HA2315<br>HE2315<br>H2315           | 7.8       | --        | --             |
| UKP216+HA2316<br>216+HE2316<br>216+H2316               | 2-11/16<br>2-3/4          | 70   | 88.9            | 292 | 232 | 78 | 25 | 30             | 30             | 175            | 39             | 78             | M20       | UK216       | P216        | HA2316<br>HE2316<br>H2316           | 9.30      | --        | --             |
| UKP217+H2317                                           |                           | 75   | 95.2            | 310 | 247 | 83 | 25 | 30             | 32             | 187            | 40             | 82             | M20       | UK217       | P217        | H2317                               | 11.2      | --        | --             |
| UKP218+H2318                                           |                           | 80   | 101.6           | 326 | 262 | 88 | 27 | 30             | 33             | 200            | 42             | 86             | M22       | UK218       | P218        | H2318                               | 13.1      | 27        | 33             |

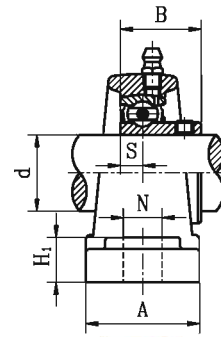
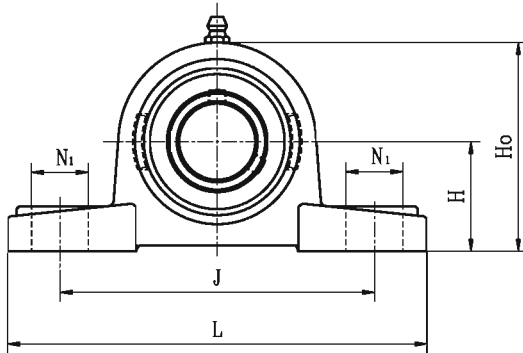
Note: Grease fittings can locate at 45° position of housings front right side.

# PILLOW BLOCKS WITH WEBBED HOUSINGS



UKP200M+H  
Tapered bore, adapter type

| Unit No.                                                   | Shaft Dia.                |      | Dimensions(mm). |     |       |    |      |                |                |                |                |                |      |     | Bolt Size | Bearing No. | Housing No.                         | Adapter No. | Mass (kg) |
|------------------------------------------------------------|---------------------------|------|-----------------|-----|-------|----|------|----------------|----------------|----------------|----------------|----------------|------|-----|-----------|-------------|-------------------------------------|-------------|-----------|
|                                                            | d                         |      | H               | L   | J     | A  | N    | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S <sub>1</sub> | B <sub>1</sub> | f    |     |           |             |                                     |             |           |
|                                                            | (in.)                     | (mm) |                 |     |       |    |      |                |                |                |                |                |      |     |           |             |                                     |             |           |
| UKP205M+HE2305<br>205M+H2305                               | 3/4                       | 20   | 36.5            | 130 | 102   | 36 | 11.5 | 19.5           | 16             | 70             | 18.5           | 35             | M6   | M10 | UK205     | P205M       | HE2305<br>H2305                     | 0.84        |           |
| UKP206M+HS2306<br>206M+HA2306<br>206M+H2306<br>206M+HE2306 | 7/8<br>15/16<br>1         | 25   | 42.9            | 152 | 117.5 | 40 | 14   | 23.5           | 17             | 82             | 20.5           | 38             | M6   | M12 | UK206     | P206M       | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.24        |           |
| UKP207M+HS2307<br>207M+H2307<br>207M+HA2307                | 1-1/8<br>1-3/16           | 30   | 47.6            | 160 | 126   | 45 | 14   | 21             | 19             | 93             | 22.5           | 43             | M6   | M12 | UK207     | P207M       | HS2307<br>H2307<br>HA2307           | 1.66        |           |
| UKP208M+HE2308<br>208M+HS2308<br>208M+H2308                | 1-1/4<br>1-3/8            | 35   | 49.2            | 175 | 135.5 | 48 | 14   | 24.5           | 19             | 99             | 24.5           | 46             | G1/8 | M12 | UK208     | P208M       | HE2308<br>HS2308<br>H2308           | 1.95        |           |
| UKP209M+HA2309<br>209M+HE2309<br>209M+H2309                | 1-7/16<br>1-1/2           | 40   | 54              | 187 | 143.5 | 48 | 14   | 22.5           | 21             | 107            | 26             | 50             | G1/8 | M12 | UK209     | P209M       | HA2309<br>HE2309<br>H2309           | 2.37        |           |
| UKP210M+HS2310<br>210M+HA2310<br>210M+HE2310<br>210M+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 57.2            | 203 | 157   | 54 | 18   | 26             | 22             | 114            | 27.5           | 55             | G1/8 | M16 | UK210     | P210M       | HS2310<br>HA2310<br>HE2310<br>H2310 | 2.87        |           |
| UKP211M+HS2311<br>211M+HA2311<br>211M+H2311<br>211M+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 63.5            | 219 | 171.5 | 60 | 18   | 27.5           | 24             | 125            | 28.5           | 59             | G1/8 | M16 | UK211     | P211M       | HS2311<br>HA2311<br>H2311<br>HE2311 | 3.81        |           |
| UKP212M+HS2312<br>212M+H2312                               | 2-1/8                     | 55   | 69.9            | 240 | 190.5 | 60 | 18   | 29.5           | 26.5           | 137            | 31             | 62             | G1/8 | M16 | UK212     | P212M       | HS2312<br>H2312                     | 4.89        |           |
| UKP213M+HA2313<br>213M+HE2313<br>213M+H2313<br>213M+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 76.2            | 257 | 203   | 65 | 22   | 35             | 29             | 150            | 32             | 65             | G1/8 | M20 | UK213     | P213M       | HA2313<br>HE2313<br>H2313<br>HS2313 | 5.89        |           |

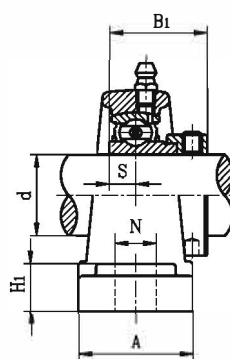
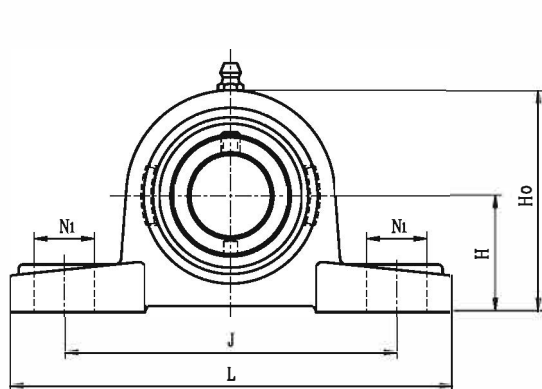


**SBP2G**  
Setscrew type

| Unit No.                                                | Shaft Dia.                                 |                | Dimensions(mm). |     |     |    |    |                |                |                |      |      | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            | Available |                |
|---------------------------------------------------------|--------------------------------------------|----------------|-----------------|-----|-----|----|----|----------------|----------------|----------------|------|------|-----------|--------------------------------------------------------|-------------|----------------------|-----------|----------------|
|                                                         | d                                          |                | H               | L   | J   | A  | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B    |           |                                                        |             |                      | N         | N <sub>1</sub> |
|                                                         | (in.)                                      | (mm)           |                 |     |     |    |    |                |                |                |      |      |           |                                                        |             |                      |           |                |
| SBP201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br><br>5/8<br><br>11/16                | 12<br>15<br>17 | 30.2            | 125 | 96  | 32 | 12 | 16             | 13             | 57             | 6    | 22   | M10       | SB201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | P203S       | 0.52<br>0.51<br>0.50 | --        | --             |
|                                                         |                                            |                |                 |     |     |    |    |                |                |                |      |      |           |                                                        |             |                      |           |                |
|                                                         |                                            |                |                 |     |     |    |    |                |                |                |      |      |           |                                                        |             |                      |           |                |
|                                                         |                                            |                |                 |     |     |    |    |                |                |                |      |      |           |                                                        |             |                      |           |                |
| SBP204-12G<br>204                                       | 3/4                                        | 20             | 33.3            | 127 | 96  | 37 | 13 | 16             | 14             | 65             | 7    | 25   | M10       | SB204-12G<br>204G                                      | P204        | 0.66                 | 13        | 19             |
| SBP205-14G<br>208-15G<br>205G<br>205-16G                | 7/8<br>15/16<br><br>1                      | 25             | 36.5            | 140 | 105 | 38 | 13 | 19             | 15             | 71             | 7.5  | 27   | M10       | SB205-14G<br>205-15G<br>205G<br>205-16G                | P205        | 0.79                 | --        | --             |
| SBP206-18G<br>206G<br>206-19G<br>206-20G                | 1- 1/8<br><br>1- 3/16<br>1- 1/4            | 30             | 42.9            | 160 | 121 | 44 | 14 | 19             | 16             | 83             | 8    | 30   | M12       | SB206-18G<br>206G<br>206-19G<br>206-20G                | P206        | 1.16                 | 17        | 21             |
| SBP207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1- 1/4<br>1- 5/16<br>1- 3/8<br><br>1- 7/16 | 35             | 47.6            | 167 | 126 | 48 | 15 | 19             | 17             | 93             | 8.5  | 32   | M12       | SB207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | P207        | 1.52                 | 17        | 21             |
| SBP208-24G<br>208-25G<br>208G                           | 1- 1/2<br>1- 9/16                          | 40             | 49.2            | 180 | 136 | 52 | 15 | 21             | 18             | 100            | 9    | 34   | M12       | SB208-24G<br>208-25G<br>208G                           | P208        | 1.84                 | 17        | 23             |
| SBP209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4                  | 45             | 54              | 190 | 146 | 54 | 15 | 21             | 20             | 108            | 10.2 | 41.2 | M12       | SB209-26G<br>209-27G<br>209-28G<br>209G                | P209        | 2.24                 | 17        | 23             |
| SBP210-30G<br>210-31G<br>210                            | 1-7/8<br>1-15/16                           | 50             | 57.2            | 204 | 159 | 57 | 19 | 22             | 21             | 114            | 10.9 | 43.5 | M16       | SB210-30G<br>210-31G<br>210                            | P210        | 2.61                 | --        | --             |
| SBP211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br><br>2-3/16                   | 55             | 63.5            | 217 | 172 | 60 | 19 | 22             | 22             | 126            | 11.8 | 45.3 | M16       | SB211-32G<br>211-34G<br>211G<br>211-35G                | P211        | 3.30                 | --        | --             |
| SBP212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br><br>2-3/8<br>2-7/16               | 60             | 69.9            | 238 | 186 | 66 | 19 | 25             | 24             | 138            | 14.9 | 53.7 | M16       | SB212-36G<br>212G<br>212-38G<br>212-39G                | P212        | 4.42                 | --        | --             |

Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

Note: Grease fittings can locate at 45° position of housings front right side.

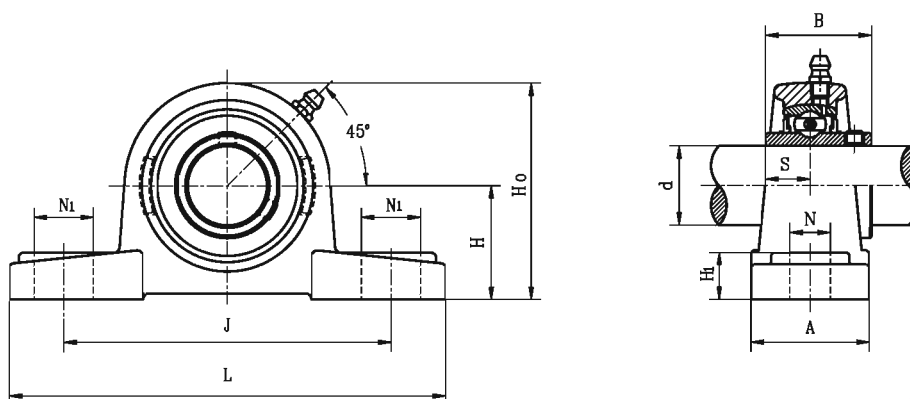


**SAP2G**  
Eccentric locking collar type

| Unit No.   | Shaft Dia.          |      | Dimensions(mm). |     |     |    |    |                |                |                |     |                | Bolt Size | Bearing No. | Housing No. | Mass (kg) | Available |                |
|------------|---------------------|------|-----------------|-----|-----|----|----|----------------|----------------|----------------|-----|----------------|-----------|-------------|-------------|-----------|-----------|----------------|
|            | d                   |      | H               | L   | J   | A  | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S   | B <sub>1</sub> |           |             |             |           | N         | N <sub>1</sub> |
|            | (in.)               | (mm) |                 |     |     |    |    |                |                |                |     |                |           |             |             |           |           |                |
| SAP201G    | 1/2<br>5/8<br>11/16 | 12   | 30.2            | 125 | 96  | 32 | 12 | 16             | 13             | 57             | 6.5 | 28.6           | M10       | SA201G      | P203S       | 0.54      | --        | --             |
| 201-8G     |                     | 15   |                 |     |     |    |    |                |                |                |     |                |           | 0.53        |             |           |           |                |
| 202G       |                     | 17   |                 |     |     |    |    |                |                |                |     |                |           | 0.51        |             |           |           |                |
| 202-10G    |                     |      |                 |     |     |    |    |                |                |                |     |                |           |             |             |           |           |                |
| 203G       |                     |      |                 |     |     |    |    |                |                |                |     |                |           |             |             |           |           |                |
| 203-11G    |                     |      |                 |     |     |    |    |                |                |                |     |                |           |             |             |           |           |                |
| SAP204-12G | 3/4                 |      | 33.3            | 127 | 96  | 37 | 13 | 16             | 14             | 65             | 7.5 | 30.9           | M10       | SA204-12G   | P204        | 0.69      | 13        | 19             |
| 204G       | 20                  |      |                 |     |     |    |    |                |                |                |     |                |           | 204G        |             |           |           |                |
| SAP205-14G | 7/8                 | 25   | 36.5            | 140 | 105 | 38 | 13 | 19             | 15             | 71             | 7.5 | 30.9           | M10       | SA205-14G   | P205        | 0.81      | --        | --             |
| 205-15G    | 15/16               |      |                 |     |     |    |    |                |                |                |     |                |           | 205-15G     |             |           |           |                |
| 205G       | 1                   |      |                 |     |     |    |    |                |                |                |     |                |           | 205G        |             |           |           |                |
| 205-16G    |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 205-16G     |             |           |           |                |
|            |                     |      |                 |     |     |    |    |                |                |                |     |                |           |             |             |           |           |                |
| SAP206-18G | 1-1/8               | 30   | 42.9            | 160 | 121 | 44 | 14 | 19             | 16             | 83             | 9   | 35.7           | M12       | SA206-18G   | P206        | 1.21      | 17        | 21             |
| 206G       | 1-3/16              |      |                 |     |     |    |    |                |                |                |     |                |           | 206G        |             |           |           |                |
| 206-19G    | 1-1/4               |      |                 |     |     |    |    |                |                |                |     |                |           | 206-19G     |             |           |           |                |
| 206-20G    |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 206-20G     |             |           |           |                |
| SAP207-20G | 1-1/4               | 35   | 47.6            | 167 | 126 | 48 | 15 | 19             | 17             | 93             | 9.5 | 38.9           | M12       | SA207-20G   | P207        | 1.58      | 17        | 21             |
| 207-21G    | 1-5/16              |      |                 |     |     |    |    |                |                |                |     |                |           | 207-21G     |             |           |           |                |
| 207-22G    | 1-3/8               |      |                 |     |     |    |    |                |                |                |     |                |           | 207-22G     |             |           |           |                |
| 207G       |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 207G        |             |           |           |                |
| 207-23G    | 1-7/16              |      |                 |     |     |    |    |                |                |                |     |                |           | 207-23G     |             |           |           |                |
| SAP208-24G | 1-1/2               | 40   | 49.2            | 180 | 136 | 52 | 15 | 21             | 18             | 100            | 11  | 43.7           | M12       | SA208-24G   | P208        | 1.97      | 17        | 23             |
| 208-25G    | 1-9/16              |      |                 |     |     |    |    |                |                |                |     |                |           | 208-25G     |             |           |           |                |
| 208G       |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 208G        |             |           |           |                |
| SAP209-26G | 1-5/8               | 45   | 54              | 190 | 146 | 54 | 15 | 21             | 20             | 108            | 11  | 43.7           | M12       | SA209-26G   | P209        | 2.34      | 17        | 23             |
| 209-27G    | 1-11/16             |      |                 |     |     |    |    |                |                |                |     |                |           | 209-27G     |             |           |           |                |
| 209-28G    | 1-3/4               |      |                 |     |     |    |    |                |                |                |     |                |           | 209-28G     |             |           |           |                |
| 209G       |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 209G        |             |           |           |                |
| SAP210-30G | 1-7/8               | 50   | 57.2            | 204 | 159 | 57 | 19 | 22             | 21             | 114            | 11  | 43.7           | M16       | SA210-30G   | P210        | 2.68      | --        | --             |
| 210-31G    | 1-15/16             |      |                 |     |     |    |    |                |                |                |     |                |           | 210-31G     |             |           |           |                |
| 210G       |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 210G        |             |           |           |                |
| SAP211-32G | 2                   | 55   | 63.5            | 217 | 172 | 60 | 19 | 22             | 22             | 126            | 12  | 48.4           | M16       | SA211-32G   | P211        | 3.42      | --        | --             |
| 211-34G    | 2-1/8               |      |                 |     |     |    |    |                |                |                |     |                |           | 211-34G     |             |           |           |                |
| 211G       |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 211G        |             |           |           |                |
| 211-35G    | 2-3/16              |      |                 |     |     |    |    |                |                |                |     |                |           | 211-35G     |             |           |           |                |
| SAP212-36G | 2-1/4               | 60   | 69.9            | 238 | 186 | 66 | 19 | 25             | 24             | 138            | 12  | 49.3           | M16       | SA212-36G   | P212        | 4.51      | --        | --             |
| 212G       | 2-3/8               |      |                 |     |     |    |    |                |                |                |     |                |           | 212G        |             |           |           |                |
| 212-38G    |                     |      |                 |     |     |    |    |                |                |                |     |                |           | 212-38G     |             |           |           |                |
| 212-39G    | 2-7/16              |      |                 |     |     |    |    |                |                |                |     |                |           | 212-39G     |             |           |           |                |

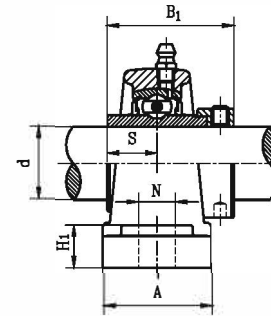
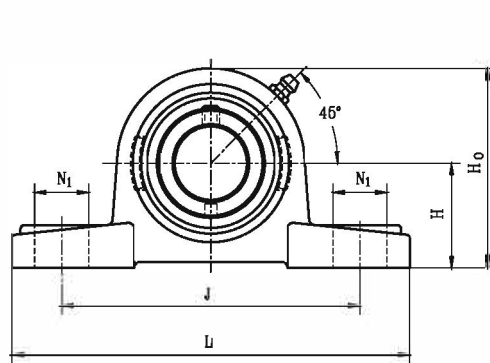
Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

Note: Grease fittings can locate at 45° position of housings front right side.



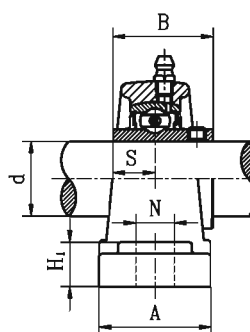
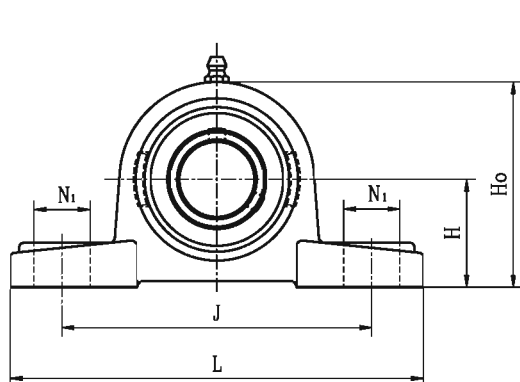
**UCPK2**  
Setscrew type

| Unit No.   | Shaft Dia. |      | Dimensions(mm). |     |     |    |    |                |                |                |      |      | Bolt Size | Bearing No. | Housing No. | Mass (kg) |
|------------|------------|------|-----------------|-----|-----|----|----|----------------|----------------|----------------|------|------|-----------|-------------|-------------|-----------|
|            | d          |      | H               | L   | J   | A  | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B    |           |             |             |           |
|            | (in.)      | (mm) |                 |     |     |    |    |                |                |                |      |      |           |             |             |           |
| UCPK201S   |            | 12   |                 |     |     |    |    |                |                |                |      |      |           | UC201S      |             | 0.56      |
| 201-8S     | 1/2        | 15   |                 |     |     |    |    |                |                |                |      |      |           | 201-8S      |             | 0.55      |
| 202S       | 5/8        | 17   | 27              | 121 | 89  | 35 | 11 | 14             | 13             | 54             | 11.5 | 27.4 | M10       | 202-10S     | PK203       | 0.54      |
| 203S       |            |      |                 |     |     |    |    |                |                |                |      |      |           | 203-S       |             |           |
| 203-11S    | 11/16      |      |                 |     |     |    |    |                |                |                |      |      |           | 203-11S     |             |           |
| UCPK201    |            | 12   |                 |     |     |    |    |                |                |                |      |      |           | UC201       |             | 0.78      |
| 201-8      | 1/2        | 15   |                 |     |     |    |    |                |                |                |      |      |           | 201-8       |             | 0.76      |
| 202        | 5/8        | 17   | 31.8            | 128 | 98  | 38 | 11 | 14             | 14             | 63             | 12.7 | 31   | M10       | 202-10      | PK204       | 0.75      |
| 203        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 203         |             | 0.73      |
| 203-11     | 11/16      |      |                 |     |     |    |    |                |                |                |      |      |           | 203-11      |             |           |
| 204-12     | 3/4        | 20   |                 |     |     |    |    |                |                |                |      |      |           | 204-12      |             |           |
| 204        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 204         |             |           |
| UCPK205-14 | 7/8        |      |                 |     |     |    |    |                |                |                |      |      |           | UC205-14    |             |           |
| 205-15     | 15/16      | 25   | 33.3            | 140 | 105 | 40 | 11 | 14             | 15             | 66.5           | 14.3 | 34   | M10       | 205-15      | PK205       | 0.93      |
| 205        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 205         |             |           |
| 205-16     | 1          |      |                 |     |     |    |    |                |                |                |      |      |           | 205-16      |             |           |
| UCPK206-18 | 1- 1/8     | 30   |                 |     |     |    |    |                |                |                |      |      |           | UC206-18    |             |           |
| 206        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 206         |             | 1.26      |
| 206-19     | 1- 3/16    |      | 39.7            | 160 | 121 | 44 | 14 | 19             | 17             | 79             | 15.9 | 38.1 | M12       | 206-19      | PK206       |           |
| 206-20     | 1- 1/4     |      |                 |     |     |    |    |                |                |                |      |      |           | 206-20      |             |           |
| UCPK207-20 | 1- 1/4     |      |                 |     |     |    |    |                |                |                |      |      |           | UC207-20    |             |           |
| 207-21     | 1- 5/16    |      |                 |     |     |    |    |                |                |                |      |      |           | 207-21      |             |           |
| 207-22     | 1- 3/8     | 35   | 46              | 167 | 127 | 48 | 14 | 19             | 18             | 91             | 17.5 | 42.9 | M12       | 207-22      | PK207       | 1.74      |
| 207        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 207         |             |           |
| 207-23     | 1-7/16     |      |                 |     |     |    |    |                |                |                |      |      |           | 207-23      |             |           |
| UCPK208-24 | 1- 1/2     |      |                 |     |     |    |    |                |                |                |      |      |           | UC208-24    |             |           |
| 208-25     | 1- 9/16    | 40   | 49.2            | 181 | 140 | 52 | 14 | 19             | 19             | 98             | 19   | 49.2 | M12       | 208-25      | PK208       | 2.21      |
| 208        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 208         |             |           |
| UCPK209-26 | 1- 5/8     |      |                 |     |     |    |    |                |                |                |      |      |           | UC209-26    |             |           |
| 209-27     | 1- 11/16   |      |                 |     |     |    |    |                |                |                |      |      |           | 209-27      |             |           |
| 209-28     | 1- 3/4     | 45   | 52.4            | 189 | 146 | 54 | 14 | 19             | 20             | 105            | 19   | 49.2 | M12       | 209-28      | PK209       | 2.54      |
| 209        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 209         |             |           |
| UCPK210-30 | 1- 7/8     |      |                 |     |     |    |    |                |                |                |      |      |           | UC210-30    |             |           |
| 210-31     | 1-15/16    | 50   | 55.6            | 203 | 159 | 57 | 14 | 19             | 21             | 111.5          | 19   | 51.6 | M12       | 210-31      | PK210       | 2.93      |
| 210        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 210         |             |           |
| UCPK211-32 | 2          |      |                 |     |     |    |    |                |                |                |      |      |           | UC211-32    |             |           |
| 211-34     | 2- 1/8     | 55   | 61.9            | 232 | 181 | 60 | 18 | 24             | 23             | 123            | 22.2 | 55.6 | M16       | 211-34      | PK211       | 3.92      |
| 211        |            |      |                 |     |     |    |    |                |                |                |      |      |           | 211         |             |           |
| 211-35     | 2- 3/16    |      |                 |     |     |    |    |                |                |                |      |      |           | 211-35      |             |           |
| UCPK212-36 | 2- 1/4     |      |                 |     |     |    |    |                |                |                |      |      |           | UC212-36    |             |           |
| 212        |            | 60   | 68.3            | 241 | 191 | 64 | 18 | 24             | 25             | 136            | 25.4 | 65.1 | M16       | 212         | PK212       | 4.88      |
| 212-38     | 2- 3/8     |      |                 |     |     |    |    |                |                |                |      |      |           | 212-38      |             |           |
| 212-39     | 2- 7/16    |      |                 |     |     |    |    |                |                |                |      |      |           | 212-39      |             |           |
| UCPK213-40 | 2- 1/2     |      |                 |     |     |    |    |                |                |                |      |      |           | UC213-40    |             |           |
| 213        |            | 65   | 68.3            | 248 | 194 | 70 | 18 | 29             | 27             | 141            | 25.4 | 65.1 | M16       | 213         | PK213       | 5.59      |



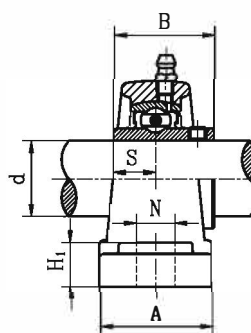
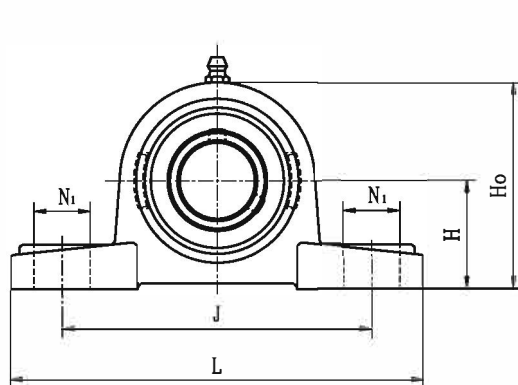
**NAPK2**  
Eccentric locking collar type

| Unit No.                                                            | Shaft Dia.                            |                      | Dimensions(mm). |     |     |    |    |                |                |                |      |                | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|---------------------------------------|----------------------|-----------------|-----|-----|----|----|----------------|----------------|----------------|------|----------------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                     |                      | H               | L   | J   | A  | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B <sub>1</sub> |           |                                                                   |             |                              |
|                                                                     | (in.)                                 | (mm)                 |                 |     |     |    |    |                |                |                |      |                |           |                                                                   |             |                              |
| NAPK201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                   | 12<br>15<br>17       | 27              | 121 | 89  | 35 | 11 | 14             | 13             | 54             | 13.9 | 37.3           | M10       | NA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | PK203       | 0.67<br>0.66<br>0.64         |
| NAPK201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4            | 12<br>15<br>17<br>20 | 31.8            | 128 | 98  | 38 | 11 | 14             | 14             | 63             | 17   | 43.5           | M10       | NA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | PK204       | 0.85<br>0.82<br>0.81<br>0.78 |
| NAPK 205-14<br>205-15<br>205<br>205-16                              | 7/8<br>15/16<br>1                     | 25                   | 33.3            | 140 | 105 | 40 | 11 | 14             | 15             | 66.5           | 17.4 | 44.3           | M10       | NA205-14<br>205-15<br>205<br>205-16                               | PK205       | 0.98                         |
| NAPK 206-18<br>206<br>206-19<br>206-20                              | 1- 1/8<br>1- 3/16<br>1- 1/4           | 30                   | 39.7            | 160 | 121 | 44 | 14 | 19             | 17             | 79             | 18.2 | 48.3           | M12       | NA206-18<br>206<br>206-19<br>206-20                               | PK206       | 1.33                         |
| NAPK 207-20<br>207-21<br>207-22<br>207<br>207-23                    | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1-7/16 | 35                   | 46              | 167 | 127 | 48 | 14 | 19             | 18             | 91             | 18.8 | 51.1           | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23                     | PK207       | 1.81                         |
| NAPK 208-24<br>208-25<br>208                                        | 1- 1/2<br>1- 9/16                     | 40                   | 49.2            | 181 | 140 | 52 | 14 | 19             | 19             | 98             | 21.4 | 56.3           | M12       | NA208-24<br>208-25<br>208                                         | PK208       | 2.32                         |
| NAPK 209-26<br>209-27<br>209-28<br>209                              | 1- 5/8<br>1- 11/16<br>1- 3/4          | 45                   | 52.4            | 189 | 146 | 54 | 14 | 19             | 20             | 105            | 21.4 | 56.3           | M12       | NA209-26<br>209-27<br>209-28<br>209                               | PK209       | 2.66                         |
| NAPK 210-30<br>210-31<br>210                                        | 1- 7/8<br>1-15/16                     | 50                   | 55.6            | 203 | 159 | 57 | 14 | 19             | 21             | 111.5          | 24.6 | 62.7           | M12       | NA210-30<br>210-31<br>210                                         | PK210       | 3.10                         |
| NAPK 211-32<br>211-34<br>211<br>211-35                              | 2<br>2- 1/8<br>2- 3/16                | 55                   | 61.9            | 232 | 181 | 60 | 18 | 24             | 23             | 123            | 27.7 | 71.3           | M16       | NA211-32<br>211-34<br>211<br>211-35                               | PK211       | 4.17                         |
| NAPK 212-36<br>212<br>212-38<br>212-39                              | 2- 1/4<br>2- 3/8<br>2- 7/16           | 60                   | 68.3            | 241 | 191 | 64 | 18 | 24             | 25             | 136            | 30.9 | 77.7           | M16       | NA212-36<br>212<br>212-38<br>212-39                               | PK212       | 5.16                         |
| NAPK 213-40<br>213                                                  | 2- 1/2                                | 65                   | 68.3            | 248 | 194 | 70 | 18 | 29             | 27             | 141            | 34.1 | 85.7           | M16       | NA213-40<br>213                                                   | PK213       | 5.98                         |



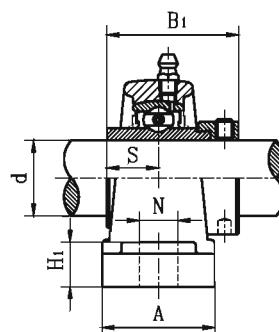
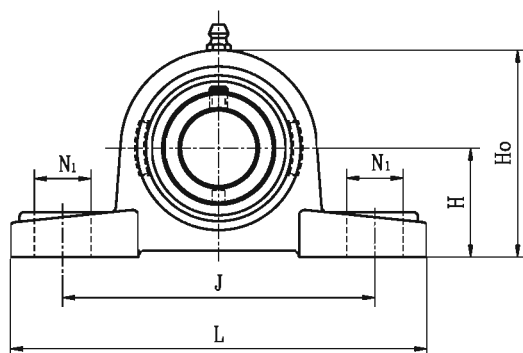
UCPX  
Setscrew type

| Unit No.                             | Shaft Dia.                |      | Dimensions(mm). |     |     |     |    |                |                |                |      |       | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|-----------------|-----|-----|-----|----|----------------|----------------|----------------|------|-------|-----------|-------------------------------------|-------------|-----------|
|                                      | d                         |      | H               | L   | J   | A   | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>o</sub> | S    | B     |           |                                     |             |           |
|                                      | (in.)                     | (mm) |                 |     |     |     |    |                |                |                |      |       |           |                                     |             |           |
| UCPX05-14<br>X05-15<br>X05<br>X05-16 | 7/8<br>15/16<br>1         | 25   | 44.4            | 159 | 119 | 51  | 17 | 20             | 17             | 85             | 15.9 | 38.1  | M14       | UCX05-14<br>X05-15<br>X05<br>X05-16 | PX05        | 1.48      |
| UCPX06-18<br>X06<br>X06-19<br>X06-20 | 1-1/8<br>1-3/16<br>1-1/4  | 30   | 47.6            | 175 | 127 | 54  | 17 | 20             | 20             | 93             | 17.5 | 42.9  | M14       | UCX06-18<br>X06<br>X06-19<br>X06-20 | PX06        | 1.86      |
| UCPX07-22<br>X07<br>X07-23           | 1-3/8<br>1-7/16           | 35   | 54              | 203 | 144 | 57  | 17 | 20             | 21             | 105            | 19   | 49.2  | M14       | UCX07-22<br>X07<br>X07-23           | PX07        | 2.63      |
| UCPX08-24<br>X08                     | 1-1/2                     | 40   | 58.7            | 222 | 156 | 65  | 20 | 23             | 23             | 112            | 19   | 49.2  | M16       | UCX08-24<br>X08                     | PX08        | 3.19      |
| UCPX09-26<br>X09-27<br>X09-28<br>X09 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 58.7            | 222 | 156 | 67  | 20 | 23             | 25             | 116            | 19   | 51.6  | M16       | UCX09-26<br>X09-27<br>X09-28<br>X09 | PX09        | 3.36      |
| UCPX10-30<br>X10-31<br>X10<br>X10-32 | 1-7/8<br>1-15/16<br>2     | 50   | 63.5            | 240 | 171 | 71  | 20 | 23             | 24             | 126            | 22.2 | 55.6  | M16       | UCX10-30<br>X10-31<br>X10<br>X10-32 | PX10        | 4.12      |
| UCPX11-34<br>X11<br>X11-35<br>X11-36 | 2-1/8<br>2-3/16<br>2-1/4  | 55   | 69.8            | 260 | 184 | 79  | 25 | 28             | 29             | 137            | 25.4 | 65.1  | M20       | UCX11-34<br>X11<br>X11-35<br>X11-36 | PX11        | 5.55      |
| UCPX12<br>X12-38<br>X12-39           | 2-3/8<br>2-7/16           | 60   | 76.2            | 280 | 203 | 81  | 25 | 28             | 31             | 149            | 25.4 | 65.1  | M20       | UCX12<br>X12-38<br>X12-39           | PX12        | 6.79      |
| UCPX13-40<br>X13                     | 2-1/2                     | 65   | 76.2            | 286 | 203 | 83  | 25 | 28             | 33             | 152            | 30.2 | 74.6  | M20       | UCX13-40<br>X13                     | PX13        | 7.38      |
| UCPX14-44<br>X14                     | 2-3/4                     | 70   | 88.9            | 320 | 229 | 85  | 27 | 30             | 34             | 170            | 33.3 | 77.8  | M22       | UCX14-44<br>X14                     | PX14        | 9.63      |
| UCPX15<br>X15-48                     | 3                         | 75   | 88.9            | 330 | 229 | 92  | 27 | 30             | 35             | 175            | 33.3 | 82.6  | M22       | UCX15<br>X15-48                     | PX15        | 10.7      |
| UCPX16                               |                           | 80   | 101.6           | 378 | 283 | 99  | 27 | 30             | 37             | 194            | 34.1 | 85.7  | M22       | UCX16                               | PX16        | 15.0      |
| UCPX17-52<br>X17                     | 3-1/4                     | 85   | 101.6           | 380 | 283 | 102 | 27 | 30             | 40             | 200            | 39.7 | 96    | M22       | UCX17-52<br>X17                     | PX17        | 16.5      |
| UCPX18-56<br>X18                     | 3-1/2                     | 90   | 101.6           | 381 | 283 | 106 | 27 | 30             | 40             | 206            | 42.9 | 104   | M22       | UCX18-56<br>X18                     | PX18        | 18.2      |
| UCPX20<br>X20-64                     | 4                         | 100  | 127             | 432 | 337 | 120 | 33 | 36             | 45             | 244            | 49.2 | 117.5 | M27       | UCX20<br>X20-64                     | PX20        | 28.2      |



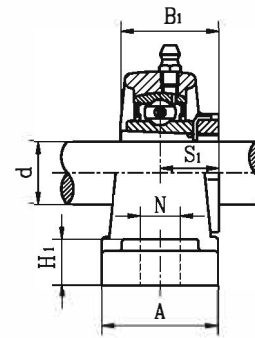
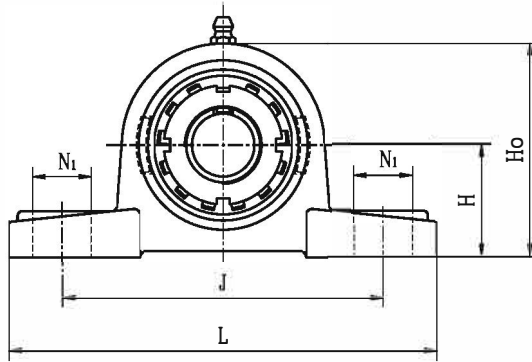
UCP3  
Setscrew type

| Unit No.                             | Shaft Dia.                  |      | Dimensions(mm). |     |     |     |    |                |                |                |    |     | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|-----------------------------|------|-----------------|-----|-----|-----|----|----------------|----------------|----------------|----|-----|-----------|-------------------------------------|-------------|-----------|
|                                      | d                           |      | H               | L   | J   | A   | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>o</sub> | S  | B   |           |                                     |             |           |
|                                      | (in.)                       | (mm) |                 |     |     |     |    |                |                |                |    |     |           |                                     |             |           |
| UCP305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1           | 25   | 45              | 173 | 132 | 45  | 17 | 20             | 15             | 85             | 15 | 38  | M14       | UC305-14<br>305-15<br>305<br>305-16 | P305        | 1.46      |
| UCP306-18<br>306<br>306-19           | 1- 1/8<br>1- 3/16           | 30   | 50              | 180 | 140 | 49  | 17 | 20             | 16             | 95             | 17 | 43  | M14       | UC306-18<br>306<br>306-19           | P306        | 1.80      |
| UCP307-20<br>307-21<br>307-22<br>307 | 1- 1/4<br>1- 5/16<br>1- 3/8 | 35   | 56              | 210 | 160 | 56  | 17 | 25             | 19             | 106            | 19 | 48  | M14       | UC307-20<br>307-21<br>307-22<br>307 | P307        | 2.98      |
| UCP308-24<br>308-25<br>308           | 1- 1/2<br>1- 9/16           | 40   | 60              | 218 | 170 | 62  | 18 | 25             | 19             | 116            | 19 | 52  | M14       | UC308-24<br>308-25<br>308           | P308        | 3.33      |
| UCP309-26<br>309-27<br>309-28<br>309 | 1- 5/8<br>1-11/16<br>1- 3/4 | 45   | 67              | 244 | 190 | 66  | 20 | 26             | 23             | 129            | 22 | 57  | M16       | UC309-26<br>309-27<br>309-28<br>309 | P309        | 4.41      |
| UCP310-30<br>310-31<br>310           | 1- 7/8<br>1-15/16           | 50   | 75              | 271 | 212 | 74  | 20 | 30             | 26             | 143            | 22 | 61  | M16       | UC310-30<br>310-31<br>310           | P310        | 6.10      |
| UCP311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16        | 55   | 80              | 300 | 236 | 80  | 20 | 32             | 29             | 154            | 25 | 66  | M16       | UC311-32<br>311-34<br>311<br>311-35 | P311        | 7.65      |
| UCP312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16    | 60   | 85              | 325 | 250 | 85  | 23 | 35             | 31             | 164            | 26 | 71  | M20       | UC312-36<br>312<br>312-38<br>312-39 | P312        | 9.20      |
| UCP313-40<br>313                     | 2- 1/2                      | 65   | 90              | 335 | 260 | 90  | 25 | 38             | 33             | 176            | 30 | 75  | M20       | UC313-40<br>313                     | P313        | 11.3      |
| UCP314-44<br>314                     | 2-3/4                       | 70   | 95              | 360 | 280 | 93  | 27 | 40             | 34             | 187            | 31 | 78  | M22       | UC314-44<br>314                     | P314        | 13.0      |
| UCP315<br>315-48                     | 3                           | 75   | 100             | 380 | 290 | 100 | 27 | 40             | 35             | 198            | 32 | 82  | M22       | UC315<br>315-48                     | P315        | 15.9      |
| UCP316                               |                             | 80   | 106             | 400 | 300 | 105 | 27 | 40             | 37             | 210            | 34 | 86  | M22       | UC316                               | P316        | 17.7      |
| UCP317-52<br>317                     | 3- 1/4                      | 85   | 112             | 420 | 320 | 110 | 33 | 45             | 40             | 220            | 40 | 96  | M27       | UC317-52<br>317                     | P317        | 20.5      |
| UCP318-56<br>318                     | 3-1/2                       | 90   | 118             | 430 | 330 | 110 | 33 | 45             | 45             | 235            | 40 | 96  | M27       | UC318-56<br>318                     | P318        | 25.1      |
| UCP319<br>319-60                     | 3-3/4                       | 95   | 125             | 470 | 360 | 120 | 36 | 50             | 45             | 250            | 41 | 103 | M30       | UC319<br>319-60                     | P319        | 31.8      |
| UCP320<br>320-64                     | 4                           | 100  | 140             | 490 | 380 | 120 | 36 | 50             | 50             | 275            | 42 | 108 | M30       | UC320<br>320-64                     | P320        | 37.2      |
| UCP322                               |                             | 110  | 150             | 520 | 400 | 140 | 40 | 55             | 55             | 300            | 46 | 117 | M33       | UC322                               | P322        | 50.6      |
| UCP324                               |                             | 120  | 160             | 570 | 450 | 140 | 40 | 55             | 65             | 320            | 51 | 126 | M33       | UC324                               | P324        | 54.5      |
| UCP326                               |                             | 130  | 180             | 600 | 480 | 140 | 40 | 55             | 75             | 355            | 54 | 135 | M33       | UC326                               | P326        | 68.4      |
| UCP328                               |                             | 140  | 200             | 620 | 500 | 140 | 40 | 55             | 75             | 390            | 59 | 145 | M33       | UC328                               | P328        | 82.1      |



**NAP3**  
Eccentric locking collar type

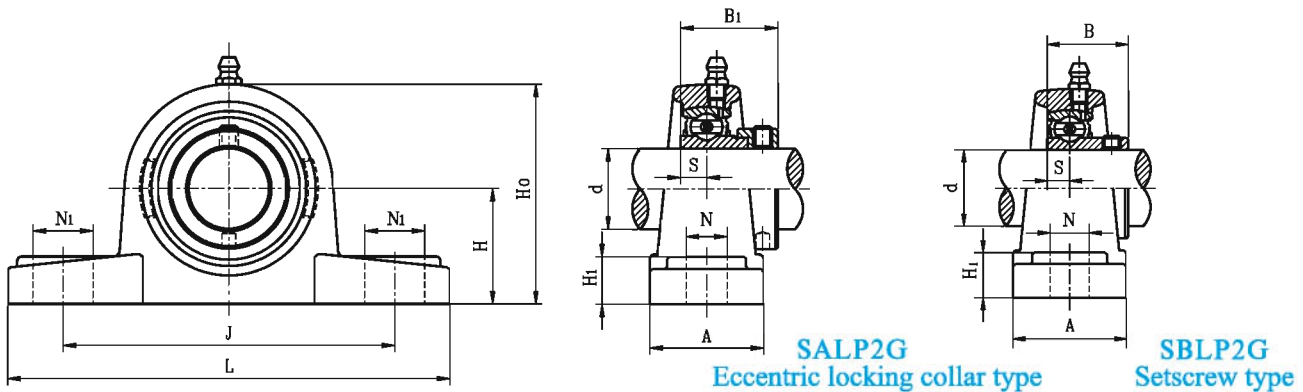
| Unit No.                             | Shaft Dia.                |      | Dimensions(mm). |     |     |     |    |                |                |     |       |                | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|-----------------|-----|-----|-----|----|----------------|----------------|-----|-------|----------------|-----------|-------------------------------------|-------------|-----------|
|                                      | d                         |      | H               | L   | J   | A   | N  | N <sub>1</sub> | H <sub>1</sub> | Ho  | S     | B <sub>1</sub> |           |                                     |             |           |
|                                      | (in.)                     | (mm) |                 |     |     |     |    |                |                |     |       |                |           |                                     |             |           |
| NAP305-14<br>305-15<br>305-16        | 7/8<br>15/16<br>1         | 25   | 45              | 173 | 132 | 45  | 17 | 20             | 15             | 85  | 16.7  | 46.8           | M14       | NA305-14<br>305-15<br>305-16        | P305        | 1.53      |
| NAP306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 50              | 180 | 140 | 49  | 17 | 20             | 16             | 95  | 17.5  | 50             | M14       | NA306-18<br>306<br>306-19           | P306        | 1.94      |
| NAP307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 56              | 210 | 160 | 56  | 17 | 25             | 19             | 106 | 18.3  | 51.6           | M14       | NA307-20<br>307-21<br>307-22<br>307 | P307        | 3.08      |
| NAP308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 60              | 218 | 170 | 62  | 18 | 25             | 19             | 116 | 19.8  | 57.1           | M14       | NA308-24<br>308-25<br>308           | P308        | 3.47      |
| NAP309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 67              | 244 | 190 | 66  | 20 | 26             | 23             | 129 | 19.8  | 58.7           | M16       | NA309-26<br>309-27<br>309-28<br>309 | P309        | 4.54      |
| NAP310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 75              | 271 | 212 | 74  | 20 | 30             | 26             | 143 | 24.6  | 66.6           | M16       | NA310-30<br>310-31<br>310           | P310        | 6.32      |
| NAP311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 80              | 300 | 236 | 80  | 20 | 32             | 29             | 154 | 27.8  | 73             | M16       | NA311-32<br>311-34<br>311<br>311-35 | P311        | 7.90      |
| NAP312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 85              | 325 | 250 | 85  | 23 | 35             | 31             | 164 | 30.95 | 79.4           | M20       | NA312-36<br>312<br>312-38<br>312-39 | P312        | 9.51      |
| NAP313-40<br>313                     | 2-1/2                     | 65   | 90              | 335 | 260 | 90  | 25 | 38             | 33             | 176 | 32.5  | 85.7           | M20       | NA313-40<br>313                     | P313        | 11.8      |
| NAP314-44<br>314                     | 2-3/4                     | 70   | 95              | 360 | 280 | 93  | 27 | 40             | 34             | 187 | 34.15 | 92.1           | M22       | NA314-44<br>314                     | P314        | 13.6      |
| NAP315<br>315-48                     | 3                         | 75   | 100             | 380 | 290 | 100 | 27 | 40             | 35             | 198 | 37.3  | 100            | M22       | NA315<br>315-48                     | P315        | 16.8      |
| NAP316                               |                           | 80   | 106             | 400 | 300 | 105 | 27 | 40             | 37             | 210 | 40.5  | 106.4          | M22       | NA316                               | P316        | 18.9      |
| NAP317-52<br>317                     | 3-1/4                     | 85   | 112             | 420 | 320 | 110 | 33 | 45             | 40             | 220 | 42    | 109.5          | M27       | NA317-52<br>317                     | P317        | 21.5      |
| NAP318-56<br>318                     | 3-1/2                     | 90   | 118             | 430 | 330 | 110 | 33 | 45             | 45             | 235 | 43.6  | 115.9          | M27       | NA318-56<br>318                     | P318        | 26.5      |
| NAP319<br>319-60                     | 3-3/4                     | 95   | 125             | 470 | 360 | 120 | 36 | 50             | 45             | 250 | 46.8  | 122.3          | M30       | NA319<br>319-60                     | P319        | 33.2      |
| NAP320<br>320-64                     | 4                         | 100  | 140             | 490 | 380 | 120 | 36 | 50             | 50             | 275 | 50    | 128.6          | M30       | NA320<br>320-64                     | P320        | 39.6      |



**UKP3+H**  
Tapered bore, adapter type

| Unit No.                                               | Shaft Dia.                |      | Dimensions(mm). |     |     |     |    |                |                |                |                |                | Bolt Size | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|--------------------------------------------------------|---------------------------|------|-----------------|-----|-----|-----|----|----------------|----------------|----------------|----------------|----------------|-----------|-------------|-------------|-------------------------------------|-----------|
|                                                        | d                         |      | H               | L   | J   | A   | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S <sub>1</sub> | B <sub>1</sub> |           |             |             |                                     |           |
|                                                        | (in.)                     | (mm) |                 |     |     |     |    |                |                |                |                |                |           |             |             |                                     |           |
| UKP305+HE2305<br>305+H2305                             | 3/4                       | 20   | 45              | 173 | 132 | 45  | 17 | 20             | 15             | 85             | 21.5           | 35             | M14       | UK305       | P305        | HE2305<br>H2305                     | 1.51      |
| UKP306+HS2306<br>306+HA2306<br>306+H2306<br>306+HE2306 | 7/8<br>15/16<br>1         | 25   | 50              | 180 | 140 | 49  | 17 | 20             | 16             | 95             | 23             | 38             | M14       | UK306       | P306        | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.85      |
| UKP307+HS2307<br>307+H2307<br>307+HA2307               | 1-1/8<br>1-3/16           | 30   | 56              | 210 | 160 | 56  | 17 | 25             | 19             | 106            | 25.5           | 43             | M14       | UK307       | P307        | HS2307<br>H2307<br>HA2307           | 3.02      |
| UKP308+HE2308<br>308+HS2308<br>308+H2308               | 1-1/4<br>1-3/8            | 35   | 60              | 218 | 170 | 62  | 18 | 25             | 19             | 116            | 27.5           | 46             | M14       | UK308       | P308        | HE2308<br>HS2308<br>H2308           | 3.38      |
| UKP309+HA2309<br>309+HE2309<br>309+H2309               | 1-7/16<br>1-1/2           | 40   | 67              | 244 | 190 | 66  | 20 | 26             | 23             | 129            | 30             | 50             | M16       | UK309       | P309        | HA2309<br>HE2309<br>H2309           | 4.55      |
| UKP310+HS2310<br>310+HA2310<br>310+HE2310<br>310+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 75              | 271 | 212 | 74  | 20 | 30             | 26             | 143            | 32             | 55             | M16       | UK310       | P310        | HS2310<br>HA2310<br>HE2310<br>H2310 | 6.14      |
| UKP311+HS2311<br>311+HA2311<br>311+H2311<br>311+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 80              | 300 | 236 | 80  | 20 | 32             | 29             | 154            | 33.5           | 59             | M16       | UK311       | P311        | HS2311<br>HA2311<br>H2311<br>HE2311 | 7.67      |
| UKP312+HS2312<br>312+H2312                             | 2-1/8                     | 55   | 85              | 325 | 250 | 85  | 23 | 35             | 31             | 164            | 36.5           | 62             | M20       | UK312       | P312        | HS2312<br>H2312                     | 9.20      |
| UKP313+HA2313<br>313+HE2313<br>313+H2313<br>313+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 90              | 335 | 260 | 90  | 25 | 38             | 33             | 176            | 38.5           | 65             | M20       | UK313       | P313        | HA2313<br>HE2313<br>H2313<br>HS2313 | 11.2      |
| UKP315+HA2315<br>315+HE2315<br>315+H2315               | 2-7/16<br>2-1/2           | 65   | 100             | 380 | 290 | 100 | 27 | 40             | 35             | 198            | 42.5           | 73             | M22       | UK315       | P315        | HA2315<br>HE2315<br>H2315           | 16.2      |
| UKP316+HA2316<br>316+HE2316<br>316+H2316               | 2-11/16<br>2-3/4          | 70   | 106             | 400 | 300 | 105 | 27 | 40             | 37             | 210            | 44.5           | 78             | M22       | UK316       | P316        | HA2316<br>HE2316<br>H2316           | 18.0      |
| UKP317+HA2317<br>317+H2317<br>317+HE2317               | 2-15/16<br>3              | 75   | 112             | 420 | 320 | 110 | 33 | 45             | 40             | 220            | 48             | 82             | M27       | UK317       | P317        | HA2317<br>H2317<br>HE2317           | 20.5      |
| UKP318+H2318                                           |                           | 80   | 118             | 430 | 330 | 110 | 33 | 45             | 45             | 235            | 48             | 86             | M27       | UK318       | P318        | H2318                               | 25.2      |
| UKP319+HE2319<br>319+H2319                             | 3-1/4                     | 85   | 125             | 470 | 360 | 120 | 36 | 50             | 45             | 250            | 52             | 90             | M30       | UK319       | P319        | HE2319<br>H2319                     | 31.6      |
| UKP320+HE2320<br>320+H2320                             | 3-1/2                     | 90   | 140             | 490 | 380 | 120 | 36 | 50             | 50             | 275            | 54             | 97             | M30       | UK320       | P320        | HE2320<br>H2320                     | 37.2      |
| UKP322+H2322                                           |                           | 100  | 150             | 520 | 400 | 140 | 40 | 55             | 55             | 300            | 61             | 105            | M33       | UK322       | P322        | H2322                               | 50.6      |
| UKP324+H2324                                           |                           | 110  | 160             | 570 | 450 | 140 | 40 | 55             | 65             | 320            | 65.5           | 112            | M33       | UK324       | P324        | H2324                               | 54.1      |
| UKP326+H2326                                           |                           | 115  | 180             | 600 | 480 | 140 | 40 | 55             | 75             | 355            | 68             | 121            | M33       | UK326       | P326        | H2326                               | 68.2      |
| UKP328+H2328                                           |                           | 125  | 200             | 620 | 500 | 140 | 40 | 55             | 75             | 390            | 73             | 131            | M33       | UK328       | P328        | H2328                               | 81.9      |

# LIGHT-DUTY PILLOW BLOCKS (LP2 TYPE)

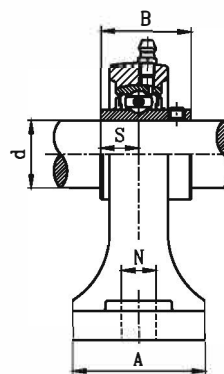
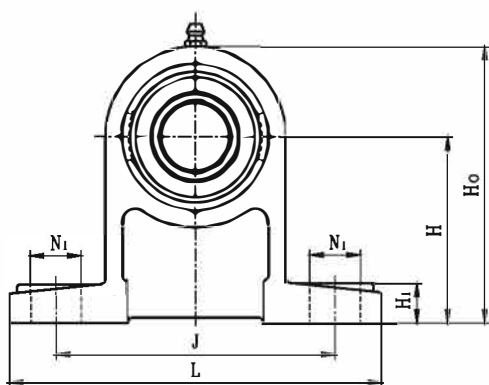


| Unit No.                                                 | Shaft Dia.                             |                | Dimensions(mm). |     |     |    |                |      |                |                |     |                | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            |
|----------------------------------------------------------|----------------------------------------|----------------|-----------------|-----|-----|----|----------------|------|----------------|----------------|-----|----------------|-----------|--------------------------------------------------------|-------------|----------------------|
|                                                          | d                                      |                | H               | L   | J   | A  | H <sub>0</sub> | N    | N <sub>1</sub> | H <sub>1</sub> | S   | B <sub>1</sub> |           |                                                        |             |                      |
|                                                          | (in.)                                  | (mm)           |                 |     |     |    |                |      |                |                |     |                |           |                                                        |             |                      |
| SALP201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                    | 12<br>15<br>17 | 30.2            | 114 | 87  | 25 | 57             | 11   | 16             | 12             | 6.5 | 28.6           | M10       | SA201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | LP203       | 0.46<br>0.45<br>0.43 |
| SALP204-12G<br>204G                                      | 3/4                                    | 20             | 33.3            | 125 | 97  | 27 | 63.8           | 11.5 | 16             | 14             | 7.5 | 30.9           | M10       | SA204-12G<br>204G                                      | LP204       | 0.60                 |
| SALP205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                      | 25             | 36.5            | 130 | 100 | 29 | 69.5           | 11.5 | 16             | 15             | 7.5 | 30.9           | M10       | SA205-14G<br>205-15G<br>205G<br>205-16G                | LP205       | 0.72                 |
| SALP206-18G<br>206G<br>206-19G<br>206-20G                | 1- 1/8<br>1- 3/16<br>1- 1/4            | 30             | 42.9            | 156 | 121 | 33 | 82             | 14   | 21             | 16             | 9   | 35.7           | M12       | SA206-18G<br>206G<br>206-19G<br>206-20G                | LP206       | 1.03                 |
| SALP207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1- 7/16 | 35             | 47.6            | 165 | 127 | 35 | 93             | 14   | 21             | 16             | 9.5 | 38.9           | M12       | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | LP207       | 1.4                  |

| Unit No.                                                 | Shaft Dia.                             |                | Dimensions(mm). |     |     |    |                |      |                |                |     |    | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            |
|----------------------------------------------------------|----------------------------------------|----------------|-----------------|-----|-----|----|----------------|------|----------------|----------------|-----|----|-----------|--------------------------------------------------------|-------------|----------------------|
|                                                          | d                                      |                | H               | L   | J   | A  | H <sub>0</sub> | N    | N <sub>1</sub> | H <sub>1</sub> | S   | B  |           |                                                        |             |                      |
|                                                          | (in.)                                  | (mm)           |                 |     |     |    |                |      |                |                |     |    |           |                                                        |             |                      |
| SBLP201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                    | 12<br>15<br>17 | 30.2            | 114 | 87  | 25 | 57             | 11   | 16             | 12             | 6   | 22 | M10       | SB201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | LP203       | 0.44<br>0.43<br>0.42 |
| SBLP204-12G<br>204G                                      | 3/4                                    | 20             | 33.3            | 125 | 97  | 27 | 63.8           | 11.5 | 16             | 14             | 7   | 25 | M10       | SB204-12G<br>204G                                      | LP204       | 0.57                 |
| SBLP205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                      | 25             | 36.5            | 130 | 100 | 29 | 69.5           | 11.5 | 16             | 15             | 7.5 | 27 | M10       | SB205-14G<br>205-15G<br>205G<br>205-16G                | LP205       | 0.70                 |
| SBLP206-18G<br>206G<br>206-19G<br>206-20G                | 1- 1/8<br>1- 3/16<br>1- 1/4            | 30             | 42.9            | 156 | 121 | 33 | 82             | 14   | 21             | 16             | 8   | 30 | M12       | SB206-18G<br>206G<br>206-19G<br>206-20G                | LP206       | 0.98                 |
| SBLP207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1- 7/16 | 35             | 47.6            | 165 | 127 | 35 | 93             | 14   | 21             | 16             | 8.5 | 32 | M12       | SB207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | LP207       | 1.34                 |

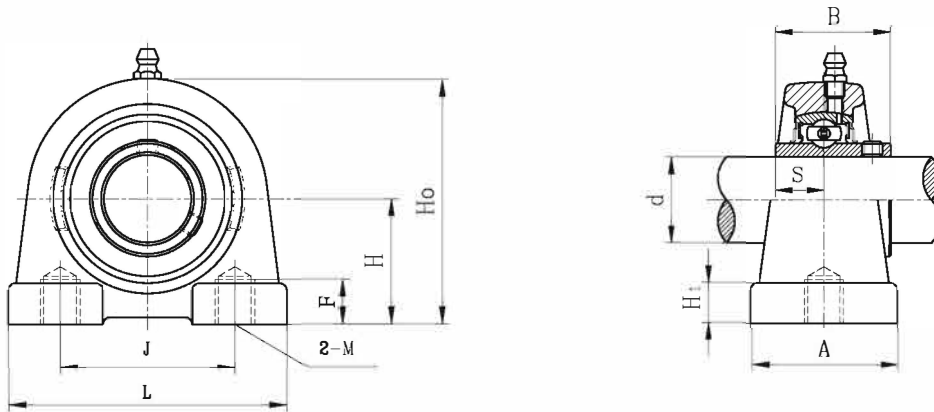
Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

# HIGH CENTER HEIGHT PILLOW BLOCKS



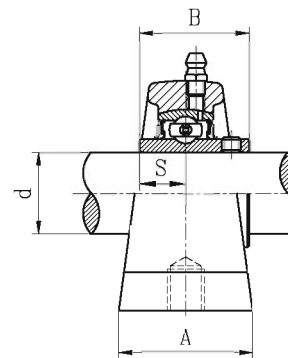
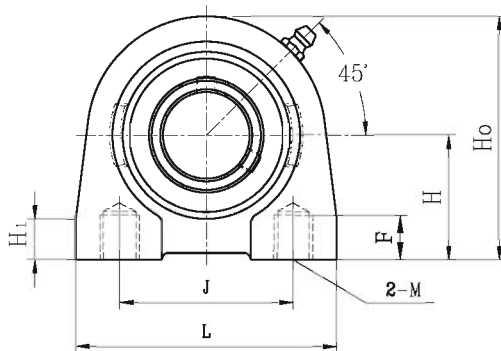
**UCPH2**  
Setscrew type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |     |     |     |    |                |                |                |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|-----|-----|----|----------------|----------------|----------------|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                  |                      | H               | J   | L   | A   | N  | N <sub>1</sub> | H <sub>1</sub> | H <sub>0</sub> | S    | B    |           |                                                                   |             |                              |
|                                                                     | (in.)                              | (mm)                 |                 |     |     |     |    |                |                |                |      |      |           |                                                                   |             |                              |
| UCPH201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 70              | 95  | 127 | 38  | 12 | 16             | 13             | 97             | 11.5 | 27.4 | M10       | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | PH203       | 0.62<br>0.61<br>0.60         |
| UCPH201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 70              | 95  | 127 | 40  | 12 | 16             | 13             | 101            | 12.7 | 31   | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | PH204       | 0.78<br>0.76<br>0.75<br>0.73 |
| UCPH205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 80              | 105 | 140 | 50  | 13 | 19             | 16             | 114            | 14.3 | 34   | M10       | UC205-14<br>205-15<br>205<br>205-16                               | PH205       | 1.06                         |
| UCPH206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 90              | 121 | 165 | 50  | 17 | 21             | 18             | 130            | 15.9 | 38.1 | M14       | UC206-18<br>206<br>206-19<br>206-20                               | PH206       | 1.49                         |
| UCPH207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 95              | 127 | 167 | 60  | 17 | 21             | 19             | 140            | 17.5 | 42.9 | M14       | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | PH207       | 1.91                         |
| UCPH208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 100             | 137 | 184 | 66  | 17 | 21             | 20             | 150            | 19   | 49.2 | M14       | UC208-24<br>208-25<br>208                                         | PH208       | 2.42                         |
| UCPH209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 105             | 146 | 190 | 70  | 17 | 21             | 20             | 158            | 19   | 49.2 | M14       | UC209-26<br>209-27<br>209-28<br>209                               | PH209       | 2.84                         |
| UCPH210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 110             | 159 | 204 | 70  | 19 | 22             | 22             | 165            | 19   | 51.6 | M16       | UC210-30<br>210-31<br>210<br>210-32                               | PH210       | 3.09                         |
| UCPH211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 120             | 171 | 217 | 75  | 19 | 22             | 23             | 181            | 22.2 | 55.6 | M16       | UC211-32<br>211-34<br>211<br>211-35                               | PH211       | 3.97                         |
| UCPH212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 130             | 186 | 236 | 80  | 19 | 22             | 24             | 197            | 25.4 | 65.1 | M16       | UC212-36<br>212<br>212-38<br>212-39                               | PH212       | 5.10                         |
| UCPH213-40<br>213                                                   | 2-1/2                              | 65                   | 140             | 203 | 258 | 85  | 23 | 28             | 26             | 213            | 25.4 | 65.1 | M20       | UC213-40<br>213                                                   | PH213       | 6.26                         |
| UCPH214-44<br>214                                                   | 2-3/4                              | 70                   | 150             | 210 | 266 | 90  | 23 | 28             | 27             | 227            | 30.2 | 74.6 | M20       | UC214-44<br>214                                                   | PH214       | 7.35                         |
| UCPH215-47<br>215<br>215-48                                         | 2-15/16<br>3                       | 75                   | 160             | 217 | 274 | 95  | 23 | 28             | 28             | 240            | 33.3 | 77.8 | M20       | UC215-47<br>215<br>215-48                                         | PH215       | 8.10                         |
| UCPH216                                                             |                                    | 80                   | 170             | 232 | 290 | 100 | 24 | 28             | 30             | 256            | 33.3 | 82.6 | M20       | UC216                                                             | PH216       | 9.77                         |



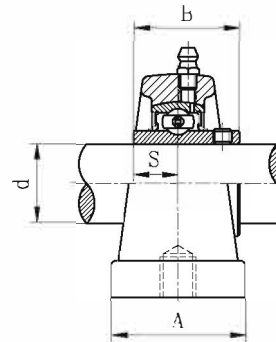
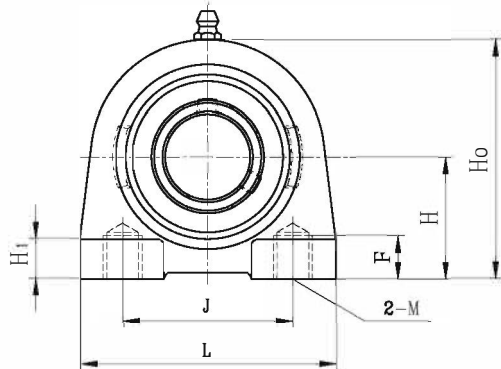
UCPA2  
Setscrew type

| Unit No.                                                            | Shaft Dia.                            |                      | Dimensions(mm). |     |     |    |                |                |      |      |    |     | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|---------------------------------------|----------------------|-----------------|-----|-----|----|----------------|----------------|------|------|----|-----|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                     |                      | H               | L   | J   | A  | H <sub>0</sub> | H <sub>1</sub> | S    | B    | F  | M   |                                                                   |             |                              |
|                                                                     | (in.)                                 | (mm)                 |                 |     |     |    |                |                |      |      |    |     |                                                                   |             |                              |
| UCPA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                   | 12<br>15<br>17       | 30.2            | 70  | 48  | 36 | 57             | 10             | 11.5 | 27.4 | 9  | M8  | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | PA203       | 0.41<br>0.40<br>0.39         |
| UCPA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4            | 12<br>15<br>17<br>20 | 30.2            | 76  | 52  | 40 | 62             | 11             | 12.7 | 31   | 13 | M10 | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | PA204       | 0.61<br>0.59<br>0.58<br>0.56 |
| UCPA205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                     | 25                   | 36.5            | 84  | 56  | 38 | 72             | 12             | 14.3 | 34   | 15 | M10 | UC205-14<br>205-15<br>205<br>205-16                               | PA205       | 0.75                         |
| UCPA206-18<br>206<br>206-19<br>206-20                               | 1- 1/8<br>1- 3/16<br>1- 1/4           | 30                   | 42.9            | 94  | 66  | 48 | 84             | 13             | 15.9 | 38.1 | 18 | M14 | UC206-18<br>206<br>206-19<br>206-20                               | PA206       | 1.11                         |
| UCPA207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1-7/16 | 35                   | 47.6            | 110 | 80  | 48 | 95             | 13             | 17.5 | 42.9 | 20 | M14 | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | PA207       | 1.51                         |
| UCPA208-24<br>208-25<br>208                                         | 1- 1/2<br>1- 9/16                     | 40                   | 49.2            | 116 | 84  | 54 | 100            | 13             | 19   | 49.2 | 20 | M14 | UC208-24<br>208-25<br>208                                         | PA208       | 1.79                         |
| UCPA209-26<br>209-27<br>209-28<br>209                               | 1- 5/8<br>1-11/16<br>1- 3/4           | 45                   | 54.2            | 120 | 90  | 60 | 108            | 13             | 19   | 49.2 | 25 | M14 | UC209-26<br>209-27<br>209-28<br>209                               | PA209       | 2.16                         |
| UCPA210-30<br>210-31<br>210<br>210-32                               | 1- 7/8<br>1-15/16<br>2                | 50                   | 57.2            | 130 | 94  | 60 | 116            | 14             | 19   | 51.6 | 25 | M16 | UC210-30<br>210-31<br>210<br>210-32                               | PA210       | 2.65                         |
| UCPA211-32<br>211-34<br>211<br>211-35                               | 2<br>2- 1/8<br>2- 3/16                | 55                   | 63.5            | 140 | 104 | 66 | 125            | 14             | 22.2 | 55.6 | 25 | M16 | UC211-32<br>211-34<br>211<br>211-35                               | PA211       | 2.74                         |
| UCPA212-36<br>212<br>212-38<br>212-39                               | 2- 1/4<br>2- 3/8<br>2- 7/16           | 60                   | 69.9            | 150 | 114 | 68 | 138            | 15             | 25.4 | 65.1 | 25 | M16 | UC212-36<br>212<br>212-38<br>212-39                               | PA212       | 4.12                         |
| UCPA213-40<br>213                                                   | 2- 1/2                                | 65                   | 76.2            | 160 | 124 | 70 | 150            | 15             | 25.4 | 65.1 | 25 | M16 | UC213-40<br>213                                                   | PA213       | 5.13                         |



**UCPA2A**  
Setscrew type

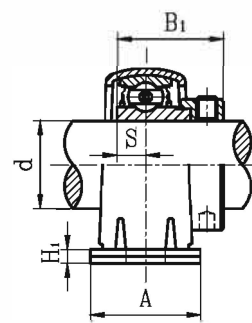
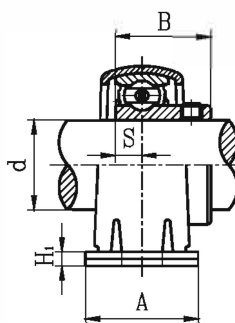
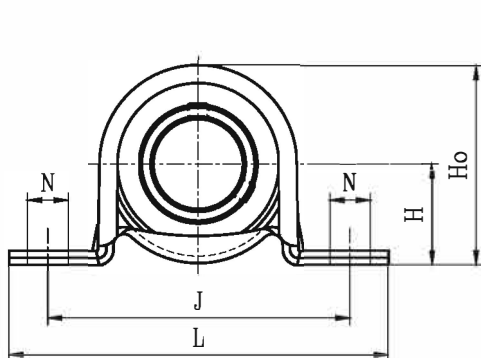
| Unit No.                                             | Shaft Dia.                                                      |            | Dimensions(mm). |       |       |      |       |    |      |      |    |     | Bearing No.                                   | Housing No.                                                       | Mass (kg) | Available                        |           |  |
|------------------------------------------------------|-----------------------------------------------------------------|------------|-----------------|-------|-------|------|-------|----|------|------|----|-----|-----------------------------------------------|-------------------------------------------------------------------|-----------|----------------------------------|-----------|--|
|                                                      | d                                                               |            | H               | L     | J     | A    | Ho    | H1 | S    | B    | F  | M   |                                               |                                                                   |           | M                                |           |  |
|                                                      | (in.)                                                           | (mm)       |                 |       |       |      |       |    |      |      |    |     |                                               |                                                                   |           |                                  |           |  |
| UCPA201A                                             | 201-8A<br>202A<br>202-10A<br>203A<br>203-11A<br>204-12A<br>204A | 1/2        | 12              | 33.3  | 73    | 50.8 | 38    | 65 | 12   | 12.7 | 31 | 13  | M8                                            | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | PA204A    | 0.65<br>0.63<br>0.62<br><br>0.60 | 3/8-16UNC |  |
|                                                      |                                                                 | 15         |                 |       |       |      |       |    |      |      |    |     |                                               |                                                                   |           |                                  |           |  |
|                                                      |                                                                 | 5/8        | 17              |       |       |      |       |    |      |      |    |     |                                               |                                                                   |           |                                  |           |  |
|                                                      |                                                                 | 11/16      |                 |       |       |      |       |    |      |      |    |     |                                               |                                                                   |           |                                  |           |  |
|                                                      |                                                                 | 3/4        | 20              |       |       |      |       |    |      |      |    |     |                                               |                                                                   |           |                                  |           |  |
| UCPA205-14A<br>205-15A<br>205A<br>205-16A            | 7/8<br>15/16<br><br>1                                           | <br>25     | 36.5            | 76.2  | 50.8  | 38   | 71.4  | 12 | 14.3 | 34   | 13 | M10 | UC205-14<br>205-15<br>205<br>205-16           | PA205A                                                            | 0.71      | 3/8-16UNC                        |           |  |
| UCPA206-18A<br>206A<br>206-19A<br>206-20A            | 1-1/8<br><br>1- 3/16<br>1- 1/4                                  | 30         | 42.9            | 101.6 | 76.2  | 38   | 85.7  | 15 | 15.9 | 38.1 | 16 | M10 | UC206-18<br>206<br>206-19<br>206-20           | PA206A                                                            | 1.15      | 7/16-14UNC                       |           |  |
| UCPA207-20A<br>207-21A<br>207-22A<br>207A<br>207-23A | 1-1/4<br>1- 5/16<br>1- 3/8<br><br>1-7/16                        | <br><br>35 | 47.6            | 108   | 82.5  | 47.6 | 95.2  | 16 | 17.5 | 42.9 | 19 | M10 | UC207-20<br>207-21<br>207-22<br>207<br>207-23 | PA207A                                                            | 1.64      | 1/2-13UNC                        |           |  |
| UCPA208-24A<br>208-25A<br>208A                       | 1- 1/2<br>1- 9/16                                               | <br>40     | 49.2            | 117.5 | 88.9  | 47.6 | 100   | 16 | 19   | 49.2 | 19 | M12 | UC208-24<br>208-25<br>208                     | PA208A                                                            | 1.78      | 1/2-13UNC                        |           |  |
| UCPA209-26A<br>209-27A<br>209-28A<br>209A            | 1- 5/8<br>1- 11/16<br>1- 3/4                                    | <br>45     | 53.98           | 127   | 95.25 | 50.8 | 108   | 18 | 19   | 49.2 | 19 | M12 | UC209-26<br>209-27<br>209-28<br>209           | PA209A                                                            | 2.17      | 1/2-13UNC                        |           |  |
| UCPA210-30A<br>210-31A<br>210A<br>210-32A            | 1-7/8<br>1-15/16<br><br>2                                       | 50         | 57.15           | 139.7 | 101.6 | 50.8 | 117.5 | 18 | 19   | 51.6 | 25 | M16 | UC210-30<br>210-31<br>210<br>210-32           | PA210A                                                            | 2.68      | 5/8-11UNC                        |           |  |



**UCPG2**  
Setscrew type

| Unit No.                                                             | Shaft Dia.                            |                      | Dimensions(mm). |     |    |    |    |    |      |      |    |     | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|----------------------------------------------------------------------|---------------------------------------|----------------------|-----------------|-----|----|----|----|----|------|------|----|-----|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                      | d                                     |                      | H               | L   | J  | A  | Ho | H1 | S    | B    | F  | M   |                                                                   |             |                              |
|                                                                      | (in.)                                 | (mm)                 |                 |     |    |    |    |    |      |      |    |     |                                                                   |             |                              |
| UCPG 201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br><br>5/8<br><br>11/16<br>3/4    | 12<br>15<br>17<br>20 | 33.3            | 70  | 49 | 38 | 64 | 14 | 12.7 | 31   | 13 | M8  | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | PG204       | 0.65<br>0.63<br>0.62<br>0.60 |
|                                                                      |                                       |                      |                 |     |    |    |    |    |      |      |    |     |                                                                   |             |                              |
|                                                                      |                                       |                      |                 |     |    |    |    |    |      |      |    |     |                                                                   |             |                              |
|                                                                      |                                       |                      |                 |     |    |    |    |    |      |      |    |     |                                                                   |             |                              |
| UCPG 205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br><br>1                 | 25                   | 36.5            | 75  | 50 | 38 | 70 | 15 | 14.3 | 34   | 15 | M10 | UC 205-14<br>205-15<br>205<br>205-16                              | PG205       | 0.69                         |
| UCPG 206-18<br>206<br>206-19<br>206-20                               | 1- 1/8<br><br>1- 3/16<br>1- 1/4       | 30                   | 42.9            | 85  | 60 | 48 | 83 | 17 | 15.9 | 38.1 | 15 | M10 | UC 206-18<br>206<br>206-19<br>206-20                              | PG206       | 1.09                         |
| UCPG 207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1-7/16 | 35                   | 47.6            | 100 | 68 | 48 | 93 | 20 | 17.5 | 42.9 | 19 | M12 | UC 207-20<br>207-21<br>207-22<br>207<br>207-23                    | PG207       | 1.56                         |
| UCPG 208-24<br>208-25<br>208                                         | 1- 1/2<br>1- 9/16                     | 40                   | 49.2            | 110 | 78 | 54 | 98 | 20 | 19   | 49.2 | 19 | M12 | UC 208-24<br>208-25<br>208                                        | PG208       | 1.83                         |

# PRESSED HPUSING PILIOW BLOCKS

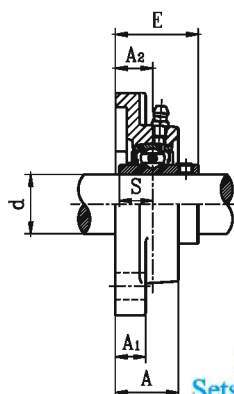
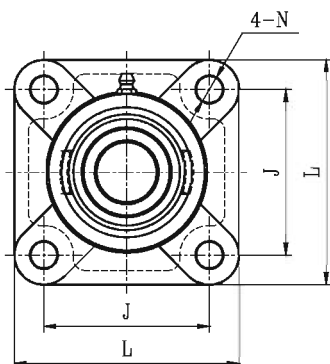


**SBPP2**  
Setscrew type

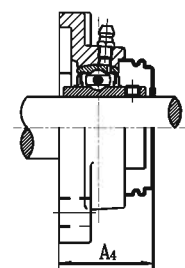
**SAPP2**  
Eccentric locking collar type

| Unit No.                                           | Shaft Dia.                         |                | Dimensions(mm). |     |     |    |      |                |                |     |    |     | Bolt Size                                        | Bearing No. | Housing No.          | Mass (kg) |
|----------------------------------------------------|------------------------------------|----------------|-----------------|-----|-----|----|------|----------------|----------------|-----|----|-----|--------------------------------------------------|-------------|----------------------|-----------|
|                                                    | d                                  |                | H               | J   | L   | A  | N    | H <sub>1</sub> | H <sub>0</sub> | S   | B  |     |                                                  |             |                      |           |
|                                                    | (in.)                              | (mm)           |                 |     |     |    |      |                |                |     |    |     |                                                  |             |                      |           |
| SBPP201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 22.2            | 68  | 86  | 25 | 9.5  | 3              | 43.5           | 6   | 22 | M8  | SB201<br>201-8<br>202<br>202-10<br>203<br>203-11 | PP203       | 0.17<br>0.16<br>0.15 |           |
| SBPP204-12<br>204                                  | 3/4                                | 20             | 25.4            | 76  | 98  | 32 | 9.5  | 3              | 50.2           | 7   | 25 | M8  | SB204-12<br>204                                  | PP204       | 0.21                 |           |
| SBPP205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 28.6            | 86  | 108 | 32 | 11.5 | 4              | 56.4           | 7.5 | 27 | M10 | SB205-14<br>205-15<br>205<br>205-16              | PP205       | 0.30                 |           |
| SBPP206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 33.3            | 95  | 117 | 38 | 11.5 | 4              | 66.1           | 8   | 30 | M10 | SB206-18<br>206<br>206-19<br>206-20              | PP206       | 0.42                 |           |
| SBPP207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 39.7            | 106 | 129 | 42 | 11.5 | 4              | 77.7           | 8.5 | 32 | M10 | SB207-20<br>207-21<br>207-22<br>207<br>207-23    | PP207       | 0.59                 |           |

| Unit No.                                           | Shaft Dia.                         |                | Dimensions(mm). |     |     |    |      |                |                |     |                | Bolt Size | Bearing No.                                      | Housing No. | Mass (kg)            |
|----------------------------------------------------|------------------------------------|----------------|-----------------|-----|-----|----|------|----------------|----------------|-----|----------------|-----------|--------------------------------------------------|-------------|----------------------|
|                                                    | d                                  |                | H               | J   | L   | A  | N    | H <sub>1</sub> | H <sub>0</sub> | S   | B <sub>1</sub> |           |                                                  |             |                      |
|                                                    | (in.)                              | (mm)           |                 |     |     |    |      |                |                |     |                |           |                                                  |             |                      |
| SAPP201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 22.2            | 68  | 86  | 25 | 9.5  | 3              | 43.5           | 6.5 | 28.6           | M8        | SA201<br>201-8<br>202<br>202-10<br>203<br>203-11 | PP203       | 0.19<br>0.18<br>0.16 |
| SAPP204-12<br>204                                  | 3/4                                | 20             | 25.4            | 76  | 98  | 32 | 9.5  | 3              | 50.2           | 7.5 | 30.9           | M8        | SA204-12<br>204                                  | PP204       | 0.24                 |
| SAPP205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 28.6            | 86  | 108 | 32 | 11.5 | 4              | 56.4           | 7.5 | 30.9           | M10       | SA205-14<br>205-15<br>205<br>205-16              | PP205       | 0.32                 |
| SAPP206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 33.3            | 95  | 117 | 38 | 11.5 | 4              | 66.1           | 9   | 35.7           | M10       | SA206-18<br>206<br>206-19<br>206-20              | PP206       | 0.47                 |
| SAPP207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 39.7            | 106 | 129 | 42 | 11.5 | 4              | 77.7           | 9.5 | 38.9           | M10       | SA207-20<br>207-21<br>207-22<br>207<br>207-23    | PP207       | 0.65                 |

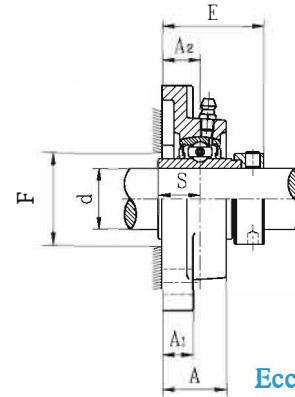
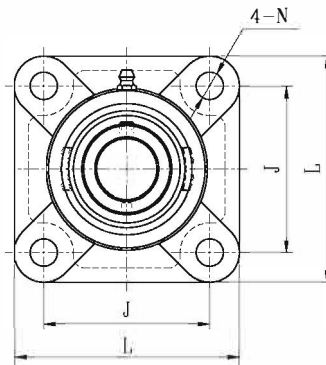


UCF2  
Setscrew type



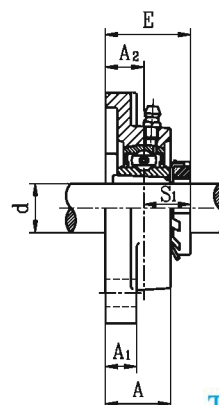
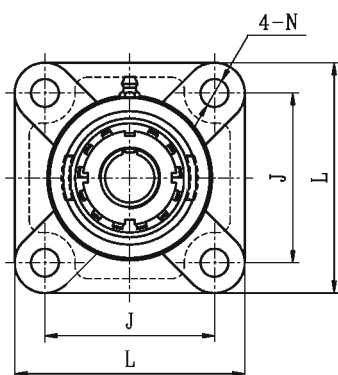
S-UCF200E1  
SM-UCF200E1  
With end cover

| Unit No.                                                           | Shaft Dia.                         |                      | Dimensions(mm). |     |    |    |      |      |      |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    | Available |
|--------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|----|----|------|------|------|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|-----------|
|                                                                    | d                                  |                      | L               | J   | A2 | A1 | A    | E    | N    | S    | A4   |           |                                                                   |             |                              | N         |
|                                                                    | (in.)                              | (mm)                 |                 |     |    |    |      |      |      |      |      |           |                                                                   |             |                              |           |
| UCF201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 76              | 54  | 15 | 11 | 24.5 | 30.9 | 11.5 | 11.5 | --   | M10       | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | F203        | 0.39<br>0.38<br>0.37         | --        |
| UCF201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 86              | 64  | 15 | 11 | 25.5 | 33.3 | 11.5 | 12.7 | 37.5 | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | F204        | 0.64<br>0.62<br>0.61<br>0.59 | 12        |
| UCF205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 95              | 70  | 16 | 13 | 27   | 35.7 | 11.5 | 14.3 | 40   | M10       | UC205-14<br>205-15<br>205<br>205-16                               | F205        | 0.78                         | 12        |
| UCF206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 108             | 83  | 18 | 13 | 31   | 40.2 | 11.5 | 15.9 | 44   | M10       | UC206-18<br>206<br>206-19<br>206-20                               | F206        | 1.12                         | 12        |
| UCF207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 117             | 92  | 19 | 15 | 34   | 44.4 | 14   | 17.5 | 48.5 | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | F207        | 1.54                         | --        |
| UCF208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 130             | 102 | 21 | 15 | 36   | 51.2 | 14   | 19   | 55   | M12       | UC208-24<br>208-25<br>208                                         | F208        | 1.81                         | 16        |
| UCF209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 137             | 105 | 22 | 16 | 38   | 52.2 | 16   | 19   | 57   | M14       | UC209-26<br>209-27<br>209-28<br>209                               | F209        | 2.02                         | --        |
| UCF210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 143             | 111 | 22 | 16 | 40   | 54.6 | 18   | 19   | 60   | M16       | UC210-30<br>210-31<br>210                                         | F210        | 2.32                         | 16        |
| UCF211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 162             | 130 | 25 | 18 | 43   | 58.4 | 18   | 22.2 | 64   | M16       | UC211-32<br>211-34<br>211<br>211-35                               | F211        | 3.07                         | 19        |
| UCF212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 175             | 143 | 29 | 18 | 48   | 68.7 | 18   | 25.4 | 74.5 | M16       | UC212-36<br>212<br>212-38<br>212-39                               | F212        | 4.34                         | 19        |
| UCF213-40<br>213                                                   | 2-1/2                              | 65                   | 187             | 149 | 30 | 22 | 50   | 69.7 | 18   | 25.4 | 79   | M16       | UC213-40<br>213                                                   | F213        | 4.91                         | 19        |
| UCF214-44<br>214                                                   | 2-3/4                              | 70                   | 193             | 152 | 31 | 22 | 54   | 75.4 | 18   | 30.2 | --   | M16       | UC214-44<br>214                                                   | F214        | 6.27                         | 19        |
| UCF215-47<br>215<br>215-48                                         | 2-15/16<br>3                       | 75                   | 200             | 159 | 34 | 22 | 56   | 78.5 | 18   | 33.3 | --   | M16       | UC215-47<br>215<br>215-48                                         | F215        | 6.33                         | 19        |
| UCF216                                                             |                                    | 80                   | 208             | 165 | 34 | 22 | 57   | 83.3 | 22   | 33.3 | --   | M20       | UC216                                                             | F216        | 7.00                         | 23        |
| UCF217-52<br>217                                                   | 3-1/4                              | 85                   | 220             | 175 | 36 | 24 | 63   | 87.6 | 23   | 34.1 | --   | M20       | UC217-52<br>217                                                   | F217        | 8.69                         | --        |
| UCF218-56<br>218                                                   | 3-1/2                              | 90                   | 235             | 187 | 40 | 25 | 68   | 96.3 | 23   | 39.7 | --   | M20       | UC218-56<br>218                                                   | F218        | 11.1                         | --        |
| UCF220<br>220-64                                                   | 4                                  | 100                  | 265             | 210 | 44 | 25 | 70   | 110  | 27   | 42   | --   | M22       | UC220<br>220-64                                                   | F220        | 14.8                         | --        |



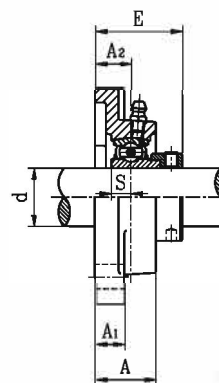
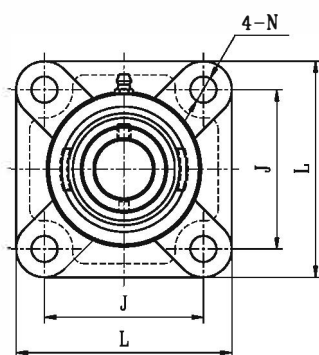
NAF2  
Eccentric locking collar type

| Unit No.                                                           | Shaft Dia.                         |                      | Dimensions(mm). |     |                |                |      |       |      |      |       | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    | Available |
|--------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|----------------|----------------|------|-------|------|------|-------|-----------|-------------------------------------------------------------------|-------------|------------------------------|-----------|
|                                                                    | d                                  |                      | L               | J   | A <sub>2</sub> | A <sub>1</sub> | A    | E     | N    | S    | F min |           |                                                                   |             |                              | N         |
|                                                                    | (in.)                              | (mm)                 |                 |     |                |                |      |       |      |      |       |           |                                                                   |             |                              |           |
| NAF201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 76              | 54  | 15             | 11             | 24.5 | 38.4  | 11.5 | 13.9 | --    | M10       | NA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | F203        | 0.50<br>0.49<br>0.47         | --        |
| NAF201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 86              | 64  | 15             | 11             | 25.5 | 41.5  | 11.5 | 17   | 31    | M10       | NA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | F204        | 0.71<br>0.68<br>0.67<br>0.64 | 12        |
| NAF205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 95              | 70  | 16             | 13             | 27   | 42.9  | 11.5 | 17.4 | 36    | M10       | NA205-14<br>205-15<br>205<br>205-16                               | F205        | 0.83                         | 12        |
| NAF206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 108             | 83  | 18             | 13             | 31   | 48.1  | 11.5 | 18.2 | 42    | M10       | NA206-18<br>206<br>206-19<br>206-20                               | F206        | 1.19                         | 12        |
| NAF207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 117             | 92  | 19             | 15             | 34   | 51.3  | 14   | 18.8 | 50    | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23                     | F207        | 1.61                         | --        |
| NAF208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 130             | 102 | 21             | 15             | 36   | 55.9  | 14   | 21.4 | 55    | M12       | NA208-24<br>208-25<br>208                                         | F208        | 1.92                         | 16        |
| NAF209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 137             | 105 | 22             | 16             | 38   | 56.9  | 16   | 21.4 | --    | M14       | NA209-26<br>209-27<br>209-28<br>209                               | F209        | 2.14                         | --        |
| NAF210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 143             | 111 | 22             | 16             | 40   | 60.1  | 18   | 24.6 | 64    | M16       | NA210-30<br>210-31<br>210                                         | F210        | 2.49                         | 16        |
| NAF211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 162             | 130 | 25             | 18             | 43   | 68.6  | 18   | 27.7 | 71    | M16       | NA211-32<br>211-34<br>211<br>211-35                               | F211        | 3.32                         | 19        |
| NAF212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 175             | 143 | 29             | 18             | 48   | 75.8  | 18   | 30.9 | 77    | M16       | NA212-36<br>212<br>212-38<br>212-39                               | F212        | 4.62                         | 19        |
| NAF213-40<br>213                                                   | 2-1/2                              | 65                   | 187             | 149 | 30             | 22             | 50   | 81.6  | 18   | 34.1 | 84    | M16       | NA213-40<br>213                                                   | F213        | 5.30                         | 19        |
| NAF214-44<br>214                                                   | 2-3/4                              | 70                   | 193             | 152 | 31             | 22             | 54   | 82.6  | 18   | 34.1 | 89    | M16       | NA214-44<br>214                                                   | F214        | 6.31                         | 19        |
| NAF215<br>215-48                                                   | 3                                  | 75                   | 200             | 159 | 34             | 22             | 56   | 88.8  | 18   | 37.3 | 94    | M16       | NA215<br>215-48                                                   | F215        | 6.79                         | 19        |
| NAF216                                                             |                                    | 80                   | 208             | 165 | 34             | 22             | 57   | 91.9  | 22   | 37.3 | 101   | M20       | NA216                                                             | F216        | 7.62                         | 23        |
| NAF217-52<br>217                                                   | 3-1/4                              | 85                   | 220             | 175 | 36             | 24             | 63   | 85.8  | 23   | 23.4 | --    | M20       | NA217-52<br>217                                                   | F217        | 8.90                         |           |
| NAF218-56<br>218                                                   | 3-1/2                              | 90                   | 235             | 187 | 40             | 25             | 68   | 88    | 23   | 24.5 | --    | M20       | NA218-56<br>218                                                   | F218        | 10.8                         |           |
| NAF220                                                             |                                    | 100                  | 265             | 210 | 44             | 25             | 70   | 119.4 | 27   | 50   | 129   | M22       | NA220                                                             | F220        | 16.1                         |           |



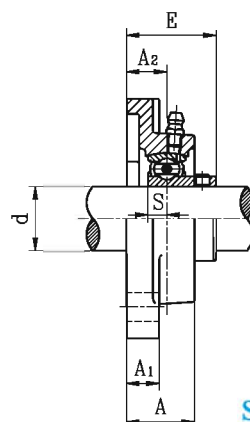
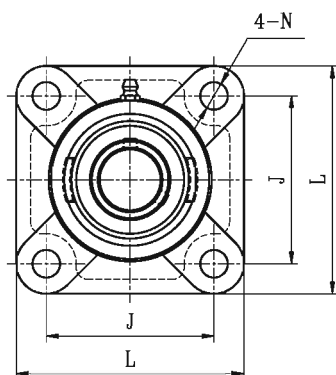
**UKF2+H**  
Tapered bore, adapter type

| Unit No.                                               | Shaft Dia.                |      | Dimensions(mm). |     |                |                |    |      |      |                | Bolt Size | Bearing No. | Housing No. | Adaptor No.                         | Mass (kg) | Available |
|--------------------------------------------------------|---------------------------|------|-----------------|-----|----------------|----------------|----|------|------|----------------|-----------|-------------|-------------|-------------------------------------|-----------|-----------|
|                                                        | d                         |      | L               | J   | A <sub>2</sub> | A <sub>1</sub> | A  | E    | N    | S <sub>1</sub> |           |             |             |                                     |           | N         |
|                                                        | (in.)                     | (mm) |                 |     |                |                |    |      |      |                |           |             |             |                                     |           |           |
| UKF205+HE2305<br>205+H2305                             | 3/4                       | 20   | 95              | 70  | 16             | 13             | 27 | 34.5 | 11.5 | 18.5           | M10       | UK205       | F205        | HE2305<br>H2305                     | 0.82      | 12        |
| UKF206+HS2306<br>206+HA2306<br>206+H2306<br>206+HE2306 | 7/8<br>15/16<br>1         | 25   | 108             | 83  | 18             | 13             | 31 | 38.5 | 11.5 | 20.5           | M10       | UK206       | F206        | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.19      | 12        |
| UKF207+HS2307<br>207+H2307<br>207+HA2307               | 1-1/8<br>1-3/16           | 30   | 117             | 92  | 19             | 15             | 34 | 41.5 | 14   | 22.5           | M12       | UK207       | F207        | HS2307<br>H2307<br>HA2307           | 1.59      | --        |
| UKF208+HE2308<br>208+HS2308<br>208+H2308               | 1-1/4<br>1-3/8            | 35   | 130             | 102 | 21             | 15             | 36 | 45.5 | 14   | 24.5           | M12       | UK208       | F208        | HE2308<br>HS2308<br>H2308           | 1.87      | 16        |
| UKF209+HA2309<br>209+HE2309<br>209+H2309               | 1-7/16<br>1-1/2           | 40   | 137             | 105 | 22             | 16             | 38 | 48   | 16   | 26             | M14       | UK209       | F209        | HA2309<br>HE2309<br>H2309           | 2.13      | --        |
| UKF210+HS2310<br>210+HA2310<br>210+HE2310<br>210+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 143             | 111 | 22             | 16             | 40 | 49.5 | 18   | 27.5           | M16       | UK210       | F210        | HS2310<br>HA2310<br>HE2310<br>H2310 | 2.50      | 16        |
| UKF211+HS2311<br>211+HA2311<br>211+H2311<br>211+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 162             | 130 | 25             | 18             | 43 | 53.5 | 18   | 28.5           | M16       | UK211       | F211        | HS2311<br>HA2311<br>H2311<br>HE2311 | 3.23      | 19        |
| UKF212+HS2312<br>212+H2312                             | 2-1/8                     | 55   | 175             | 143 | 29             | 18             | 48 | 60   | 18   | 31             | M16       | UK212       | F212        | HS2312<br>H2312                     | 4.44      | 19        |
| UKF213+HA2313<br>213+HE2313<br>213+H2313<br>213+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 187             | 149 | 30             | 22             | 50 | 62   | 18   | 32             | M16       | UK213       | F213        | HA2313<br>HE2313<br>H2313<br>HS2313 | 4.99      | 19        |
| UKF215+HA2315<br>215+HE2315<br>215+H2315               | 2-7/16<br>2-1/2           | 65   | 200             | 159 | 34             | 22             | 56 | 69.5 | 18   | 35.5           | M16       | UK215       | F215        | HA2315<br>HE2315<br>H2315           | 6.70      | 19        |
| UKF216+HA2316<br>216+HE2316<br>216+H2316               | 2-11/16<br>2-3/4          | 70   | 208             | 165 | 34             | 22             | 57 | 73   | 22   | 39             | M20       | UK216       | F216        | HA2316<br>HE2316<br>H2316           | 7.47      | 23        |
| UKF217+HA2317<br>217+H2317<br>217+HE2317               | 2-15/16<br>3              | 75   | 220             | 175 | 36             | 24             | 63 | 76   | 23   | 40             | M20       | UK217       | F217        | HA2317<br>H2317<br>HE2317           | 9.08      | --        |
| UKF218+H2318                                           |                           | 80   | 235             | 187 | 40             | 25             | 68 | 82   | 23   | 42             | M20       | UK218       | F218        | H2318                               | 11.5      | --        |



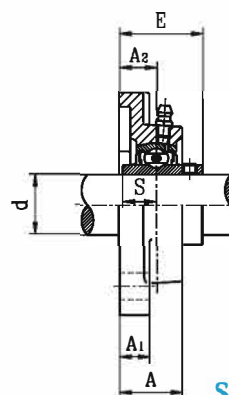
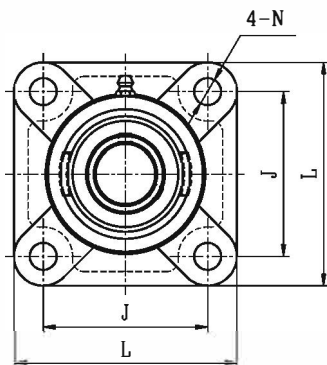
**SAF2G**  
Eccentric locking collar type

| Unit No.                                                | Shaft Dia.                         |                | Dimensions(mm). |     |    |    |      |      |      |     | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            | Available |
|---------------------------------------------------------|------------------------------------|----------------|-----------------|-----|----|----|------|------|------|-----|-----------|--------------------------------------------------------|-------------|----------------------|-----------|
|                                                         | d                                  |                | L               | J   | A2 | A1 | A    | E    | N    | S   |           |                                                        |             |                      | N         |
|                                                         | (in.)                              | (mm)           |                 |     |    |    |      |      |      |     |           |                                                        |             |                      |           |
| SAF201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 76              | 54  | 15 | 11 | 24.5 | 37.1 | 11.5 | 6.5 | M10       | SA201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | F203        | 0.40<br>0.39<br>0.37 | —         |
| SAF204-12G<br>204G                                      | 3/4                                | 20             | 86              | 64  | 15 | 11 | 25.5 | 38.4 | 11.5 | 7.5 | M10       | SA204-12G<br>204G                                      | F204        | 0.59                 | 12        |
| SAF205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95              | 70  | 16 | 13 | 27   | 39.4 | 11.5 | 7.5 | M10       | SA205-14G<br>205-15G<br>205G<br>205-16G                | F205        | 0.77                 | 12        |
| SAF206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 108             | 83  | 18 | 13 | 31   | 44.7 | 11.5 | 9   | M10       | SA206-18G<br>206G<br>206-19G<br>206-20G                | F206        | 1.11                 | 12        |
| SAF207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 117             | 92  | 19 | 15 | 34   | 48.4 | 14   | 9.5 | M12       | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | F207        | 1.51                 | --        |
| SAF208-24G<br>208-25G<br>208G                           | 1-1/2<br>1-9/16                    | 40             | 130             | 102 | 21 | 15 | 36   | 53.7 | 14   | 11  | M12       | SA208-24G<br>208-25G<br>208G                           | F208        | 1.79                 | 16        |
| SAF209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 137             | 105 | 22 | 16 | 38   | 54.7 | 16   | 11  | M14       | SA209-26G<br>209-27G<br>209-28G<br>209G                | F209        | 2.00                 | -         |
| SAF210-30G<br>210-31G<br>210G                           | 1-7/8<br>1-15/16                   | 50             | 143             | 111 | 22 | 16 | 40   | 54.7 | 18   | 11  | M16       | SA210-30G<br>210-31G<br>210G                           | F210        | 2.27                 | 16        |
| SAF211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br>2-3/16               | 55             | 162             | 130 | 25 | 18 | 43   | 61.4 | 18   | 12  | M16       | SA211-32G<br>211-34G<br>211G<br>211-35G                | F211        | 3.07                 | 19        |
| SAF212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 175             | 143 | 29 | 18 | 48   | 66.3 | 18   | 12  | M16       | SA212-36G<br>212G<br>212-38G<br>212-39G                | F212        | 4.19                 | 19        |



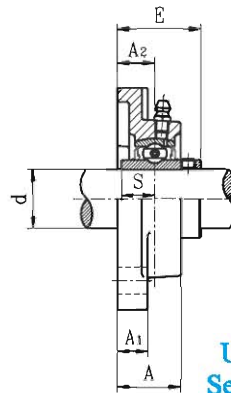
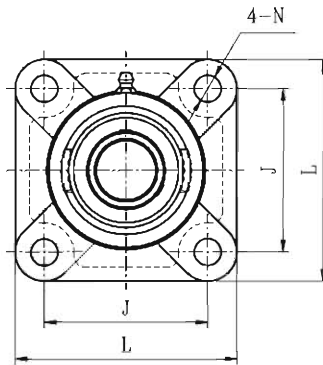
**SBF2G**  
Setscrew type

| Unit No.                                                | Shaft Dia.                         |                | Dimensions(mm). |     |                |                |      |      |      |      | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            | Available |
|---------------------------------------------------------|------------------------------------|----------------|-----------------|-----|----------------|----------------|------|------|------|------|-----------|--------------------------------------------------------|-------------|----------------------|-----------|
|                                                         | d                                  |                | L               | J   | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S    |           |                                                        |             |                      | N         |
|                                                         | (in.)                              | (mm)           |                 |     |                |                |      |      |      |      |           |                                                        |             |                      |           |
| SBF201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 76              | 54  | 15             | 11             | 24.5 | 31   | 11.5 | 6    | M10       | SB201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | F203        | 0.38<br>0.37<br>0.36 | --        |
| SBF204-12G<br>204G                                      | 3/4                                | 20             | 86              | 64  | 15             | 11             | 25.5 | 33   | 11.5 | 7    | M10       | SB204-12G<br>204G                                      | F204        | 0.56                 | 12        |
| SBF205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95              | 70  | 16             | 13             | 27   | 35.5 | 11.5 | 7.5  | M10       | SB205-14G<br>205-15G<br>205G<br>205-16G                | F205        | 0.75                 | 12        |
| SBF206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 108             | 83  | 18             | 13             | 31   | 40   | 11.5 | 8    | M10       | SB206-18G<br>206G<br>206-19G<br>206-20G                | F206        | 1.06                 | 12        |
| SBF207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 117             | 92  | 19             | 15             | 34   | 42.5 | 14   | 8.5  | M12       | SB207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | F207        | 1.45                 | --        |
| SBF208-24G<br>208-25G<br>208G                           | 1-1/2<br>1-9/16                    | 40             | 130             | 102 | 21             | 15             | 36   | 46   | 14   | 9    | M12       | SB208-24G<br>208-25G<br>208G                           | F208        | 1.66                 | 16        |
| SBF209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 137             | 105 | 22             | 16             | 38   | 53   | 16   | 10.2 | M14       | SB209-26G<br>209-27G<br>209-28G<br>209G                | F209        | 1.90                 | -         |
| SBF210-30G<br>210-31G<br>210G                           | 1-7/8<br>1-15/16                   | 50             | 143             | 111 | 22             | 16             | 40   | 54.6 | 18   | 10.9 | M16       | SB210-30G<br>210-31G<br>210G                           | F210        | 2.20                 | 16        |
| SBF211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br>2-3/16               | 55             | 162             | 130 | 25             | 18             | 43   | 58.5 | 18   | 11.8 | M16       | SB211-32G<br>211-34G<br>211G<br>211-35G                | F211        | 2.95                 | 19        |
| SBF212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 175             | 143 | 29             | 18             | 48   | 67.8 | 18   | 14.9 | M16       | SB212-36G<br>212G<br>212-38G<br>212-39G                | F212        | 4.10                 | 19        |

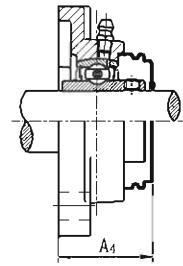


**UCFX**  
Setscrew type

| Unit No.                             | Shaft Dia.                |      | Dimensions(mm). |       |                |                |    |       |      |      | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|-----------------|-------|----------------|----------------|----|-------|------|------|-----------|-------------------------------------|-------------|-----------|
|                                      | d<br>(in.)                | (mm) | L               | J     | A <sub>2</sub> | A <sub>1</sub> | A  | E     | N    | S    |           |                                     |             |           |
| UCFX05-14<br>X05-15<br>X05<br>X05-16 | 7/8<br>15/16<br>1         | 25   | 108             | 82.5  | 18             | 13             | 30 | 40.2  | 11.5 | 15.9 | M10       | UCX05-14<br>X05-15<br>X05<br>X05-16 | FX05        | 1.13      |
| UCFX06-18<br>X06<br>X06-19<br>X06-20 | 1-1/8<br>1-3/16<br>1-1/4  | 30   | 117             | 92    | 19             | 14             | 34 | 44.4  | 13   | 17.5 | M12       | UCX06-18<br>X06<br>X06-19<br>X06-20 | FX06        | 1.48      |
| UCFX07-22<br>X07<br>X07-23           | 1-3/8<br>1-7/16           | 35   | 130             | 101.5 | 21             | 14             | 38 | 51.2  | 13   | 19   | M12       | UCX07-22<br>X07<br>X07-23           | FX07        | 1.99      |
| UCFX08-24<br>X08-25<br>X08           | 1-1/2<br>1-9/16           | 40   | 137             | 105   | 22             | 14             | 40 | 52.2  | 15   | 19   | M14       | UCX08-24<br>X08-25<br>X08           | FX08        | 2.18      |
| UCFX09-26<br>X09-27<br>X09-28<br>X09 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 143             | 111   | 23             | 14             | 40 | 55.6  | 15   | 19   | M14       | UCX09-26<br>X09-27<br>X09-28<br>X09 | FX09        | 2.22      |
| UCFX10-30<br>X10-31<br>X10<br>X10-32 | 1-7/8<br>1-15/16<br>2     | 50   | 162             | 130   | 26             | 20             | 44 | 59.4  | 17   | 22.2 | M16       | UCX10-30<br>X10-31<br>X10<br>X10-32 | FX10        | 3.52      |
| UCFX11-34<br>X11<br>X11-35<br>X11-36 | 2-1/8<br>2-3/16<br>2-1/4  | 55   | 175             | 143   | 29             | 20             | 49 | 68.7  | 17   | 25.4 | M16       | UCX11-34<br>X11<br>X11-35<br>X11-36 | FX11        | 4.04      |
| UCFX12<br>X12-38<br>X12-39           | 2-3/8<br>2-7/16           | 60   | 187             | 149   | 34             | 21             | 57 | 73.7  | 17   | 25.4 | M16       | UCX12<br>X12-38<br>X12-39           | FX12        | 5.61      |
| UCFX13-40<br>X13                     | 2-1/2                     | 65   | 187             | 149   | 34             | 21             | 59 | 78.4  | 17   | 30.2 | M16       | UCX13-40<br>X13                     | FX13        | 5.76      |
| UCFX14-44<br>X14                     | 2-3/4                     | 70   | 197             | 152   | 37             | 24             | 60 | 81.5  | 20   | 33.3 | M18       | UCX14-44<br>X14                     | FX14        | 6.61      |
| UCFX15<br>X15-48                     | 3                         | 75   | 197             | 152   | 40             | 24             | 68 | 89.3  | 20   | 33.3 | M18       | UCX15<br>X15-48                     | FX15        | 7.51      |
| UCFX16                               |                           | 80   | 214             | 171   | 40             | 24             | 70 | 91.6  | 20   | 34.1 | M18       | UCX16                               | FX16        | 9.85      |
| UCFX17-52<br>X17                     | 3-1/4                     | 85   | 214             | 171   | 40             | 24             | 70 | 96.3  | 20   | 39.7 | M18       | UCX17-52<br>X17                     | FX17        | 10.7      |
| UCFX18-56<br>X18                     | 3-1/2                     | 90   | 214             | 171   | 45             | 24             | 76 | 106.1 | 23   | 42.9 | M20       | UCX18-56<br>X18                     | FX18        | 11.7      |
| UCFX20<br>X20-64                     | 4                         | 100  | 268             | 211   | 59             | 31             | 97 | 127.3 | 31   | 49.2 | M27       | UCX20<br>X20-64                     | FX20        | 20.8      |

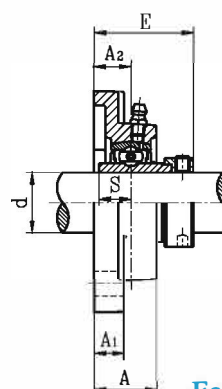
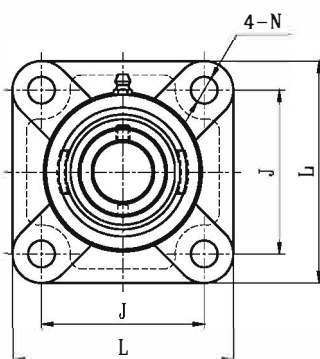


**UCFU2**  
Setscrew type



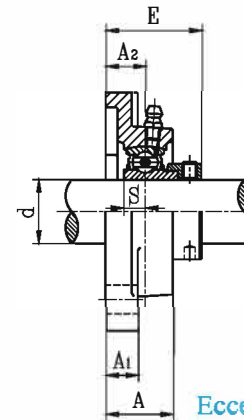
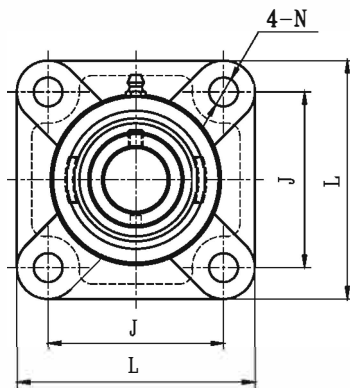
**S-UCFU200E1**  
**SM-UCFU200E1**  
With end cover

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |       |    |    |      |      |      |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-------|----|----|------|------|------|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                  |                      | L               | J     | A2 | A1 | A    | E    | N    | S    | A4   |           |                                                                   |             |                              |
|                                                                     | (in.)                              | (mm)                 |                 |       |    |    |      |      |      |      |      |           |                                                                   |             |                              |
| UCFU201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 76              | 54    | 15 | 11 | 24.5 | 30.9 | 11.5 | 11.5 | --   | M10       | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FU203       | 0.39<br>0.38<br>0.37         |
| UCFU201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 86              | 63.5  | 19 | 15 | 29.5 | 37.3 | 11.5 | 12.7 | 41.5 | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FU204       | 0.67<br>0.65<br>0.64<br>0.62 |
| UCFU205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 93              | 70    | 19 | 15 | 30   | 38.7 | 11.5 | 14.3 | 43   | M10       | UC205-14<br>205-15<br>205<br>205-16                               | FU205       | 0.78                         |
| UCFU206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 106             | 82.5  | 20 | 16 | 32.5 | 42.2 | 11.5 | 15.9 | 46   | M10       | UC206-18<br>206<br>206-19<br>206-20                               | FU206       | 1.01                         |
| UCFU207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 116             | 92    | 21 | 17 | 35   | 46.2 | 14   | 17.5 | 50.5 | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | FU207       | 1.37                         |
| UCFU208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 129             | 101.5 | 24 | 17 | 39   | 54.2 | 14   | 19   | 58   | M12       | UC208-24<br>208-25<br>208                                         | FU208       | 1.81                         |
| UCFU209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-1/16<br>1-3/4           | 45                   | 135             | 105   | 24 | 18 | 40   | 54.2 | 16   | 19   | 59   | M14       | UC209-26<br>209-27<br>209-28<br>209                               | FU209       | 2.09                         |
| UCFU210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 143             | 111   | 28 | 20 | 45   | 60.6 | 18   | 19   | 66   | M16       | UC210-30<br>210-31<br>210                                         | FU210       | 2.43                         |
| UCFU211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 162             | 130   | 31 | 21 | 49   | 64.4 | 18   | 22.2 | 70   | M16       | UC211-32<br>211-34<br>211<br>211-35                               | FU211       | 3.46                         |
| UCFU212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 175             | 143   | 34 | 22 | 53.5 | 73.7 | 18   | 25.4 | 79.5 | M16       | UC212-36<br>212<br>212-38<br>212-39                               | FU212       | 4.09                         |
| UCFU213-40<br>213                                                   | 2-1/2                              | 65                   | 184             | 149   | 38 | 22 | 58   | 77.7 | 18   | 25.4 | 87   | M16       | UC213-40<br>213                                                   | FU213       | 4.88                         |
| UCFU214-44<br>214                                                   | 2-3/4                              | 70                   | 188             | 152   | 38 | 23 | 60   | 82.4 | 18   | 30.2 | --   | M16       | UC214-44<br>214                                                   | FU214       | 5.49                         |
| UCFU215-47<br>215<br>215-48                                         | 2-15/16<br>3                       | 75                   | 200             | 159   | 41 | 24 | 62   | 85.5 | 18   | 33.3 | --   | M16       | UC215-47<br>215<br>215-48                                         | FU215       | 6.15                         |
| UCFU216                                                             |                                    | 80                   | 207             | 165   | 42 | 25 | 63   | 91.3 | 22   | 33.3 | --   | M20       | UC216                                                             | FU216       | 7.03                         |



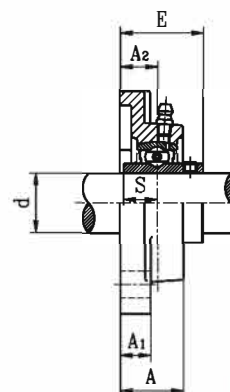
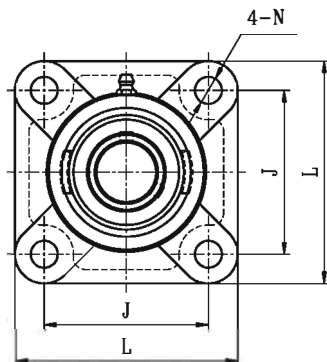
**NAFU2**  
Eccentric locking collar type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |       |    |    |      |      |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-------|----|----|------|------|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d (in.)                            | d (mm)               | L               | J     | A2 | A1 | A    | E    | N    | S    |           |                                                                   |             |                              |
| NAFU201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 76              | 54    | 15 | 11 | 24.5 | 38.4 | 11.5 | 13.9 | M10       | NA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FU203       | 0.50<br>0.49<br>0.47         |
| NAFU201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 86              | 63.5  | 19 | 15 | 29.5 | 45.5 | 11.5 | 17   | M10       | NA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FU204       | 0.74<br>0.71<br>0.70<br>0.67 |
| NAFU205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 93              | 70    | 19 | 15 | 30   | 45.9 | 11.5 | 17.4 | M10       | NA205-14<br>205-15<br>205<br>205-16                               | FU205       | 0.83                         |
| NAFU206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 106             | 82.5  | 20 | 16 | 32.5 | 50.1 | 11.5 | 18.2 | M10       | NA206-18<br>206<br>206-19<br>206-20                               | FU206       | 1.08                         |
| NAFU207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 116             | 92    | 21 | 17 | 35   | 53.3 | 14   | 18.8 | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23                     | FU207       | 1.44                         |
| NAFU208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 129             | 101.5 | 24 | 17 | 39   | 58.9 | 14   | 21.4 | M12       | NA208-24<br>208-25<br>208                                         | FU208       | 1.92                         |
| NAFU209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 135             | 105   | 24 | 18 | 40   | 58.9 | 16   | 21.4 | M14       | NA209-26<br>209-27<br>209-28<br>209                               | FU209       | 2.21                         |
| NAFU210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 143             | 111   | 28 | 20 | 45   | 66.1 | 18   | 24.6 | M16       | NA210-30<br>210-31<br>210                                         | FU210       | 2.60                         |
| NAFU211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 162             | 130   | 31 | 21 | 49   | 74.6 | 18   | 27.7 | M16       | NA211-32<br>211-34<br>211<br>211-35                               | FU211       | 3.71                         |
| NAFU212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 175             | 143   | 34 | 22 | 53.5 | 80.8 | 18   | 30.9 | M16       | NA212-36<br>212<br>212-38<br>212-39                               | FU212       | 4.37                         |
| NAFU213-40<br>213                                                   | 2-1/2                              | 65                   | 184             | 149   | 38 | 22 | 58   | 89.6 | 18   | 34.1 | M16       | NA213-40<br>213                                                   | FU213       | 5.27                         |
| NAFU214-44<br>214                                                   | 2-3/4                              | 70                   | 188             | 152   | 38 | 23 | 60   | 89.6 | 18   | 34.1 | M16       | NA214-44<br>214                                                   | FU214       | 5.53                         |
| NAFU215<br>215-48                                                   | 3                                  | 75                   | 200             | 159   | 41 | 24 | 62   | 95.8 | 18   | 37.3 | M16       | NA215<br>215-48                                                   | FU215       | 6.61                         |
| NAFU216                                                             |                                    | 80                   | 207             | 165   | 42 | 25 | 63   | 99.9 | 22   | 37.3 | M20       | NA216                                                             | FU216       | 7.65                         |



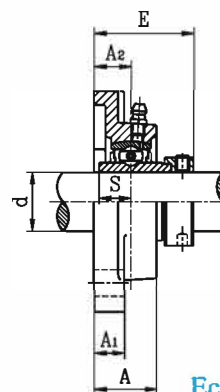
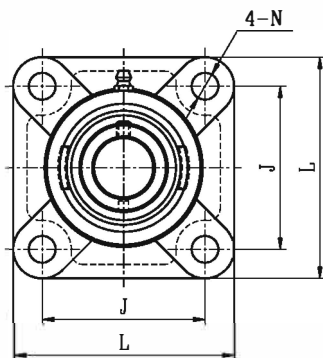
**SAFU2G**  
Eccentric locking collar type

| Unit No.                                                 | Shaft Dia.                         |                | Dimensions(mm). |       |                |                |      |      |      |     | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            |
|----------------------------------------------------------|------------------------------------|----------------|-----------------|-------|----------------|----------------|------|------|------|-----|-----------|--------------------------------------------------------|-------------|----------------------|
|                                                          | d                                  |                | L               | J     | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S   |           |                                                        |             |                      |
|                                                          | (in.)                              | (mm)           |                 |       |                |                |      |      |      |     |           |                                                        |             |                      |
| SAFU201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 76              | 54    | 15             | 11             | 24.5 | 37.1 | 11.5 | 6.5 | M10       | SA201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FU203       | 0.40<br>0.39<br>0.37 |
| SAFU204-12G<br>204G                                      | 3/4                                | 20             | 86              | 63.5  | 19             | 15             | 29.5 | 42.4 | 11.5 | 7.5 | M10       | SA204-12G<br>204G                                      | FU204       | 0.62                 |
| SAFU205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 93              | 70    | 19             | 15             | 30   | 42.4 | 11.5 | 7.5 | M10       | SA205-14G<br>205-15G<br>205G<br>205-16G                | FU205       | 0.77                 |
| SAFU206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 106             | 82.5  | 20             | 16             | 32.5 | 46.7 | 11.5 | 9   | M10       | SA206-18G<br>206G<br>206-19G<br>206-20G                | FU206       | 1.00                 |
| SAFU207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 116             | 92    | 21             | 17             | 35   | 50.4 | 14   | 9.5 | M12       | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FU207       | 1.34                 |
| SAFU208-24G<br>208-25G<br>208G                           | 1-1/2<br>1-9/16                    | 40             | 129             | 101.5 | 24             | 17             | 39   | 56.7 | 14   | 11  | M12       | SA208-24G<br>208-25G<br>208G                           | FU208       | 1.79                 |
| SAFU209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 135             | 105   | 24             | 18             | 40   | 56.7 | 16   | 11  | M14       | SA209-26G<br>209-27G<br>209-28G<br>209G                | FU209       | 2.07                 |
| SAFU210-30G<br>210-31G<br>210G                           | 1-7/8<br>1-15/16                   | 50             | 143             | 111   | 28             | 20             | 45   | 60.7 | 18   | 11  | M16       | SA210-30G<br>210-31G<br>210G                           | FU210       | 2.38                 |
| SAFU211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br>2-3/16               | 55             | 162             | 130   | 31             | 21             | 49   | 67.4 | 18   | 12  | M16       | SA211-32G<br>211-34G<br>211G<br>211-35G                | FU211       | 3.46                 |
| SAFU212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 175             | 143   | 34             | 22             | 53.5 | 71.3 | 18   | 12  | M16       | SA212-36G<br>212G<br>212-38G<br>212-39G                | FU212       | 3.94                 |



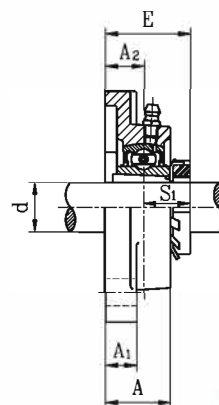
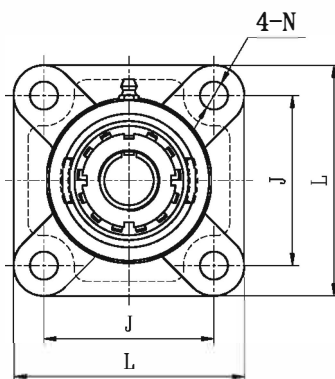
UCF3  
Setscrew type

| Unit No.                             | Shaft Dia.                |      | Dimensions(mm.). |     |    |    |     |     |    |    | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|------------------|-----|----|----|-----|-----|----|----|-----------|-------------------------------------|-------------|-----------|
|                                      | d                         |      | L                | J   | A2 | A1 | A   | E   | N  | S  |           |                                     |             |           |
|                                      | (in.)                     | (mm) |                  |     |    |    |     |     |    |    |           |                                     |             |           |
| UCF305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 108              | 80  | 16 | 13 | 29  | 39  | 16 | 15 | M14       | UC305-14<br>305-15<br>305<br>305-16 | F305        | 1.04      |
| UCF306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 125              | 95  | 18 | 15 | 32  | 44  | 16 | 17 | M14       | UC306-18<br>306<br>306-19           | F306        | 1.58      |
| UCF307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 135              | 100 | 20 | 16 | 36  | 49  | 19 | 19 | M16       | UC307-20<br>307-21<br>307-22<br>307 | F307        | 1.96      |
| UCF308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 150              | 112 | 23 | 17 | 40  | 56  | 19 | 19 | M16       | UC308-24<br>308-25<br>308           | F308        | 2.72      |
| UCF309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 160              | 125 | 25 | 18 | 44  | 60  | 19 | 22 | M16       | UC309-26<br>309-27<br>309-28<br>309 | F309        | 3.26      |
| UCF310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 175              | 132 | 28 | 20 | 48  | 67  | 23 | 22 | M20       | UC310-30<br>310-31<br>310           | F310        | 4.31      |
| UCF311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 185              | 140 | 30 | 20 | 52  | 71  | 23 | 25 | M20       | UC311-32<br>311-34<br>311<br>311-35 | F311        | 5.28      |
| UCF312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 193              | 150 | 33 | 22 | 56  | 78  | 23 | 26 | M20       | UC312-36<br>312<br>312-38<br>312-39 | F312        | 6.26      |
| UCF313-40<br>313                     | 2-1/2                     | 65   | 208              | 166 | 33 | 22 | 58  | 78  | 23 | 30 | M20       | UC313-40<br>313                     | F313        | 7.65      |
| UCF314-44<br>314                     | 2-3/4                     | 70   | 226              | 178 | 36 | 25 | 61  | 83  | 25 | 31 | M22       | UC314-44<br>314                     | F314        | 9.23      |
| UCF315<br>315-48                     | 3                         | 75   | 236              | 184 | 39 | 25 | 66  | 89  | 25 | 32 | M22       | UC315<br>315-48                     | F315        | 10.5      |
| UCF316                               |                           | 80   | 250              | 196 | 38 | 27 | 68  | 90  | 31 | 34 | M27       | UC316                               | F316        | 12.4      |
| UCF317-52<br>317                     | 3-1/4                     | 85   | 260              | 204 | 44 | 27 | 74  | 100 | 31 | 40 | M27       | UC317-52<br>317                     | F317        | 15.3      |
| UCF318-56<br>318                     | 3-1/2                     | 90   | 280              | 216 | 44 | 30 | 76  | 100 | 35 | 40 | M30       | UC318-56<br>318                     | F318        | 17.6      |
| UCF319<br>319-60                     | 3-3/4                     | 95   | 290              | 228 | 59 | 30 | 94  | 121 | 35 | 41 | M30       | UC319<br>319-60                     | F319        | 21.6      |
| UCF320<br>320-64                     | 4                         | 100  | 310              | 242 | 59 | 32 | 94  | 125 | 38 | 42 | M33       | UC320<br>320-64                     | F320        | 25.6      |
| UCF322                               |                           | 110  | 340              | 266 | 60 | 35 | 96  | 131 | 41 | 46 | M36       | UC322                               | F322        | 35.2      |
| UCF324                               |                           | 120  | 370              | 290 | 65 | 40 | 110 | 140 | 41 | 51 | M36       | UC324                               | F324        | 49.3      |
| UCF326                               |                           | 130  | 410              | 320 | 65 | 45 | 115 | 146 | 41 | 54 | M36       | UC326                               | F326        | 63.4      |
| UCF328                               |                           | 140  | 450              | 350 | 75 | 55 | 125 | 161 | 41 | 59 | M36       | UC328                               | F328        | 77.5      |



NAF3  
Eccentric locking collar type

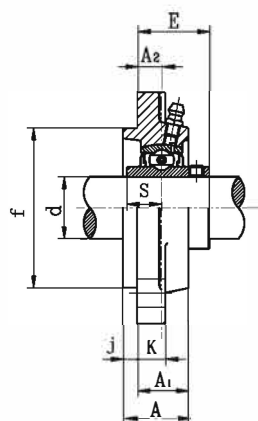
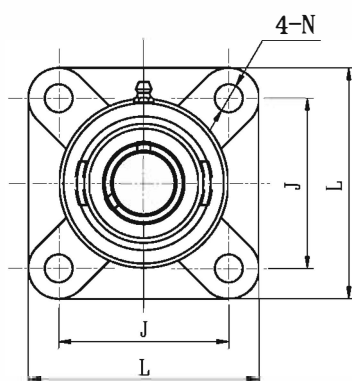
| Unit No.                             | Shaft Dia.                |      | Dimensions(mm). |     |    |    |    |       |    |       | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|-----------------|-----|----|----|----|-------|----|-------|-----------|-------------------------------------|-------------|-----------|
|                                      | d                         |      | L               | J   | A2 | A1 | A  | E     | N  | S     |           |                                     |             |           |
|                                      | (in.)                     | (mm) |                 |     |    |    |    |       |    |       |           |                                     |             |           |
| NAF305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 108             | 80  | 16 | 13 | 29 | 46.1  | 16 | 16.7  | M14       | NA305-14<br>305-15<br>305<br>305-16 | F305        | 1.11      |
| NAF306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 125             | 95  | 18 | 15 | 32 | 50.5  | 16 | 17.5  | M14       | NA306-18<br>306<br>306-19           | F306        | 1.72      |
| NAF307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 135             | 100 | 20 | 16 | 36 | 53.3  | 19 | 18.3  | M16       | NA307-20<br>307-21<br>307-22<br>307 | F307        | 2.06      |
| NAF308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 150             | 112 | 23 | 17 | 40 | 60.3  | 19 | 19.8  | M16       | NA308-24<br>308-25<br>308           | F308        | 2.86      |
| NAF309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 160             | 125 | 25 | 18 | 44 | 63.9  | 19 | 19.8  | M16       | NA309-26<br>309-27<br>309-28<br>309 | F309        | 3.39      |
| NAF310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 175             | 132 | 28 | 20 | 48 | 70    | 23 | 24.6  | M20       | NA310-30<br>310-31<br>310           | F310        | 4.53      |
| NAF311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 185             | 140 | 30 | 20 | 52 | 75.2  | 23 | 27.8  | M20       | NA311-32<br>311-34<br>311<br>311-35 | F311        | 5.53      |
| NAF312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 193             | 150 | 33 | 22 | 56 | 81.45 | 23 | 30.95 | M20       | NA312-36<br>312<br>312-38<br>312-39 | F312        | 6.57      |
| NAF313-40<br>313                     | 2-1/2                     | 65   | 208             | 166 | 33 | 22 | 58 | 86.2  | 23 | 32.5  | M20       | NA313-40<br>313                     | F313        | 8.17      |
| NAF314-44<br>314                     | 2-3/4                     | 70   | 226             | 178 | 36 | 25 | 61 | 93.95 | 25 | 34.15 | M22       | NA314-44<br>314                     | F314        | 9.89      |
| NAF315<br>315-48                     | 3                         | 75   | 236             | 184 | 39 | 25 | 66 | 101.7 | 25 | 37.3  | M22       | NA315<br>315-48                     | F315        | 11.5      |
| NAF316                               |                           | 80   | 250             | 196 | 38 | 27 | 68 | 103.9 | 31 | 40.5  | M27       | NA316                               | F316        | 13.5      |
| NAF317-52<br>317                     | 3-1/4                     | 85   | 260             | 204 | 44 | 27 | 74 | 111.5 | 31 | 42    | M27       | NA317-52<br>317                     | F317        | 16.3      |
| NAF318-56<br>318                     | 3-1/2                     | 90   | 280             | 216 | 44 | 30 | 76 | 116.3 | 35 | 43.6  | M30       | NA318-56<br>318                     | F318        | 19.0      |
| NAF319<br>319-60                     | 3-3/4                     | 95   | 290             | 228 | 59 | 30 | 94 | 134.5 | 35 | 46.8  | M30       | NA319<br>319-60                     | F319        | 23.0      |
| NAF320<br>320-64                     | 4                         | 100  | 310             | 242 | 59 | 32 | 94 | 137.6 | 38 | 50    | M33       | NA320<br>320-64                     | F320        | 27.9      |



**UKF3+H**  
Tapered bore, adapter type

| Unit No.                                               | Shaft Dia.                |      | Dimensions(mm). |     |                |                |     |       |    |                | Bolt Size | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|--------------------------------------------------------|---------------------------|------|-----------------|-----|----------------|----------------|-----|-------|----|----------------|-----------|-------------|-------------|-------------------------------------|-----------|
|                                                        | d                         |      | L               | J   | A <sub>2</sub> | A <sub>1</sub> | A   | E     | N  | S <sub>1</sub> |           |             |             |                                     |           |
|                                                        | (in.)                     | (mm) |                 |     |                |                |     |       |    |                |           |             |             |                                     |           |
| UKF305+HE2305<br>305+H2305                             | 3/4                       | 20   | 108             | 80  | 16             | 13             | 29  | 37.5  | 16 | 21.5           | M14       | UK305       | F305        | HE2305<br>H2305                     | 1.09      |
| UKF306+HS2306<br>306+HA2306<br>306+H2306<br>306+HE2306 | 7/8<br>15/16<br>1         | 25   | 125             | 95  | 18             | 15             | 32  | 41    | 16 | 23             | M14       | UK306       | F306        | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.65      |
| UKF307+HS2307<br>307+H2307<br>307+HA2307               | 1-1/8<br>1-3/16           | 30   | 135             | 100 | 20             | 16             | 36  | 45.5  | 19 | 25.5           | M16       | UK307       | F307        | HS2307<br>H2307<br>HA2307           | 2.00      |
| UKF308+HE2308<br>308+HS2308<br>308+H2308               | 1-1/4<br>1-3/8            | 35   | 150             | 112 | 23             | 17             | 40  | 50.5  | 19 | 27.5           | M16       | UK308       | F308        | HE2308<br>HS2308<br>H2308           | 2.77      |
| UKF309+HA2309<br>309+HE2309<br>309+H2309               | 1-7/16<br>1-1/2           | 40   | 160             | 125 | 25             | 18             | 44  | 55    | 19 | 30             | M16       | UK309       | F309        | HA2309<br>HE2309<br>H2309           | 3.40      |
| UKF310+HS2310<br>310+HA2310<br>310+HE2310<br>310+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 175             | 132 | 28             | 20             | 48  | 60    | 23 | 32             | M20       | UK310       | F310        | HS2310<br>HA2310<br>HE2310<br>H2310 | 4.35      |
| UKF311+HS2311<br>311+HA2311<br>311+H2311<br>311+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 185             | 140 | 30             | 20             | 52  | 63.5  | 23 | 33.5           | M20       | UK311       | F311        | HS2311<br>HA2311<br>H2311<br>HE2311 | 5.30      |
| UKF312+HS2312<br>312+H2312                             | 2-1/8                     | 55   | 193             | 150 | 33             | 22             | 56  | 69.5  | 23 | 36.5           | M20       | UK312       | F312        | HS2312<br>H2312                     | 6.26      |
| UKF313+HA2313<br>313+HE2313<br>313+H2313<br>313+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 208             | 166 | 33             | 22             | 58  | 71.5  | 23 | 38.5           | M20       | UK313       | F313        | HA2313<br>HE2313<br>H2313<br>HS2313 | 7.61      |
| UKF315+HA2315<br>315+HE2315<br>315+H2315               | 2-7/16<br>2-1/2           | 65   | 236             | 184 | 39             | 25             | 66  | 81.5  | 25 | 42.5           | M22       | UK315       | F315        | HA2315<br>HE2315<br>H2315           | 10.8      |
| UKF316+HA2316<br>316+HE2316<br>316+H2316               | 2-11/16<br>2-3/4          | 70   | 250             | 196 | 38             | 27             | 68  | 82.5  | 31 | 44.5           | M27       | UK316       | F316        | HA2316<br>HE2316<br>H2316           | 12.7      |
| UKF317+HA2317<br>317+H2317<br>317+HE2317               | 2-15/16<br>3              | 75   | 260             | 204 | 44             | 27             | 74  | 92    | 31 | 48             | M27       | UK317       | F317        | HA2317<br>H2317<br>HE2317           | 15.3      |
| UKF318+H2318                                           |                           | 80   | 280             | 216 | 44             | 30             | 76  | 92    | 35 | 48             | M30       | UK318       | F318        | H2318                               | 17.7      |
| UKF319+HE2319<br>319+H2319                             | 3-1/4                     | 85   | 290             | 228 | 59             | 30             | 94  | 111   | 35 | 52             | M30       | UK319       | F319        | HE2319<br>H2319                     | 21.4      |
| UKF320+HE2320<br>320+H2320                             | 3-1/2                     | 90   | 310             | 242 | 59             | 32             | 94  | 113   | 38 | 54             | M33       | UK320       | F320        | HE2320<br>H2320                     | 25.6      |
| UKF322+H2322                                           |                           | 100  | 340             | 266 | 60             | 35             | 96  | 121   | 41 | 61             | M36       | UK322       | F322        | H2322                               | 35.2      |
| UKF324+H2324                                           |                           | 110  | 370             | 290 | 65             | 40             | 110 | 130.5 | 41 | 65.5           | M36       | UK324       | F324        | H2324                               | 48.9      |
| UKF326+H2326                                           |                           | 115  | 410             | 320 | 65             | 45             | 115 | 133   | 41 | 68             | M36       | UK326       | F326        | H2326                               | 63.2      |
| UKF328+H2328                                           |                           | 125  | 450             | 350 | 75             | 55             | 125 | 148   | 41 | 73             | M36       | UK328       | F328        | H2328                               | 77.3      |

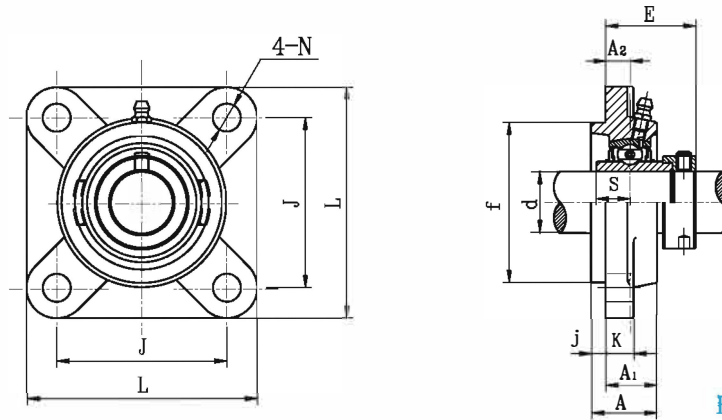
# SQUARE FLANGE CARTRIDGE UNITS



UCFS3  
Setscrew type

| Unit No.                              | Shaft Dia.                |      | Dimensions(mm). |     |                |                |     |    |    |    |     |    |     | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|---------------------------------------|---------------------------|------|-----------------|-----|----------------|----------------|-----|----|----|----|-----|----|-----|-----------|-------------------------------------|-------------|-----------|
|                                       | d                         |      | L               | J   | A <sub>2</sub> | A <sub>1</sub> | A   | j  | K  | N  | f   | S  | E   |           |                                     |             |           |
|                                       | (in.)                     | (mm) |                 |     |                |                |     |    |    |    |     |    |     |           |                                     |             |           |
| UCFS305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 110             | 80  | 9              | 22             | 29  | 7  | 13 | 16 | 80  | 15 | 32  | M14       | UC305-14<br>305-15<br>305<br>305-16 | FS305       | 1.19      |
| UCFS306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 125             | 95  | 10             | 24             | 32  | 8  | 15 | 16 | 90  | 17 | 36  | M14       | UC306-18<br>306<br>306-19           | FS306       | 1.77      |
| UCFS307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 135             | 100 | 11             | 27             | 36  | 9  | 16 | 19 | 100 | 19 | 40  | M16       | UC307-20<br>307-21<br>307-22<br>307 | FS307       | 2.19      |
| UCFS308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 150             | 112 | 13             | 30             | 40  | 10 | 17 | 19 | 115 | 19 | 46  | M16       | UC308-24<br>308-25<br>308           | FS308       | 3.10      |
| UCFS309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 160             | 125 | 14             | 33             | 44  | 11 | 18 | 19 | 125 | 22 | 49  | M16       | UC309-26<br>309-27<br>309-28<br>309 | FS309       | 3.80      |
| UCFS310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 175             | 132 | 16             | 36             | 48  | 12 | 19 | 23 | 140 | 22 | 55  | M20       | UC310-30<br>310-31<br>310           | FS310       | 4.95      |
| UCFS311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 185             | 140 | 17             | 39             | 52  | 13 | 20 | 23 | 150 | 25 | 58  | M20       | UC311-32<br>311-34<br>311<br>311-35 | FS311       | 5.86      |
| UCFS312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 195             | 150 | 19             | 42             | 56  | 14 | 22 | 23 | 160 | 26 | 64  | M20       | UC312-36<br>312<br>312-38<br>312-39 | FS312       | 7.52      |
| UCFS313-40<br>313                     | 2-1/2                     | 65   | 208             | 166 | 15             | 40             | 58  | 18 | 22 | 23 | 175 | 30 | 60  | M20       | UC313-40<br>313                     | FS313       | 8.68      |
| UCFS314-44<br>314                     | 2-3/4                     | 70   | 226             | 178 | 18             | 43             | 61  | 18 | 25 | 25 | 185 | 31 | 65  | M22       | UC314-44<br>314                     | FS314       | 10.7      |
| UCFS315<br>315-48                     | 3                         | 75   | 236             | 184 | 21             | 48             | 66  | 18 | 25 | 25 | 200 | 32 | 71  | M22       | UC315<br>315-48                     | FS315       | 12.5      |
| UCFS316                               |                           | 80   | 250             | 196 | 18             | 48             | 68  | 20 | 27 | 31 | 210 | 34 | 70  | M27       | UC316                               | FS316       | 14.4      |
| UCFS317-52<br>317                     | 3-1/4                     | 85   | 260             | 204 | 24             | 54             | 74  | 20 | 27 | 31 | 220 | 40 | 80  | M27       | UC317-52<br>317                     | FS317       | 17.1      |
| UCFS318-56<br>318                     | 3-1/2                     | 90   | 280             | 216 | 24             | 56             | 76  | 20 | 30 | 35 | 240 | 40 | 80  | M30       | UC318-56<br>318                     | FS318       | 20.8      |
| UCFS319<br>319-60                     | 3-3/4                     | 95   | 290             | 228 | 39             | 74             | 94  | 20 | 30 | 35 | 250 | 41 | 101 | M30       | UC319<br>319-60                     | FS319       | 24.8      |
| UCFS320<br>320-64                     | 4                         | 100  | 310             | 242 | 39             | 74             | 94  | 20 | 32 | 38 | 260 | 42 | 105 | M33       | UC320<br>320-64                     | FS320       | 29.3      |
| UCFS322                               |                           | 110  | 340             | 266 | 35             | 71             | 96  | 25 | 35 | 41 | 300 | 46 | 106 | M36       | UC322                               | FS322       | 39.0      |
| UCFS324                               |                           | 120  | 370             | 290 | 35             | 80             | 110 | 30 | 40 | 41 | 330 | 51 | 110 | M36       | UC324                               | FS324       | 52.6      |
| UCFS326                               |                           | 130  | 410             | 320 | 35             | 85             | 115 | 30 | 45 | 41 | 360 | 54 | 116 | M36       | UC326                               | FS326       | 69.7      |
| UCFS328                               |                           | 140  | 450             | 350 | 45             | 95             | 125 | 30 | 55 | 41 | 400 | 59 | 131 | M36       | UC328                               | FS328       | 93.1      |

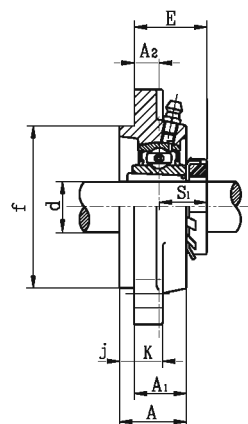
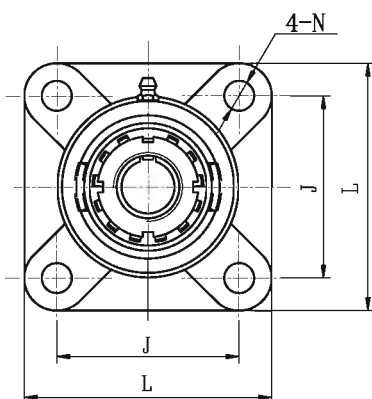
# SQUARE FLANGE CARTRIDGE UNITS



**NAFS3**  
Eccentric locking collar type

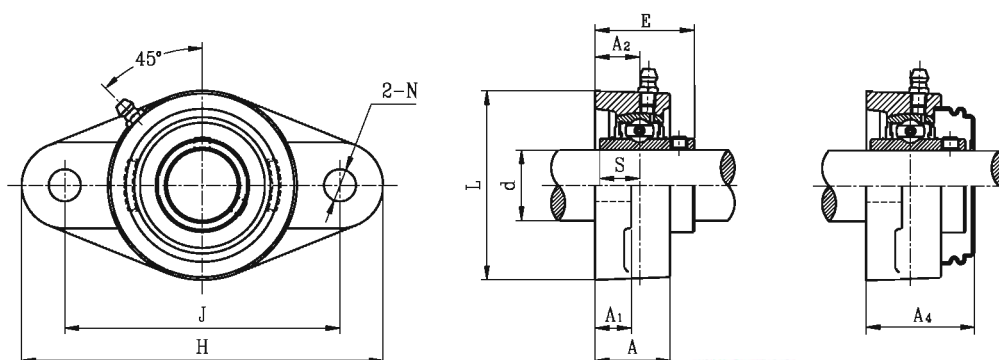
| Unit No.                              | Shaft Dia.                |      | Dimensions(mm). |     |                |                |    |    |    |    |     |       |       | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|---------------------------------------|---------------------------|------|-----------------|-----|----------------|----------------|----|----|----|----|-----|-------|-------|-----------|-------------------------------------|-------------|-----------|
|                                       | d                         |      | L               | J   | A <sub>2</sub> | A <sub>1</sub> | A  | j  | K  | N  | f   | S     | E     |           |                                     |             |           |
|                                       | (in.)                     | (mm) |                 |     |                |                |    |    |    |    |     |       |       |           |                                     |             |           |
| NAFS305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 110             | 80  | 9              | 22             | 29 | 7  | 13 | 16 | 80  | 16.7  | 39.1  | M14       | NA305-14<br>305-15<br>305<br>305-16 | FS305       | 1.26      |
| NAFS306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 125             | 95  | 10             | 24             | 32 | 8  | 15 | 16 | 90  | 17.5  | 42.5  | M14       | NA306-18<br>306<br>306-19           | FS306       | 1.91      |
| NAFS307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 135             | 100 | 11             | 27             | 36 | 9  | 16 | 19 | 100 | 18.3  | 44.3  | M16       | NA307-20<br>307-21<br>307-22<br>307 | FS307       | 2.29      |
| NAFS308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 150             | 112 | 13             | 30             | 40 | 10 | 17 | 19 | 115 | 19.8  | 50.3  | M16       | NA308-24<br>308-25<br>308           | FS308       | 3.24      |
| NAFS309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 160             | 125 | 14             | 33             | 44 | 11 | 18 | 19 | 125 | 19.8  | 52.9  | M16       | NA309-26<br>309-27<br>309-28<br>309 | FS309       | 3.93      |
| NAFS310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 175             | 132 | 16             | 36             | 48 | 12 | 19 | 23 | 140 | 24.6  | 58    | M20       | NA310-30<br>310-31<br>310           | FS310       | 5.17      |
| NAFS311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 185             | 140 | 17             | 39             | 52 | 13 | 20 | 23 | 150 | 27.8  | 62.2  | M20       | NA311-32<br>311-34<br>311<br>311-35 | FS311       | 6.11      |
| NAFS312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 195             | 150 | 19             | 42             | 56 | 14 | 22 | 23 | 160 | 30.95 | 67.5  | M20       | NA312-36<br>312<br>312-38<br>312-39 | FS312       | 7.83      |
| NAFS313-40<br>313                     | 2-1/2                     | 65   | 208             | 166 | 15             | 40             | 58 | 18 | 22 | 23 | 175 | 32.5  | 68.2  | M20       | NA313-40<br>313                     | FS313       | 9.20      |
| NAFS314-44<br>314                     | 2-3/4                     | 70   | 226             | 178 | 18             | 43             | 61 | 18 | 25 | 25 | 185 | 34.15 | 76    | M22       | NA314-44<br>314                     | FS314       | 11.4      |
| NAFS315<br>315-48                     | 3                         | 75   | 236             | 184 | 21             | 48             | 66 | 18 | 25 | 25 | 200 | 37.3  | 83.7  | M22       | NA315<br>315-48                     | FS315       | 13.4      |
| NAFS316                               |                           | 80   | 250             | 196 | 18             | 48             | 68 | 20 | 27 | 31 | 210 | 40.5  | 83.9  | M27       | NA316                               | FS316       | 15.5      |
| NAFS317-52<br>317                     | 3-1/4                     | 85   | 260             | 204 | 24             | 54             | 74 | 20 | 27 | 31 | 220 | 42    | 91.5  | M27       | NA317-52<br>317                     | FS317       | 18.1      |
| NAFS318-56<br>318                     | 3-1/2                     | 90   | 280             | 216 | 24             | 56             | 76 | 20 | 30 | 35 | 240 | 43.6  | 96.3  | M30       | NA318-56<br>318                     | FS318       | 22.2      |
| NAFS319<br>319-60                     | 3-3/4                     | 95   | 290             | 228 | 39             | 74             | 94 | 20 | 30 | 35 | 250 | 46.8  | 114.5 | M30       | NA319<br>319-60                     | FS319       | 26.2      |
| NAFS320<br>320-64                     | 4                         | 100  | 310             | 242 | 39             | 74             | 94 | 20 | 32 | 38 | 260 | 50    | 117.6 | M33       | NA320<br>320-64                     | FS320       | 31.7      |

# SQUARE FLANGE CARTRIDGE UNITS



**UKFS3+H**  
Tapered bore, adapter type

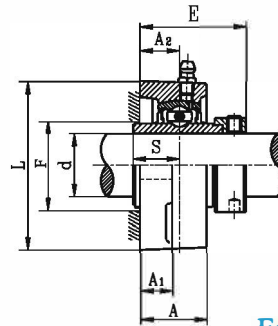
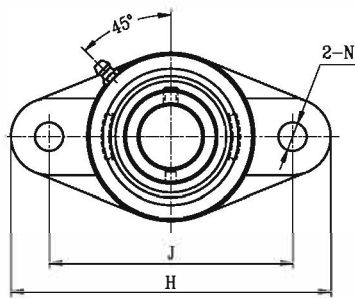
| Unit No.                                                | Shaft Dia.                |      | Dimensions(mm). |     |    |    |     |    |    |    |     |      |       | Bolt Size | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|---------------------------------------------------------|---------------------------|------|-----------------|-----|----|----|-----|----|----|----|-----|------|-------|-----------|-------------|-------------|-------------------------------------|-----------|
|                                                         | d                         |      | L               | J   | A2 | A1 | A   | j  | K  | N  | f   | S1   | E     |           |             |             |                                     |           |
|                                                         | (in.)                     | (mm) |                 |     |    |    |     |    |    |    |     |      |       |           |             |             |                                     |           |
| UKFS305+HE2305<br>305+H2305                             | 3/4                       | 20   | 110             | 80  | 9  | 22 | 29  | 7  | 13 | 16 | 80  | 21.5 | 30.5  | M14       | UK305       | FS305       | HE2305<br>H2305                     | 1.24      |
| UKFS306+HS2306<br>306+HA2306<br>306+H2306<br>306+HE2306 | 7/8<br>15/16<br>1         | 25   | 125             | 95  | 10 | 24 | 32  | 8  | 15 | 16 | 90  | 23   | 33    | M14       | UK306       | FS306       | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.82      |
| UKFS307+HS2307<br>307+H2307<br>307+HA2307               | 1-1/8<br>1-3/16           | 30   | 135             | 100 | 11 | 27 | 36  | 9  | 16 | 19 | 100 | 25.5 | 36.5  | M16       | UK307       | FS307       | HS2307<br>H2307<br>HA2307           | 2.23      |
| UKFS308+HE2308<br>308+HS2308<br>308+H2308               | 1-1/4<br>1-3/8            | 35   | 150             | 112 | 13 | 30 | 40  | 10 | 17 | 19 | 115 | 27.5 | 40.5  | M16       | UK308       | FS308       | HE2308<br>HS2308<br>H2308           | 3.15      |
| UKFS309+HA2309<br>309+HE2309<br>309+H2309               | 1-7/16<br>1-1/2           | 40   | 160             | 125 | 14 | 33 | 44  | 11 | 18 | 19 | 125 | 30   | 44    | M16       | UK309       | FS309       | HA2309<br>HE2309<br>H2309           | 3.94      |
| UKFS310+HS2310<br>310+HA2310<br>310+HE2310<br>310+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 175             | 132 | 16 | 36 | 48  | 12 | 19 | 23 | 140 | 32   | 48    | M20       | UK310       | FS310       | HS2310<br>HA2310<br>HE2310<br>H2310 | 4.99      |
| UKFS311+HS2311<br>311+HA2311<br>311+H2311<br>311+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 185             | 140 | 17 | 39 | 52  | 13 | 20 | 23 | 150 | 33.5 | 50.5  | M20       | UK311       | FS311       | HS2311<br>HA2311<br>H2311<br>HE2313 | 5.88      |
| UKFS312+HS2312<br>312+H2312                             | 2-1/8                     | 55   | 195             | 150 | 19 | 42 | 56  | 14 | 22 | 23 | 160 | 36.5 | 55.5  | M20       | UK312       | FS312       | HS2312<br>H2312                     | 7.52      |
| UKFS313+HA2313<br>313+HE2313<br>313+H2313<br>313+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 208             | 166 | 15 | 40 | 58  | 18 | 22 | 23 | 175 | 38.5 | 53.5  | M20       | UK313       | FS313       | HA2313<br>HE2313<br>H2313<br>HS2313 | 8.64      |
| UKFS315+HA2315<br>315+HE2315<br>315+H2315               | 2-7/16<br>2-1/2           | 65   | 236             | 184 | 21 | 48 | 66  | 18 | 25 | 25 | 200 | 42.5 | 63.5  | M22       | UK315       | FS315       | HA2315<br>HE2315<br>H2315           | 12.8      |
| UKFS316+HA2316<br>316+HE2316<br>316+H2316               | 2-11/16<br>2-3/4          | 70   | 250             | 196 | 18 | 48 | 68  | 20 | 27 | 31 | 210 | 44.5 | 62.5  | M27       | UK316       | FS316       | HA2316<br>HE2316<br>H2316           | 14.7      |
| UKFS317+HA2317<br>317+H2317<br>317+HE2317               | 2-15/16<br>3              | 75   | 260             | 204 | 24 | 54 | 74  | 20 | 27 | 31 | 220 | 48   | 72    | M27       | UK317       | FS317       | HA2317<br>H2317<br>HE2317           | 17.1      |
| UKFS318+H2318                                           |                           | 80   | 280             | 216 | 24 | 56 | 76  | 20 | 30 | 35 | 240 | 48   | 72    | M30       | UK318       | FS318       | H2318                               | 20.9      |
| UKFS319+HE2319<br>319+H2319                             | 3-1/4                     | 85   | 290             | 228 | 39 | 74 | 94  | 20 | 30 | 35 | 250 | 52   | 91    | M30       | UK319       | FS319       | HE2319<br>H2319                     | 24.6      |
| UKFS320+HE2320<br>320+H2320                             | 3-1/2                     | 90   | 310             | 242 | 39 | 74 | 94  | 20 | 32 | 38 | 260 | 54   | 93    | M33       | UK320       | FS320       | HE2320<br>H2320                     | 29.4      |
| UKFS322+H2322                                           |                           | 100  | 340             | 266 | 35 | 71 | 96  | 25 | 35 | 41 | 300 | 61   | 96    | M36       | UK322       | FS322       | H2322                               | 38.9      |
| UKFS324+H2324                                           |                           | 110  | 370             | 290 | 35 | 80 | 110 | 30 | 40 | 41 | 330 | 65.5 | 100.5 | M36       | UK324       | FS324       | H2324                               | 52.2      |
| UKFS326+H2326                                           |                           | 115  | 410             | 320 | 35 | 85 | 115 | 30 | 45 | 41 | 360 | 68   | 103   | M36       | UK326       | FS326       | H2326                               | 69.5      |
| UKFS328+H2328                                           |                           | 125  | 450             | 350 | 45 | 95 | 125 | 30 | 55 | 41 | 400 | 73   | 118   | M36       | UK328       | FS328       | H2328                               | 92.9      |



UCFL2  
Setscrew type

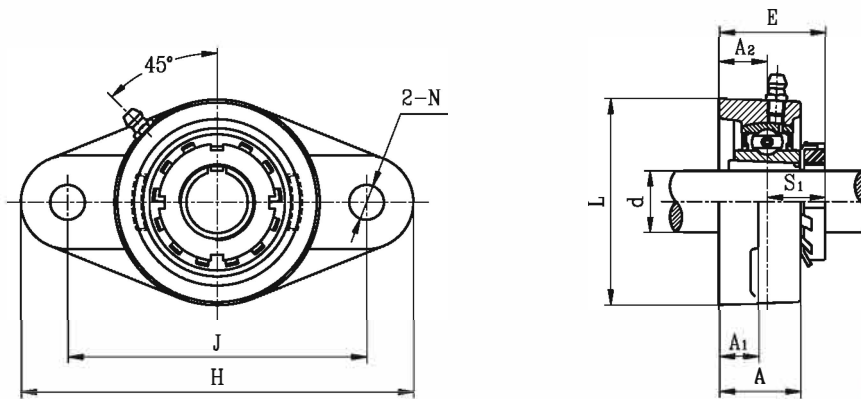
S-UCFL200E1  
SM-UCFL200E1  
With end cover

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |      |     |    |    |      |      |      |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    | Available |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|------|-----|----|----|------|------|------|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|-----------|
|                                                                     | d                                  |                      | H               | J    | L   | A2 | A1 | A    | E    | N    | S    | A4   |           |                                                                   |             |                              | N         |
|                                                                     | (in.)                              | (mm)                 |                 |      |     |    |    |      |      |      |      |      |           |                                                                   |             |                              |           |
| UCFL201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 99              | 76.5 | 57  | 15 | 11 | 24.5 | 30.9 | 11.5 | 11.5 | --   | M10       | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FL203       | 0.37<br>0.36<br>0.35         | --        |
| UCFL201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 113             | 90   | 60  | 15 | 11 | 25.5 | 33.3 | 11.5 | 12.7 | 37.5 | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FL204       | 0.47<br>0.45<br>0.44<br>0.42 | 12        |
| UCFL205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 130             | 99   | 68  | 16 | 13 | 27   | 35.7 | 11.5 | 14.3 | 40   | M10       | UC205-14<br>205-15<br>205<br>205-16                               | FL205       | 0.61                         | 16        |
| UCFL206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 148             | 117  | 80  | 18 | 13 | 31   | 40.2 | 11.5 | 15.9 | 44   | M10       | UC206-18<br>206<br>206-19<br>206-20                               | FL206       | 0.90                         | 16        |
| UCFL207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 161             | 130  | 90  | 19 | 14 | 34   | 44.4 | 14   | 17.5 | 48.5 | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | FL207       | 1.21                         | 16        |
| UCFL208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 175             | 144  | 100 | 21 | 14 | 36   | 51.2 | 14   | 19   | 55   | M12       | UC208-24<br>208-25<br>208                                         | FL208       | 1.55                         | 16        |
| UCFL209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 188             | 148  | 108 | 22 | 16 | 38   | 52.2 | 18   | 19   | 57   | M16       | UC209-26<br>209-27<br>209-28<br>209                               | FL209       | 1.87                         | 19        |
| UCFL210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 197             | 157  | 115 | 22 | 16 | 40   | 54.6 | 18   | 19   | 60   | M16       | UC210-30<br>210-31<br>210<br>210-32                               | FL210       | 2.16                         | 19        |
| UCFL211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 224             | 184  | 130 | 25 | 18 | 43   | 58.4 | 18   | 22.2 | 64   | M16       | UC211-32<br>211-34<br>211<br>211-35                               | FL211       | 2.89                         | 19        |
| UCFL212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 250             | 202  | 140 | 29 | 18 | 48   | 68.7 | 18   | 25.4 | 74.5 | M16       | UC212-36<br>212<br>212-38<br>212-39                               | FL212       | 3.75                         | 23        |
| UCFL213-40<br>213                                                   | 2-1/2                              | 65                   | 258             | 210  | 155 | 30 | 20 | 50   | 69.7 | 23   | 25.4 | 79   | M20       | UC213-40<br>213                                                   | FL213       | 4.68                         | --        |
| UCFL214-44<br>214                                                   | 2-3/4                              | 70                   | 265             | 216  | 160 | 31 | 20 | 54   | 75.4 | 23   | 30.2 | --   | M20       | UC214-44<br>214                                                   | FL214       | 5.26                         | --        |
| UCFL215-47<br>215<br>215-48                                         | 2-15/16<br>3                       | 75                   | 275             | 225  | 164 | 34 | 22 | 55   | 78.5 | 23   | 33.3 | --   | M20       | UC215-47<br>215<br>215-48                                         | FL215       | 5.38                         | --        |
| UCFL216                                                             |                                    | 80                   | 290             | 233  | 180 | 34 | 22 | 58   | 83.3 | 25   | 33.3 | --   | M22       | UC216                                                             | FL216       | 6.76                         | --        |
| UCFL217-52<br>217                                                   | 3-1/4                              | 85                   | 305             | 248  | 190 | 36 | 22 | 63   | 87.6 | 25   | 34.1 | --   | M22       | UC217-52<br>217                                                   | FL217       | 8.48                         | --        |
| UCFL218-56<br>218                                                   | 3-1/2                              | 90                   | 320             | 265  | 205 | 40 | 23 | 68   | 96.3 | 25   | 39.7 | --   | M22       | UC218-56<br>218                                                   | FL218       | 10.3                         | --        |



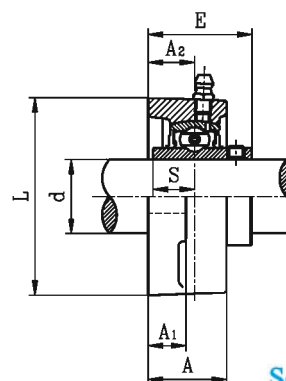
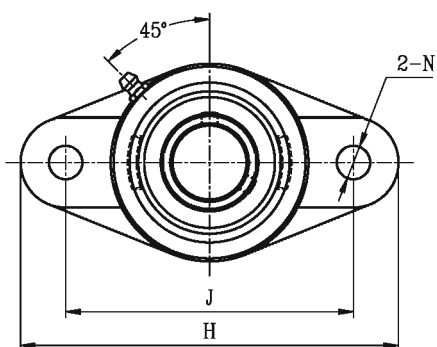
**NAFL2**  
Eccentric locking collar type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |      |     |                |                |      |      |      |      |        | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    | Available |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|------|-----|----------------|----------------|------|------|------|------|--------|-----------|-------------------------------------------------------------------|-------------|------------------------------|-----------|
|                                                                     | d (in.)                            | d (mm)               | H               | J    | L   | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S    | F min. |           |                                                                   |             |                              | N         |
| NAFL201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 99              | 76.5 | 57  | 15             | 11             | 24.5 | 38.4 | 11.5 | 13.9 | —      | M10       | NA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FL203       | 0.48<br>0.47<br>0.45         | —         |
| NAFL201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 113             | 90   | 60  | 15             | 11             | 25.5 | 41.5 | 11.5 | 17   | 31     | M10       | NA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FL204       | 0.54<br>0.51<br>0.50<br>0.47 | 12        |
| NAFL205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 130             | 99   | 68  | 16             | 13             | 27   | 42.9 | 11.5 | 17.4 | 36     | M10       | NA205-14<br>205-15<br>205<br>205-16                               | FL205       | 0.66                         | 16        |
| NAFL206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 148             | 117  | 80  | 18             | 13             | 31   | 48.1 | 11.5 | 18.2 | 42     | M10       | NA206-18<br>206<br>206-19<br>206-20                               | FL206       | 0.97                         | 16        |
| NAFL207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 161             | 130  | 90  | 19             | 14             | 34   | 51.3 | 14   | 18.8 | 50     | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23                     | FL207       | 1.28                         | 16        |
| NAFL208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 175             | 144  | 100 | 21             | 14             | 36   | 55.9 | 14   | 21.4 | 55     | M12       | NA208-24<br>208-25<br>208                                         | FL208       | 1.66                         | 16        |
| NAFL209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 188             | 148  | 108 | 22             | 16             | 38   | 56.9 | 18   | 21.4 | —      | M16       | NA209-26<br>209-27<br>209-28<br>209                               | FL209       | 1.99                         | 19        |
| NAFL210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 197             | 157  | 115 | 22             | 16             | 40   | 60.1 | 18   | 24.6 | 64     | M16       | NA210-30<br>210-31<br>210                                         | FL210       | 2.33                         | 19        |
| NAFL211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 224             | 184  | 130 | 25             | 18             | 43   | 68.6 | 18   | 27.7 | 71     | M16       | NA211-32<br>211-34<br>211<br>211-35                               | FL211       | 3.14                         | 19        |
| NAFL212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 250             | 202  | 140 | 29             | 18             | 48   | 75.8 | 18   | 30.9 | 77     | M16       | NA212-36<br>212<br>212-38<br>212-39                               | FL212       | 4.03                         | 23        |
| NAFL213-40<br>213                                                   | 2-1/2                              | 65                   | 258             | 210  | 155 | 30             | 20             | 50   | 81.6 | 23   | 34.1 | 84     | M20       | NA213-40<br>213                                                   | FL213       | 5.07                         | —         |
| NAFL214-44<br>214                                                   | 2-3/4                              | 70                   | 265             | 216  | 160 | 31             | 20             | 54   | 82.6 | 23   | 34.1 | 89     | M20       | NA214-44<br>214                                                   | FL214       | 5.30                         | —         |
| NAFL215<br>215-48                                                   | 3                                  | 75                   | 275             | 225  | 164 | 34             | 22             | 55   | 88.8 | 23   | 37.3 | 94     | M20       | NA215<br>215-48                                                   | FL215       | 5.84                         | —         |
| NAFL216                                                             |                                    | 80                   | 290             | 233  | 180 | 34             | 22             | 58   | 91.9 | 25   | 37.3 | 101    | M22       | NA216                                                             | FL216       | 7.38                         | —         |
| NAFL217-52<br>217                                                   | 3-1/4                              | 85                   | 305             | 248  | 190 | 36             | 22             | 63   | 85.8 | 25   | 23.4 | —      | M22       | NA217-52<br>217                                                   | FL217       | 8.69                         | —         |
| NAFL218-56<br>218                                                   | 3-1/2                              | 90                   | 320             | 265  | 205 | 40             | 23             | 68   | 88   | 25   | 24.5 | —      | M22       | NA218-56<br>218                                                   | FL218       | 9.97                         | —         |

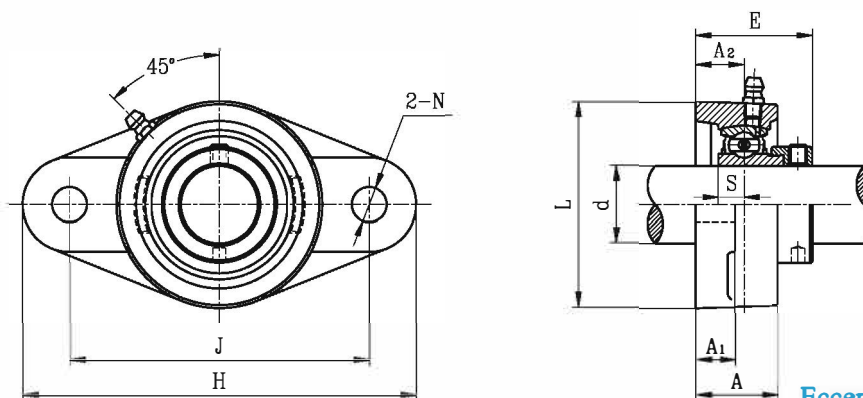


**UKFL2+H**  
Tapered bore, adapter type

| Unit No.                                                | Shaft Dia.                |      | Dimensions(mm). |     |     |                |                |    |      |      |                |     | Bolt Size | Bearing No. | Housing No.                         | Adapter No. | Mass (kg) | Available |
|---------------------------------------------------------|---------------------------|------|-----------------|-----|-----|----------------|----------------|----|------|------|----------------|-----|-----------|-------------|-------------------------------------|-------------|-----------|-----------|
|                                                         | d                         |      | H               | J   | L   | A <sub>2</sub> | A <sub>1</sub> | A  | E    | N    | S <sub>1</sub> | N   |           |             |                                     |             |           |           |
|                                                         | (in.)                     | (mm) |                 |     |     |                |                |    |      |      |                |     |           |             |                                     |             |           |           |
| UKFL205+HE2305<br>205+H2305                             | 3/4                       | 20   | 130             | 99  | 68  | 16             | 13             | 27 | 34.5 | 11.5 | 18.5           | M10 | UK205     | FL205       | HE2305<br>H2305                     | 0.65        | 16        |           |
| UKFL206+HS2306<br>206+HA2306<br>206+H2306<br>206+HE2306 | 7/8<br>15/16<br>1         | 25   | 148             | 117 | 80  | 18             | 13             | 31 | 38.5 | 11.5 | 20.5           | M10 | UK206     | FL206       | HS2306<br>HA2306<br>H2306<br>HE2306 | 0.97        | 16        |           |
| UKFL207+HS2307<br>207+H2307<br>207+HA2307               | 1-1/8<br>1-3/16           | 30   | 161             | 130 | 90  | 19             | 14             | 34 | 41.5 | 14   | 22.5           | M12 | UK207     | FL207       | HS2307<br>H2307<br>HA2307           | 1.26        | 16        |           |
| UKFL208+HE2308<br>208+HS2308<br>208+H2308               | 1-1/4<br>1-3/8            | 35   | 175             | 144 | 100 | 21             | 14             | 36 | 45.5 | 14   | 24.5           | M12 | UK208     | FL208       | HE2308<br>HS2308<br>H2308           | 1.61        | 16        |           |
| UKFL209+HA2309<br>209+HE2309<br>209+H2309               | 1-7/16<br>1-1/2           | 40   | 188             | 148 | 108 | 22             | 16             | 38 | 48   | 18   | 26             | M16 | UK209     | FL209       | HA2309<br>HE2309<br>H2309           | 1.98        | 19        |           |
| UKFL210+HS2310<br>210+HA2310<br>210+HE2310<br>210+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 197             | 157 | 115 | 22             | 16             | 40 | 49.5 | 18   | 27.5           | M16 | UK210     | FL210       | HS2310<br>HA2310<br>HE2310<br>H2310 | 2.34        | 19        |           |
| UKFL211+HS2311<br>211+HA2311<br>211+H2311<br>211+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 224             | 184 | 130 | 25             | 18             | 43 | 53.5 | 18   | 28.5           | M16 | UK211     | FL211       | HS2311<br>HA2311<br>H2311<br>HE2311 | 3.05        | 19        |           |
| UKFL212+HS2312<br>212+H2312                             | 2-1/8                     | 55   | 250             | 202 | 140 | 29             | 18             | 48 | 60   | 18   | 31             | M16 | UK212     | FL212       | HS2312<br>H2312                     | 3.85        | 23        |           |
| UKFL213+HA2313<br>213+HE2313<br>213+H2313<br>213+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 258             | 210 | 155 | 30             | 20             | 50 | 62   | 23   | 32             | M20 | UK213     | FL213       | HA2313<br>HE2313<br>H2313<br>HS2313 | 4.76        | --        |           |
| UKFL215+HA2315<br>215+HE2315<br>215+H2315               | 2-7/16<br>2-1/2           | 65   | 275             | 225 | 164 | 34             | 22             | 55 | 69.5 | 23   | 35.5           | M20 | UK215     | FL215       | HA2315<br>HE2315<br>H2315           | 5.75        | --        |           |
| UKFL216+HA2316<br>216+HE2316<br>216+H2316               | 2-11/16<br>2-3/4          | 70   | 290             | 233 | 180 | 34             | 22             | 58 | 73   | 25   | 39             | M22 | UK216     | FL216       | HA2316<br>HE2316<br>H2316           | 7.23        | --        |           |
| UKFL217+H2317                                           |                           | 75   | 305             | 248 | 190 | 36             | 22             | 63 | 76   | 25   | 40             | M22 | UK217     | FL217       | H2317                               | 8.87        | --        |           |
| UKFL218+H2318                                           |                           | 80   | 320             | 265 | 205 | 40             | 23             | 68 | 82   | 25   | 42             | M22 | UK218     | FL218       | H2318                               | 10.7        | --        |           |

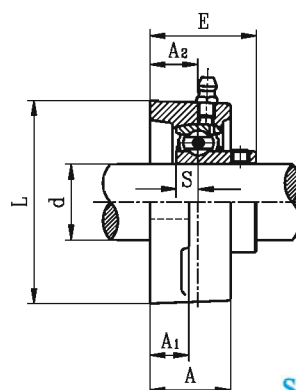
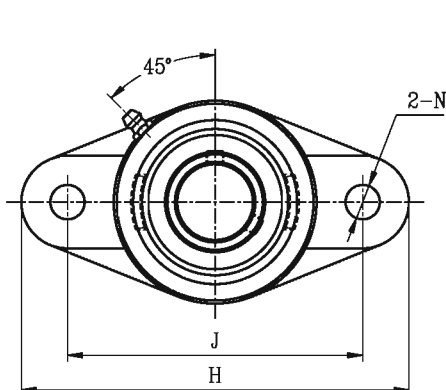


| Unit No.                              | Shaft Dia.                |      | Dimensions(mm). |     |     |                |                |    |      |    |      | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|---------------------------------------|---------------------------|------|-----------------|-----|-----|----------------|----------------|----|------|----|------|-----------|-------------------------------------|-------------|-----------|
|                                       | d                         |      | H               | J   | L   | A <sub>2</sub> | A <sub>1</sub> | A  | E    | N  | S    |           |                                     |             |           |
|                                       | (in.)                     | (mm) |                 |     |     |                |                |    |      |    |      |           |                                     |             |           |
| UCFLX05-14<br>X05-15<br>X05<br>X05-16 | 7/8<br>15/16<br>1         | 25   | 141             | 117 | 83  | 18             | 13             | 30 | 40.2 | 12 | 15.9 | M10       | UCX05-14<br>X05-15<br>X05<br>X05-16 | FLX05       | 0.97      |
| UCFLX06-18<br>X06<br>X06-19<br>X06-20 | 1-1/8<br>1-3/16<br>1-1/4  | 30   | 156             | 130 | 95  | 19             | 14             | 34 | 44.4 | 16 | 17.5 | M14       | UCX06-18<br>X06<br>X06-19<br>X06-20 | FLX06       | 1.31      |
| UCFLX07-22<br>X07<br>X07-23           | 1-3/8<br>1-7/16           | 35   | 171             | 144 | 105 | 21             | 14             | 38 | 51.2 | 16 | 19   | M14       | UCX07-22<br>X07<br>X07-23           | FLX07       | 1.76      |
| UCFLX08-24<br>X08-25<br>X08           | 1-1/2<br>1-9/16           | 40   | 179             | 148 | 111 | 22             | 14             | 40 | 52.2 | 16 | 19   | M14       | UCX08-24<br>X08-25<br>X08           | FLX08       | 2.03      |
| UCFLX09-26<br>X09-27<br>X09-28<br>X09 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 189             | 157 | 116 | 23             | 14             | 40 | 55.6 | 16 | 19   | M14       | UCX09-26<br>X09-27<br>X09-28<br>X09 | FLX09       | 2.17      |
| UCFLX10-30<br>X10-31<br>X10<br>X10-32 | 1-7/8<br>1-15/16<br>2     | 50   | 216             | 184 | 133 | 26             | 20             | 44 | 59.4 | 19 | 22.2 | M16       | UCX10-30<br>X10-31<br>X10<br>X10-32 | FLX10       | 3.25      |



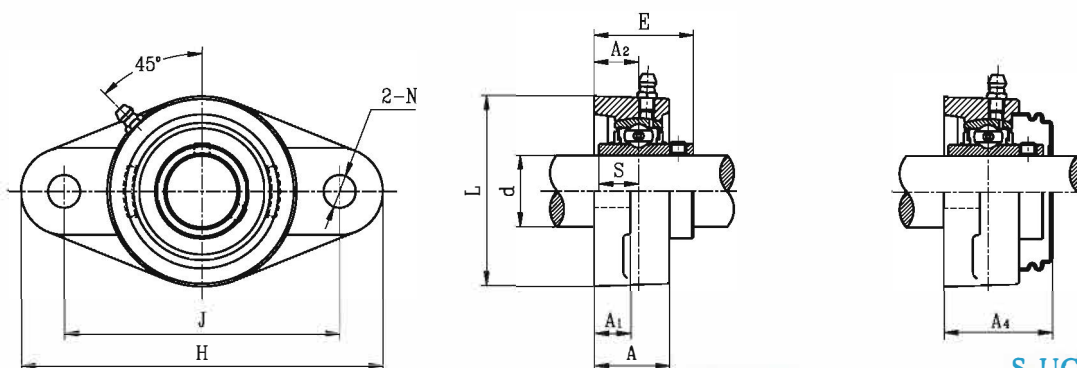
**SAFL2G**  
Eccentric locking collar type

| Unit No.                                                 | Shaft Dia.                             |                | Dimensions(mm). |      |     |                |                |      |      |      |     |     | Bolt Size                                              | Bearing No. | Housing No.          | Mass (kg) | Available |
|----------------------------------------------------------|----------------------------------------|----------------|-----------------|------|-----|----------------|----------------|------|------|------|-----|-----|--------------------------------------------------------|-------------|----------------------|-----------|-----------|
|                                                          | d                                      |                | H               | J    | L   | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S   | N   |                                                        |             |                      |           |           |
|                                                          | (in.)                                  | (mm)           |                 |      |     |                |                |      |      |      |     |     |                                                        |             |                      |           |           |
| SAFL201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                    | 12<br>15<br>17 | 99              | 76.5 | 57  | 15             | 11             | 24.5 | 37.1 | 11.5 | 6.5 | M10 | SA201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FL203       | 0.38<br>0.37<br>0.35 | --        |           |
| SAFL204-12G<br>204G                                      | 3/4                                    | 20             | 113             | 90   | 60  | 15             | 11             | 25.5 | 38.4 | 11.5 | 7.5 | M10 | SA204-12G<br>204G                                      | FL204       | 0.42                 | 12        |           |
| SAFL205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                      | 25             | 130             | 99   | 68  | 16             | 13             | 27   | 39.4 | 11.5 | 7.5 | M10 | SA205-14G<br>205-15G<br>205G<br>205-16G                | FL205       | 0.60                 | 16        |           |
| SAFL206-18G<br>206G<br>206-19G<br>206-20G                | 1- 1/8<br>1- 3/16<br>1- 1/4            | 30             | 148             | 117  | 80  | 18             | 13             | 31   | 44.7 | 11.5 | 9   | M10 | SA206-18G<br>206G<br>206-19G<br>206-20G                | FL206       | 0.89                 | 16        |           |
| SAFL207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1- 7/16 | 35             | 161             | 130  | 90  | 19             | 14             | 34   | 48.4 | 14   | 9.5 | M12 | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FL207       | 1.18                 | 16        |           |
| SAFL208-24G<br>208-25G<br>208G                           | 1- 1/2<br>1- 9/16                      | 40             | 175             | 144  | 100 | 21             | 14             | 36   | 53.7 | 14   | 11  | M12 | SA208-24G<br>208-25G<br>208G                           | FL208       | 1.53                 | 16        |           |
| SAFL209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4              | 45             | 188             | 148  | 108 | 22             | 16             | 38   | 54.7 | 18   | 11  | M16 | SA209-26G<br>209-27G<br>209-28G<br>209G                | FL209       | 1.85                 | 19        |           |
| SAFL210-30G<br>210-31G<br>210G<br>210-32G                | 1-7/8<br>1-15/16<br>2                  | 50             | 197             | 157  | 115 | 22             | 16             | 40   | 54.7 | 18   | 11  | M16 | SA210-30G<br>210-31G<br>210G<br>210-32G                | FL210       | 2.11                 | 19        |           |
| SAFL211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br>2-3/16                   | 55             | 224             | 184  | 130 | 25             | 18             | 43   | 61.4 | 18   | 12  | M16 | SA211-32G<br>211-34G<br>211G<br>211-35G                | FL211       | 2.89                 | 19        |           |
| SAFL212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br>2-3/8<br>2-7/16               | 60             | 250             | 202  | 140 | 29             | 18             | 48   | 66.3 | 18   | 12  | M16 | SA212-36G<br>212G<br>212-38G<br>212-39G                | FL212       | 3.60                 | 23        |           |



**SBFL2G**  
Setscrew type

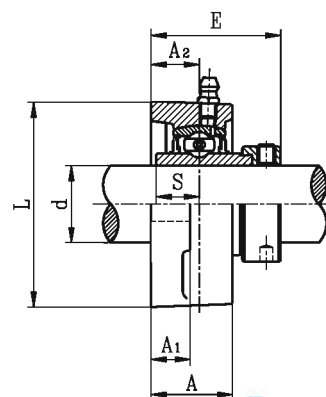
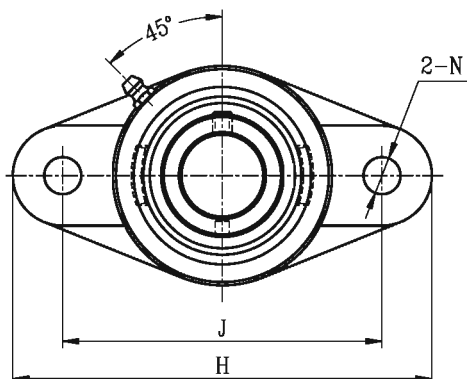
| Unit No.                                                 | Shaft Dia.                             |                | Dimensions(mm). |      |     |                |                |      |      |      |      | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            | Available |
|----------------------------------------------------------|----------------------------------------|----------------|-----------------|------|-----|----------------|----------------|------|------|------|------|-----------|--------------------------------------------------------|-------------|----------------------|-----------|
|                                                          | d                                      |                | H               | J    | L   | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S    |           |                                                        |             |                      | N         |
|                                                          | (in.)                                  | (mm)           |                 |      |     |                |                |      |      |      |      |           |                                                        |             |                      |           |
| SBFL201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                    | 12<br>15<br>17 | 99              | 76.5 | 57  | 15             | 11             | 24.5 | 31   | 11.5 | 6    | M10       | SB201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FL203       | 0.36<br>0.35<br>0.34 | --        |
| SBFL204-12G<br>204G                                      | 3/4                                    | 20             | 113             | 90   | 60  | 15             | 11             | 25.5 | 33   | 11.5 | 7    | M10       | SB204-12G<br>204G                                      | FL204       | 0.39                 | 12        |
| SBFL205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                      | 25             | 130             | 99   | 68  | 16             | 13             | 27   | 35.5 | 11.5 | 7.5  | M10       | SB205-14G<br>205-15G<br>205G<br>205-16G                | FL205       | 0.58                 | 16        |
| SBFL206-18G<br>206G<br>206-19G<br>206-20G                | 1- 1/8<br>1- 3/16<br>1- 1/4            | 30             | 148             | 117  | 80  | 18             | 13             | 31   | 40   | 11.5 | 8    | M10       | SB206-18G<br>206G<br>206-19G<br>206-20G                | FL206       | 0.84                 | 16        |
| SBFL207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1- 7/16 | 35             | 161             | 130  | 90  | 19             | 14             | 34   | 42.5 | 14   | 8.5  | M12       | SB207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FL207       | 1.12                 | 16        |
| SBFL208-24G<br>208-25G<br>208G                           | 1- 1/2<br>1- 9/16                      | 40             | 175             | 144  | 100 | 21             | 14             | 36   | 46   | 14   | 9    | M12       | SB208-24G<br>208-25G<br>208G                           | FL208       | 1.40                 | 16        |
| SBFL209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4              | 45             | 188             | 148  | 108 | 22             | 16             | 38   | 53   | 18   | 10.2 | M16       | SB209-26G<br>209-27G<br>209-28G<br>209G                | FL209       | 1.75                 | 19        |
| SBFL210-30G<br>210-31G<br>210G<br>210-32G                | 1-7/8<br>1-15/16<br>2                  | 50             | 197             | 157  | 115 | 22             | 16             | 40   | 54.6 | 18   | 10.9 | M16       | SB210-30G<br>210-31G<br>210G<br>210-32G                | FL210       | 2.04                 | 19        |
| SBFL211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br>2-3/16                   | 55             | 224             | 184  | 130 | 25             | 18             | 43   | 58.5 | 18   | 11.8 | M16       | SB211-32G<br>211-34G<br>211G<br>211-35G                | FL211       | 2.77                 | 19        |
| SBFL212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br>2-3/8<br>2-7/16               | 60             | 250             | 202  | 140 | 29             | 18             | 48   | 67.8 | 18   | 14.9 | M16       | SB212-36G<br>212G<br>212-38G<br>212-39G                | FL212       | 3.51                 | 23        |



**UCFLU2**  
Setscrew type

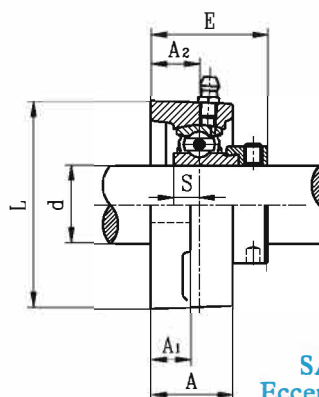
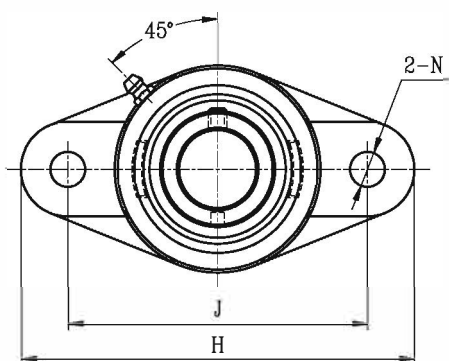
**S-UCFLU200E1**  
**SM-UCFLU200E1**  
With end cover

| Unit No.                                                             | Shaft Dia.                 |                      | Dimensions(mm). |       |     |    |    |      |      |      |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|----------------------------------------------------------------------|----------------------------|----------------------|-----------------|-------|-----|----|----|------|------|------|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                      | d                          |                      | H               | J     | L   | A2 | A1 | A    | E    | N    | S    | A4   |           |                                                                   |             |                              |
|                                                                      | (in.)                      | (mm)                 |                 |       |     |    |    |      |      |      |      |      |           |                                                                   |             |                              |
| UCFLU201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16        | 12<br>15<br>17       | 99              | 76.5  | 57  | 15 | 11 | 24.5 | 30.9 | 11.5 | 11.5 | --   | M10       | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FLU203      | 0.37<br>0.36<br>0.35         |
| UCFLU201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4 | 12<br>15<br>17<br>20 | 112.5           | 90    | 61  | 19 | 15 | 29.5 | 37.3 | 11.5 | 12.7 | 41.5 | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FLU204      | 0.53<br>0.51<br>0.50<br>0.48 |
| UCFLU205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1          | 25                   | 123             | 99    | 70  | 19 | 15 | 30   | 38.7 | 11.5 | 14.3 | 43   | M10       | UC205-14<br>205-15<br>205<br>205-16                               | FLU205      | 0.60                         |
| UCFLU206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4   | 30                   | 142             | 116.5 | 82  | 20 | 16 | 32.5 | 42.2 | 11.5 | 15.9 | 46   | M10       | UC206-18<br>206<br>206-19<br>206-20                               | FLU206      | 0.87                         |
| UCFLU207-20<br>207-21<br>207<br>207-23                               | 1-1/4<br>1-5/16<br>1-7/16  | 35                   | 158             | 130   | 94  | 21 | 17 | 36   | 46.4 | 14   | 17.5 | 50.5 | M12       | UC207-20<br>207-21<br>207<br>207-23                               | FLU207      | 1.29                         |
| UCFLU208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16            | 40                   | 172             | 143.5 | 130 | 24 | 17 | 39   | 54.2 | 14   | 19   | 58   | M12       | UC208-24<br>208-25<br>208                                         | FLU208      | 1.59                         |
| UCFLU209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-1/16<br>1-3/4   | 45                   | 180             | 148.5 | 108 | 24 | 18 | 40   | 54.2 | 16   | 19   | 59   | M14       | UC209-26<br>209-27<br>209-28<br>209                               | FLU209      | 1.68                         |
| UCFLU210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2      | 50                   | 190             | 157   | 114 | 28 | 20 | 45   | 60.6 | 18   | 19   | 66   | M16       | UC210-30<br>210-31<br>210<br>210-32                               | FLU210      | 2.01                         |
| UCFLU211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16       | 55                   | 217             | 184   | 128 | 31 | 21 | 48   | 64.4 | 18   | 22.2 | 70   | M16       | UC211-32<br>211-34<br>211<br>211-35                               | FLU211      | 2.71                         |
| UCFLU212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16   | 60                   | 237             | 202   | 138 | 34 | 21 | 53   | 73.7 | 18   | 25.4 | 79.5 | M16       | UC212-36<br>212<br>212-38<br>212-39                               | FLU212      | 3.46                         |
| UCFLU213-40<br>213                                                   | 2-1/2                      | 65                   | 256             | 210   | 152 | 38 | 22 | 56   | 77.7 | 21   | 25.4 | 87   | M18       | UC213-40<br>213                                                   | FLU213      | 4.76                         |
| UCFLU214-44<br>214                                                   | 2-3/4                      | 70                   | 264             | 216   | 157 | 38 | 23 | 58   | 82.4 | 21   | 30.2 | --   | M18       | UC214-44<br>214                                                   | FLU214      | 5.70                         |
| UCFLU215-47<br>215<br>215-48                                         | 2-15/16<br>3               | 75                   | 275             | 225   | 164 | 41 | 24 | 62   | 85.5 | 21   | 33.3 | --   | M18       | UC215-47<br>215<br>215-48                                         | FLU215      | 6.20                         |



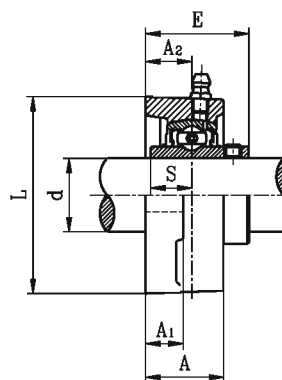
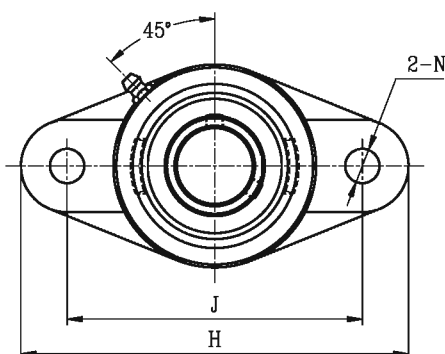
**NAFLU2**  
Eccentric locking collar type

| Unit No.                                                              | Shaft Dia.                         |                      | Dimensions(mm). |       |     |                |                |      |      |      |      | Bolt Size | Bearing No.                                                        | Housing No. | Mass (kg)                    |
|-----------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-------|-----|----------------|----------------|------|------|------|------|-----------|--------------------------------------------------------------------|-------------|------------------------------|
|                                                                       | d                                  |                      | H               | J     | L   | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S    |           |                                                                    |             |                              |
|                                                                       | (in.)                              | (mm)                 |                 |       |     |                |                |      |      |      |      |           |                                                                    |             |                              |
| NAFLU201S<br>201- 8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 99              | 76.5  | 57  | 15             | 11             | 24.5 | 38.4 | 11.5 | 13.9 | M10       | NA201S<br>201- 8S<br>202S<br>202-10S<br>203S<br>203-11S            | FLU203      | 0.48<br>0.47<br>0.45         |
| NAFLU201<br>201- 8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 112.5           | 90    | 61  | 19             | 15             | 29.5 | 45.5 | 11.5 | 17   | M10       | NA201<br>201- 8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FLU204      | 0.60<br>0.57<br>0.56<br>0.53 |
| NAFLU205-14<br>205-15<br>205<br>205-16                                | 7/8<br>15/16<br>1                  | 25                   | 123             | 99    | 70  | 19             | 15             | 30   | 45.9 | 11.5 | 17.4 | M10       | NA205-14<br>205-15<br>205<br>205-16                                | FLU205      | 0.65                         |
| NAFLU206-18<br>206<br>206-19<br>206-20                                | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 142             | 116.5 | 82  | 20             | 16             | 32.5 | 50.1 | 11.5 | 18.2 | M10       | NA206-18<br>206<br>206-19<br>206-20                                | FLU206      | 0.94                         |
| NAFLU207-20<br>207-21<br>207-22<br>207<br>207-23                      | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 158             | 130   | 94  | 21             | 17             | 36   | 53.3 | 14   | 18.8 | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23                      | FLU207      | 1.36                         |
| NAFLU208-24<br>208-25<br>208                                          | 1-1/2<br>1-9/16                    | 40                   | 172             | 143.5 | 103 | 24             | 17             | 39   | 58.9 | 14   | 21.4 | M12       | NA208-24<br>208-25<br>208                                          | FLU208      | 1.70                         |
| NAFLU209-26<br>209-27<br>209-28<br>209                                | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 180             | 148.5 | 108 | 24             | 18             | 40   | 58.9 | 16   | 21.4 | M14       | NA209-26<br>209-27<br>209-28<br>209                                | FLU209      | 1.80                         |
| NAFLU210-30<br>210-31<br>210<br>210-32                                | 1-7/8<br>1-15/16<br>2              | 50                   | 190             | 157   | 114 | 28             | 20             | 45   | 66.1 | 18   | 24.6 | M16       | NA210-30<br>210-31<br>210<br>210-32                                | FLU210      | 2.18                         |
| NAFLU211-32<br>211-34<br>211<br>211-35                                | 2<br>2-1/8<br>2-3/16               | 55                   | 217             | 184   | 128 | 31             | 21             | 48   | 74.6 | 18   | 27.7 | M16       | NA211-32<br>211-34<br>211<br>211-35                                | FLU211      | 2.96                         |
| NAFLU212-36<br>212<br>212-38<br>212-39                                | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 237             | 202   | 138 | 34             | 21             | 53   | 80.8 | 18   | 30.9 | M16       | NA212-36<br>212<br>212-38<br>212-39                                | FLU212      | 3.74                         |
| NAFLU213-40<br>213                                                    | 2-1/2                              | 65                   | 256             | 210   | 152 | 38             | 22             | 56   | 89.6 | 21   | 34.1 | M18       | NA213-40<br>213                                                    | FLU213      | 5.15                         |
| NAFLU214-44<br>214                                                    | 2-3/4                              | 70                   | 264             | 216   | 157 | 38             | 23             | 58   | 89.6 | 21   | 34.1 | M18       | NA214-44<br>214                                                    | FLU214      | 5.74                         |
| NAFLU215-47<br>215<br>215-48                                          | 2-15/16<br>3                       | 75                   | 275             | 225   | 164 | 41             | 24             | 62   | 95.8 | 21   | 37.3 | M18       | NA215-47<br>215<br>215-48                                          | FLU215      | 6.66                         |



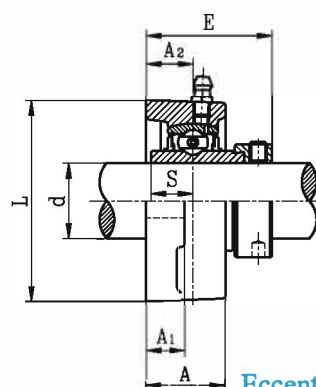
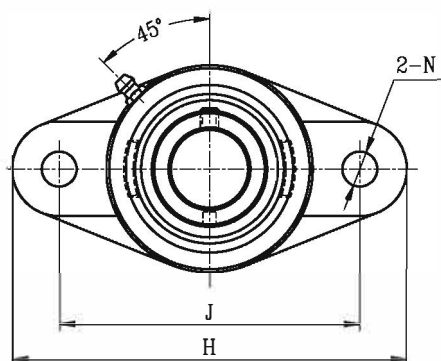
**SAFLU2G**  
Eccentric locking collar type

| Unit No.                                                  | Shaft Dia.                             |                | Dimensions(mm). |       |     |                |                |      |      |      |     | Bolt Size | Bearing No.                                            | Housing No. | Mass (kg)            |
|-----------------------------------------------------------|----------------------------------------|----------------|-----------------|-------|-----|----------------|----------------|------|------|------|-----|-----------|--------------------------------------------------------|-------------|----------------------|
|                                                           | d                                      |                | H               | J     | L   | A <sub>2</sub> | A <sub>1</sub> | A    | E    | N    | S   |           |                                                        |             |                      |
|                                                           | (in.)                                  | (mm)           |                 |       |     |                |                |      |      |      |     |           |                                                        |             |                      |
| SAFLU201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                    | 12<br>15<br>17 | 99              | 76.5  | 57  | 15             | 11             | 24.5 | 37.1 | 11.5 | 6.5 | M10       | SA201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FLU203      | 0.38<br>0.37<br>0.35 |
| SAFLU204-12G<br>204G                                      | 3/4                                    | 20             | 112.5           | 90    | 61  | 19             | 15             | 29.5 | 42.4 | 11.5 | 7.5 | M10       | SA204-12G<br>204G                                      | FLU204      | 0.48                 |
| SAFLU205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                      | 25             | 123             | 99    | 70  | 19             | 15             | 30   | 42.4 | 11.5 | 7.5 | M10       | SA205-14G<br>205-15G<br>205G<br>205-16G                | FLU205      | 0.59                 |
| SAFLU206-18G<br>206G<br>206-19G<br>206-20G                | 1- 1/8<br>1- 3/16<br>1- 1/4            | 30             | 142             | 116.5 | 82  | 20             | 16             | 32.5 | 46.7 | 11.5 | 9   | M10       | SA206-18G<br>206G<br>206-19G<br>206-20G                | FLU206      | 0.86                 |
| SAFLU207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1- 7/16 | 35             | 158             | 130   | 94  | 21             | 17             | 36   | 50.4 | 14   | 9.5 | M12       | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FLU207      | 1.26                 |
| SAFLU208-24G<br>208-25G<br>208G                           | 1- 1/2<br>1- 9/16                      | 40             | 172             | 143.5 | 103 | 24             | 17             | 39   | 56.7 | 14   | 11  | M12       | SA208-24G<br>208-25G<br>208G                           | FLU208      | 1.57                 |
| SAFLU209-26G<br>209-27G<br>209-28G<br>209G                | 1-5/8<br>1-11/16<br>1-3/4              | 45             | 180             | 148.5 | 108 | 24             | 18             | 40   | 56.7 | 56.7 | 11  | M14       | SA209-26G<br>209-27G<br>209-28G<br>209G                | FLU209      | 1.66                 |
| SAFLU210-30G<br>210-31G<br>210G<br>210-32G                | 1-7/8<br>1-15/16<br>2                  | 50             | 190             | 157   | 114 | 28             | 20             | 45   | 60.7 | 18   | 11  | M16       | SA210-30G<br>210-31G<br>210G<br>210-32G                | FLU210      | 1.96                 |
| SAFLU211-32G<br>211-34G<br>211G<br>211-35G                | 2<br>2-1/8<br>2-3/16                   | 55             | 217             | 184   | 128 | 31             | 21             | 48   | 67.4 | 18   | 12  | M16       | SA211-32G<br>211-34G<br>211G<br>211-35G                | FLU211      | 2.71                 |
| SAFLU212-36G<br>212G<br>212-38G<br>212-39G                | 2-1/4<br>2-3/8<br>2-7/16               | 60             | 237             | 202   | 138 | 34             | 21             | 53   | 71.3 | 18   | 12  | M16       | SA212-36G<br>212G<br>212-38G<br>212-39G                | FLU212      | 3.31                 |



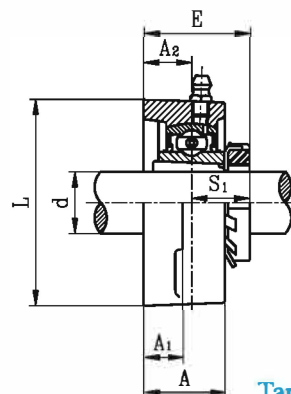
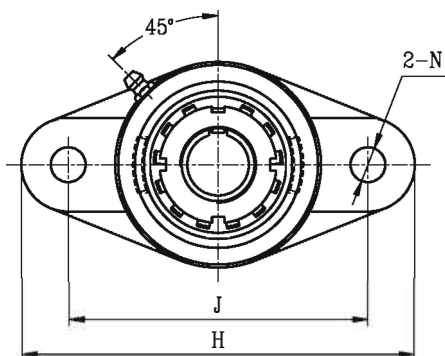
**UCFL3**  
Setscrew type

| Unit No.                              | Shaft Dia.                  |      | Dimensions(mm). |     |     |                |                |    |    |    |    | Bolt Size | Bearing No.                         | Housing No. | Mass (kg) |
|---------------------------------------|-----------------------------|------|-----------------|-----|-----|----------------|----------------|----|----|----|----|-----------|-------------------------------------|-------------|-----------|
|                                       | d                           |      | H               | J   | L   | A <sub>2</sub> | A <sub>1</sub> | A  | E  | N  | S  |           |                                     |             |           |
|                                       | (in.)                       | (mm) |                 |     |     |                |                |    |    |    |    |           |                                     |             |           |
| UCFL305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1           | 25   | 150             | 113 | 80  | 16             | 13             | 29 | 39 | 19 | 15 | M16       | UC305-14<br>305-15<br>305<br>305-16 | FL305       | 0.88      |
| UCFL306-18<br>306<br>306-19           | 1- 1/8<br>1- 3/16           | 30   | 180             | 134 | 90  | 18             | 15             | 32 | 44 | 23 | 17 | M20       | UC306-18<br>306<br>306-19           | FL306       | 1.32      |
| UCFL307-20<br>307-21<br>307-22<br>307 | 1- 1/4<br>1- 5/16<br>1- 3/8 | 35   | 185             | 141 | 100 | 20             | 16             | 36 | 49 | 23 | 19 | M20       | UC307-20<br>307-21<br>307-22<br>307 | FL307       | 1.65      |
| UCFL308-24<br>308-25<br>308           | 1- 1/2<br>1- 9/16           | 40   | 200             | 158 | 112 | 23             | 17             | 40 | 56 | 23 | 19 | M20       | UC308-24<br>308-25<br>308           | FL308       | 2.23      |
| UCFL309-26<br>309-27<br>309-28<br>309 | 1- 5/8<br>1-11/16<br>1- 3/4 | 45   | 230             | 177 | 125 | 25             | 18             | 44 | 60 | 25 | 22 | M22       | UC309-26<br>309-27<br>309-28<br>309 | FL309       | 3.01      |
| UCFL310-30<br>310-31<br>310           | 1- 7/8<br>1-15/16           | 50   | 240             | 187 | 140 | 28             | 19             | 48 | 67 | 25 | 22 | M22       | UC310-30<br>310-31<br>310           | FL310       | 3.94      |
| UCFL311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16        | 55   | 250             | 198 | 150 | 30             | 20             | 52 | 71 | 25 | 25 | M22       | UC311-32<br>311-34<br>311<br>311-35 | FL311       | 4.76      |
| UCFL312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16    | 60   | 270             | 212 | 160 | 33             | 22             | 56 | 78 | 31 | 26 | M27       | UC312-36<br>312<br>312-38<br>312-39 | FL312       | 5.64      |
| UCFL313-40<br>313                     | 2- 1/2                      | 65   | 295             | 240 | 175 | 33             | 25             | 58 | 78 | 31 | 30 | M27       | UC313-40<br>313                     | FL313       | 7.0       |
| UCFL314-44<br>314                     | 2-3/4                       | 70   | 315             | 250 | 185 | 36             | 28             | 61 | 83 | 35 | 31 | M30       | UC314-44<br>314                     | FL314       | 8.40      |
| UCFL315<br>315-48                     | 3                           | 75   | 320             | 260 | 195 | 39             | 30             | 66 | 89 | 35 | 32 | M30       | UC315<br>315-48                     | FL315       | 9.63      |
| UCFL316                               |                             | 80   | 355             | 285 | 210 | 38             | 32             | 68 | 90 | 38 | 34 | M33       | UC316                               | FL316       | 12.4      |



**NAFL3**  
Eccentric locking collar type

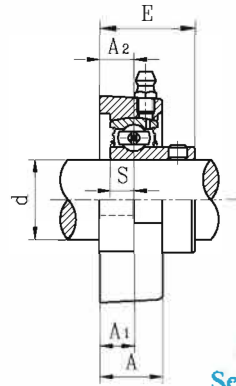
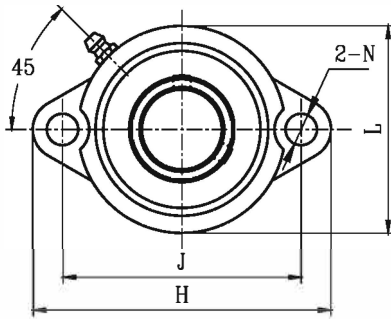
| Unit No.                                        | Shaft Dia.                             |      | Dimensions(mm). |     |     |                |                |    |       |    |       | Bolt Size | Bearing No.                                   | Housing No. | Mass (kg) |
|-------------------------------------------------|----------------------------------------|------|-----------------|-----|-----|----------------|----------------|----|-------|----|-------|-----------|-----------------------------------------------|-------------|-----------|
|                                                 | d                                      |      | H               | J   | L   | A <sub>2</sub> | A <sub>1</sub> | A  | E     | N  | S     |           |                                               |             |           |
|                                                 | (in.)                                  | (mm) |                 |     |     |                |                |    |       |    |       |           |                                               |             |           |
| NAFL305-14<br>305-15<br>305<br>305-16           | 7/8<br>15/16<br>1                      | 25   | 150             | 113 | 80  | 16             | 13             | 29 | 46.1  | 19 | 16.7  | M16       | NA305-14<br>305-15<br>305<br>305-16           | FL305       | 0.95      |
| NAFL306-18<br>306<br>306-19                     | 1- 1/8<br>1- 3/16                      | 30   | 180             | 134 | 90  | 18             | 15             | 32 | 50.5  | 23 | 17.5  | M20       | NA306-18<br>306<br>306-19                     | FL306       | 1.46      |
| NAFL307-20<br>307-21<br>307-22<br>307<br>307-23 | 1- 1/4<br>1- 5/16<br>1- 3/8<br>1- 7/16 | 35   | 185             | 141 | 100 | 20             | 16             | 36 | 53.3  | 23 | 18.3  | M20       | NA307-20<br>307-21<br>307-22<br>307<br>307-23 | FL307       | 1.75      |
| NAFL308-24<br>308-25<br>308                     | 1- 1/2<br>1- 9/16                      | 40   | 200             | 158 | 112 | 23             | 17             | 40 | 60.3  | 23 | 19.8  | M20       | NA308-24<br>308-25<br>308                     | FL308       | 2.37      |
| NAFL309-26<br>309-27<br>309-28<br>309           | 1- 5/8<br>1-11/16<br>1- 3/4            | 45   | 230             | 177 | 125 | 25             | 18             | 44 | 63.9  | 25 | 19.8  | M22       | NA309-26<br>309-27<br>309-28<br>309           | FL309       | 3.14      |
| NAFL310-30<br>310-31<br>310                     | 1- 7/8<br>1-15/16                      | 50   | 240             | 187 | 140 | 28             | 19             | 48 | 70    | 25 | 24.6  | M22       | NA310-30<br>310-31<br>310                     | FL310       | 4.16      |
| NAFL311-32<br>311-34<br>311<br>311-35           | 2<br>2-1/8<br>2-3/16                   | 55   | 250             | 198 | 150 | 30             | 20             | 52 | 75.2  | 25 | 27.8  | M22       | NA311-32<br>311-34<br>311<br>311-35           | FL311       | 5.01      |
| NAFL312-36<br>312<br>312-38<br>312-39           | 2-1/4<br>2-3/8<br>2-7/16               | 60   | 270             | 212 | 160 | 33             | 22             | 56 | 80    | 31 | 30.95 | M27       | NA312-36<br>312<br>312-38<br>312-39           | FL312       | 5.95      |
| NAFL313-40<br>313                               | 2- 1/2                                 | 65   | 295             | 240 | 175 | 33             | 25             | 58 | 86.2  | 31 | 32.5  | M27       | NA313-40<br>313                               | FL313       | 7.52      |
| NAFL314-44<br>314                               | 2-3/4                                  | 70   | 315             | 250 | 185 | 36             | 28             | 61 | 93.95 | 35 | 34.15 | M30       | NA314-44<br>314                               | FL314       | 9.06      |
| NAFL315<br>315-48                               | 3                                      | 75   | 320             | 260 | 195 | 39             | 30             | 66 | 101.7 | 35 | 37.3  | M30       | NA315<br>315-48                               | FL315       | 10.6      |
| NAFL316                                         |                                        | 80   | 355             | 285 | 210 | 38             | 32             | 68 | 103.9 | 38 | 40.5  | M33       | NA316                                         | FL316       | 13.5      |



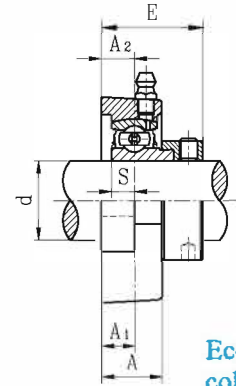
**UKFL3+H**  
Tapered bore, adapter type

| Unit No.                                                | Shaft Dia.                |      | Dimensions(mm). |     |     |                |                |    |      |    |                | Bolt Size | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|---------------------------------------------------------|---------------------------|------|-----------------|-----|-----|----------------|----------------|----|------|----|----------------|-----------|-------------|-------------|-------------------------------------|-----------|
|                                                         | d                         |      | H               | J   | L   | A <sub>2</sub> | A <sub>1</sub> | A  | E    | N  | S <sub>1</sub> |           |             |             |                                     |           |
|                                                         | (in.)                     | (mm) |                 |     |     |                |                |    |      |    |                |           |             |             |                                     |           |
| UKFL305+HE2305<br>305+H2305                             | 3/4                       | 20   | 150             | 113 | 80  | 16             | 13             | 29 | 37.5 | 19 | 21.5           | M16       | UK305       | FL305       | HE2305<br>H2305                     | 0.93      |
| UKFL306+HS2306<br>306+HA2306<br>306+H2306<br>306+HE2306 | 7/8<br>15/16<br>1         | 25   | 180             | 134 | 90  | 18             | 15             | 32 | 41   | 23 | 23             | M20       | UK306       | FL306       | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.37      |
| UKFL307+HS2307<br>307+H2307<br>307+HA2307               | 1-1/8<br>1-3/16           | 30   | 185             | 141 | 100 | 20             | 16             | 36 | 45.5 | 23 | 25.5           | M20       | UK307       | FL307       | HS2307<br>H2307<br>HA2307           | 1.69      |
| UKFL308+HE2308<br>308+HS2308<br>308+H2308               | 1-1/4<br>1-3/8            | 35   | 200             | 158 | 112 | 23             | 17             | 40 | 50.5 | 23 | 27.5           | M20       | UK308       | FL308       | HE2308<br>HS2308<br>H2308           | 2.28      |
| UKFL309+HA2309<br>309+HE2309<br>309+H2309               | 1-7/16<br>1-1/2           | 40   | 230             | 177 | 125 | 25             | 18             | 44 | 55   | 25 | 30             | M22       | UK309       | FL309       | HA2309<br>HE2309<br>H2309           | 3.15      |
| UKFL310+HS2310<br>310+HA2310<br>310+HE2310<br>310+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 240             | 187 | 140 | 28             | 19             | 48 | 60   | 25 | 32             | M22       | UK310       | FL310       | HS2310<br>HA2310<br>HE2310<br>H2310 | 3.98      |
| UKFL311+HS2311<br>311+HA2311<br>311+H2311<br>311+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 250             | 198 | 150 | 30             | 20             | 52 | 63.5 | 25 | 33.5           | M22       | UK311       | FL311       | HS2311<br>HA2311<br>H2311<br>HE2311 | 4.78      |
| UKFL312+HS2312<br>312+H2312                             | 2-1/8                     | 55   | 270             | 212 | 160 | 33             | 22             | 56 | 69.5 | 31 | 36.5           | M27       | UK312       | FL312       | HS2312<br>H2312                     | 5.64      |
| UKFL313+HA2313<br>313+HE2313<br>313+H2313<br>313+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 295             | 240 | 175 | 33             | 25             | 58 | 71.5 | 31 | 38.5           | M27       | UK313       | FL313       | HA2313<br>HE2313<br>H2313<br>HS2313 | 6.96      |
| UKFL315+HA2315<br>315+HE2315<br>315+H2315               | 2-7/16<br>2-1/2           | 65   | 320             | 260 | 195 | 39             | 30             | 66 | 81.5 | 35 | 42.5           | M30       | UK315       | FL315       | HA2315<br>HE2315<br>H2315           | 9.93      |
| UKFL316+HA2316<br>316+HE2316<br>316+H2316               | 2-11/16<br>2-3/4          | 70   | 355             | 285 | 210 | 38             | 32             | 68 | 82.5 | 38 | 44.5           | M33       | UK316       | FL316       | HA2316<br>HE2316<br>H2316           | 12.6      |

# LIGHT-DUTY OVAL FLANGE UNITS(LF TYPE)



**SBLF2G**  
Setscrew type



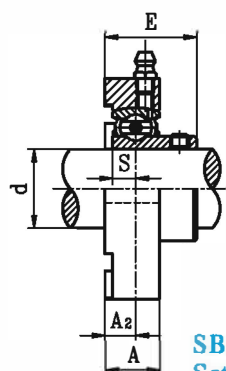
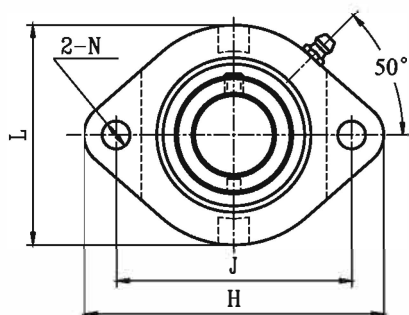
**SALF2G**  
Eccentric locking  
collar type

| Unit No.                                                 | Shaft Dia.                         |                | Dimensions(mm). |      |    |                |      |                |    |     |      | Bolt Size |      | Bearing No.                                             | Housing No. | Mass (kg)            |
|----------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|----------------|------|----------------|----|-----|------|-----------|------|---------------------------------------------------------|-------------|----------------------|
|                                                          | d                                  |                | H               | J    | L  | A <sub>1</sub> | A    | A <sub>2</sub> | N  | S   | E    |           |      |                                                         |             |                      |
|                                                          | (in.)                              | (mm)           |                 |      |    |                |      |                |    |     |      |           |      |                                                         |             |                      |
| SBLF201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 56 | 9.5            | 18   | 9.5            | 8  | 6   | 25.5 | M6        | 1/4  | SB 201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | LF203       | 0.29<br>0.28<br>0.27 |
| SBLF204-12G<br>204G                                      | 3/4                                | 20             | 90              | 71.5 | 61 | 11             | 20   | 11             | 10 | 7   | 29   | M8        | 5/16 | SB 204-12G<br>204G                                      | LF204       | 0.32                 |
| SBLF205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95              | 76   | 64 | 11             | 20   | 11             | 10 | 7.5 | 30.5 | M8        | 5/16 | SB 205-14G<br>205-15G<br>205G<br>205-16G                | LF205       | 0.36                 |
| SBLF206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 76 | 12             | 22.5 | 12             | 12 | 8   | 34   | M10       | 3/8  | SB 206-18G<br>206G<br>206-19G<br>206-20G                | LF206       | 0.57                 |
| SBLF207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122             | 100  | 89 | 13             | 24   | 13             | 12 | 8.5 | 36.5 | M10       | 3/8  | SB 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | LF207       | 0.78                 |

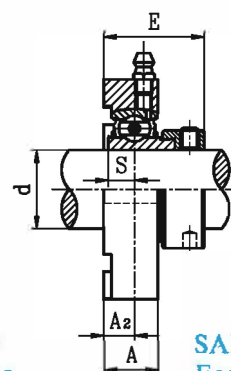
| Unit No.                                                 | Shaft Dia.                         |                | Dimensions(mm). |      |    |                |      |                |    |     |      | Bolt Size |      | Bearing No.                                            | Housing No. | Mass (kg)            |
|----------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|----------------|------|----------------|----|-----|------|-----------|------|--------------------------------------------------------|-------------|----------------------|
|                                                          | d                                  |                | H               | J    | L  | A <sub>1</sub> | A    | A <sub>2</sub> | N  | S   | E    |           |      |                                                        |             |                      |
|                                                          | (in.)                              | (mm)           |                 |      |    |                |      |                |    |     |      |           |      |                                                        |             |                      |
| SALF201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 56 | 9.5            | 18   | 9.5            | 8  | 6.5 | 31.6 | M6        | 1/4  | SA201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | LF203       | 0.31<br>0.30<br>0.28 |
| SALF204-12G<br>204G                                      | 3/4                                | 20             | 90              | 71.5 | 61 | 11             | 20   | 11             | 10 | 7.5 | 34.4 | M8        | 5/16 | SA204-12G<br>204G                                      | LF204       | 0..35                |
| SALF205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95              | 76   | 64 | 11             | 20   | 11             | 10 | 7.5 | 34.4 | M8        | 5/16 | SA205-14G<br>205-15G<br>205G<br>205-16G                | LF205       | 0.38                 |
| SALF206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 76 | 12             | 22.5 | 12             | 12 | 9   | 38.7 | M10       | 3/8  | SA206-18G<br>206G<br>206-19G<br>206-20G                | LF206       | 0.62                 |
| SALF207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122             | 100  | 89 | 13             | 24   | 13             | 12 | 9.5 | 42.4 | M10       | 3/8  | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | LF207       | 0.84                 |

Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

# LIGHT-DUTY OVAL FLANGE UNITS(LFTC TYPE)



**SBLFTC2G**  
Setscrew type



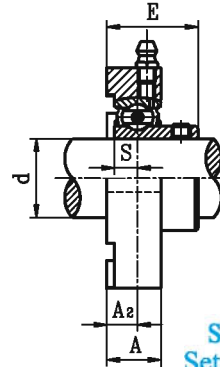
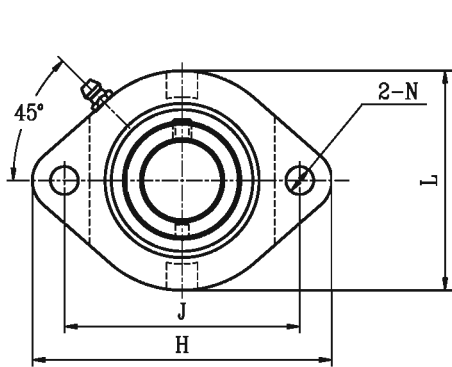
**SALFTC2G**  
Eccentric locking collar type

| Unit No.                                               | Shaft Dia.                         |      | Dimensions(mm). |      |      |      |                |    |     |      | Bolt Size |      | Bearing No.                                        | Housing No. | Mass (kg) |
|--------------------------------------------------------|------------------------------------|------|-----------------|------|------|------|----------------|----|-----|------|-----------|------|----------------------------------------------------|-------------|-----------|
|                                                        | d                                  |      | H               | J    | L    | A    | A <sub>2</sub> | N  | S   | E    |           |      |                                                    |             |           |
|                                                        | (in.)                              | (mm) |                 |      |      |      |                |    |     |      |           |      |                                                    |             |           |
| SBLFTC204-12G<br>204G                                  | 3/4                                | 20   | 90.5            | 71.4 | 66.5 | 17   | 9.5            | 9  | 7   | 27.5 | M8        | 5/16 | SB204-12G<br>204G                                  | LFTC20      | 0.37      |
| SBLFTC205-14G<br>205-15G<br>205G<br>205-16G            | 7/8<br>15/16<br>1                  | 25   | 97              | 76.2 | 71   | 17.5 | 9.9            | 9  | 7.5 | 29.4 | M8        | 5/16 | SB205-14G<br>205-15G<br>205G<br>205-16G            | LFTC25      | 0.44      |
| SBLFTC206-18G<br>206G<br>206-19G<br>206-20G            | 1-1/8<br>1-3/16<br>1-1/4           | 30   | 112.5           | 90.5 | 84   | 20.5 | 11.4           | 11 | 8   | 33.4 | M10       | 3/8  | SB206-18G<br>206G<br>206-19G<br>206-20G            | LFTC30      | 0.66      |
| SBLFTC207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35   | 126             | 100  | 94   | 22   | 12.4           | 11 | 8.5 | 35.9 | M10       | 3/8  | SB207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G | LFTC35      | 0.90      |
| SBLFTC208-24G<br>208-25G<br>208G                       | 1-1/2<br>1-9/16                    | 40   | 148             | 119  | 104  | 24   | 14.1           | 14 | 9   | 39.1 | M12       | 7/16 | SB208-24G<br>208-25G<br>208G                       | LFTC40      | 1.22      |

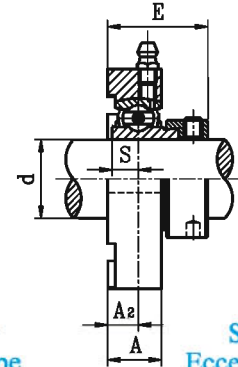
| Unit No.                                               | Shaft Dia.                         |      | Dimensions(mm). |      |      |      |                |    |     |      | Bolt Size |      | Bearing No.                                        | Housing No. | Mass (kg) |
|--------------------------------------------------------|------------------------------------|------|-----------------|------|------|------|----------------|----|-----|------|-----------|------|----------------------------------------------------|-------------|-----------|
|                                                        | d                                  |      | H               | J    | L    | A    | A <sub>2</sub> | N  | S   | E    |           |      |                                                    |             |           |
|                                                        | (in.)                              | (mm) |                 |      |      |      |                |    |     |      |           |      |                                                    |             |           |
| SALFTC204-12G<br>204G                                  | 3/4                                | 20   | 90.5            | 71.4 | 66.5 | 17   | 9.5            | 9  | 7.5 | 32.9 | M8        | 5/16 | SA204-12G<br>204G                                  | LFTC20      | 0.40      |
| SALFTC205-14G<br>205-15G<br>205G<br>205-16G            | 7/8<br>15/16<br>1                  | 25   | 97              | 76.2 | 71   | 17.5 | 9.9            | 9  | 7.5 | 33.3 | M8        | 5/16 | SA205-14G<br>205-15G<br>205G<br>205-16G            | LFTC25      | 0.46      |
| SALFTC206-18G<br>206G<br>206-19G<br>206-20G            | 1-1/8<br>1-3/16<br>1-1/4           | 30   | 112.5           | 90.5 | 84   | 20.5 | 11.4           | 11 | 9   | 38.1 | M10       | 3/8  | SA206-18G<br>206G<br>206-19G<br>206-20G            | LFTC30      | 0.71      |
| SALFTC207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35   | 126             | 100  | 94   | 22   | 12.4           | 11 | 9.5 | 41.8 | M10       | 3/8  | SA207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G | LFTC35      | 0.96      |
| SALFTC208-24G<br>208-25G<br>208G                       | 1-1/2<br>1-9/16                    | 40   | 148             | 119  | 104  | 24   | 14.1           | 14 | 11  | 46.8 | M12       | 7/16 | SA208-24G<br>208-25G<br>208G                       | LFTC40      | 1.35      |

Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

# LIGHT-DUTY OVAL FLANGE UNITS(FD TYPE)



**SBFD2G**  
Setscrew type



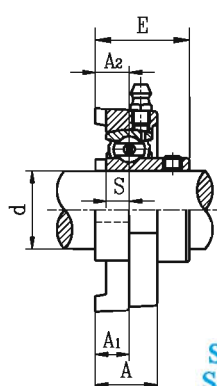
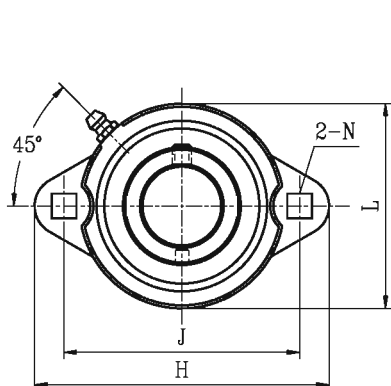
**SAFD2G**  
Eccentric locking collar type

| Unit No.                                                 | Shaft Dia.                         |                | Dimensions(mm). |      |    |      |      |    |     |      | Bolt Size |       | Bearing No.                                            | Housing No. | Mass (kg)            |
|----------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|------|------|----|-----|------|-----------|-------|--------------------------------------------------------|-------------|----------------------|
|                                                          | d                                  |                | H               | J    | L  | A    | A2   | N  | S   | E    |           |       |                                                        |             |                      |
|                                                          | (in.)                              | (mm)           |                 |      |    |      |      |    |     |      |           |       |                                                        |             |                      |
| SBFD201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63   | 59 | 15   | 8.5  | 7  | 6   | 24.5 | M5        | 10-24 | SB201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FD203       | 0.30<br>0.29<br>0.28 |
| SBFD204-12G<br>204G                                      | 3/4                                | 20             | 90              | 71   | 67 | 17   | 9.5  | 10 | 7   | 27.5 | M8        | 5/16  | SB 204-12G<br>204G                                     | FD204       | 0.37                 |
| SBFD205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95.2            | 76.2 | 71 | 17.5 | 9.5  | 10 | 7.5 | 29   | M8        | 5/16  | SB 205-14G<br>205-15G<br>205G<br>205-16G               | FD205       | 0.43                 |
| SBFD206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 84 | 21   | 12   | 12 | 8   | 34   | M10       | 3/8   | SB 206-18G<br>206G<br>206-19G<br>206-20G               | FD206       | 0.67                 |
| SBFD207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 125             | 100  | 94 | 22   | 12.5 | 12 | 8.5 | 36   | M10       | 3/8   | SB 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G    | FD207       | 0.92                 |

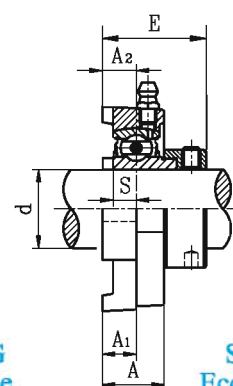
| Unit No.                                                 | Shaft Dia.                         |                | Dimensions(mm). |      |    |      |      |    |     |      | Bolt Size |       | Bearing No.                                             | Housing No. | Mass (kg)            |
|----------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|------|------|----|-----|------|-----------|-------|---------------------------------------------------------|-------------|----------------------|
|                                                          | d                                  |                | H               | J    | L  | A    | A2   | N  | S   | E    |           |       |                                                         |             |                      |
|                                                          | (in.)                              | (mm)           |                 |      |    |      |      |    |     |      |           |       |                                                         |             |                      |
| SAFD201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63   | 59 | 15   | 8.5  | 7  | 6.5 | 30.6 | M5        | 10-24 | SA 201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FD203       | 0.32<br>0.31<br>0.29 |
| SAFD204-12G<br>204G                                      | 3/4                                | 20             | 90              | 71   | 67 | 17   | 9.5  | 10 | 7.5 | 32.9 | M8        | 5/16  | SA 204-12G<br>204G                                      | FD204       | 0.40                 |
| SAFD205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95.2            | 76.2 | 71 | 17.5 | 9.5  | 10 | 7.5 | 32.9 | M8        | 5/16  | SA 205-14G<br>205-15G<br>205G<br>205-16G                | FD205       | 0.45                 |
| SAFD206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 84 | 21   | 12   | 12 | 9   | 38.7 | M10       | 3/8   | SA 206-18G<br>206G<br>206-19G<br>206-20G                | FD206       | 0.72                 |
| SAFD207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 125             | 100  | 94 | 22   | 12.5 | 12 | 9.5 | 41.9 | M10       | 3/8   | SA 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FD207       | 0.98                 |

Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

# DUCTILE IRON OVAL FLANGE UNITS (PFTD TYPE)



**SBPFTD2G**  
Setscrew type



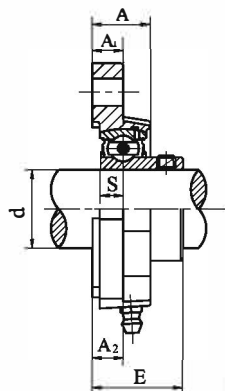
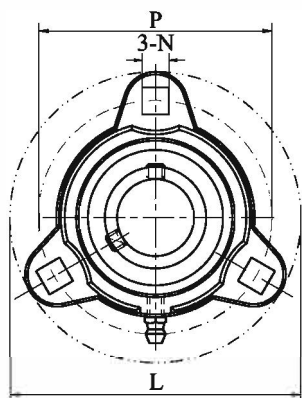
**SAPFTD2G**  
Eccentric locking collar type

| Unit No.                                                   | Shaft Dia.                         |                | Dimensions(mm). |      |    |      |      |      |      |     |      | Bolt Size |      | Bearing No.                                             | Housing No. | Mass (kg)            |
|------------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|------|------|------|------|-----|------|-----------|------|---------------------------------------------------------|-------------|----------------------|
|                                                            | d                                  |                | H               | J    | L  | A1   | A    | A2   | N    | S   | E    |           |      |                                                         |             |                      |
|                                                            | (in.)                              | (mm)           |                 |      |    |      |      |      |      |     |      |           |      |                                                         |             |                      |
| SBPFTD201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 56 | 9    | 18   | 9    | 8.7  | 6   | 25   | M8        | 5/16 | SB 201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | PFTD203     | 0.26<br>0.25<br>0.24 |
| SBPFTD204-12G<br>204G                                      | 3/4                                | 20             | 91              | 71.5 | 63 | 10.2 | 20   | 10.2 | 8.7  | 7   | 28.2 | M8        | 5/16 | SB 204-12G<br>204G                                      | PFTD204     | 0.29                 |
| SBPFTD205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 96              | 76.2 | 69 | 10.5 | 19   | 8.7  | 8.7  | 7.5 | 28.2 | M8        | 5/16 | SB 205-14G<br>205-15G<br>205G<br>205-16G                | PFTD205     | 0.39                 |
| SBPFTD206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 79 | 11.5 | 22   | 11.5 | 10.3 | 8   | 33.5 | M10       | 3/8  | SB 206-18G<br>206G<br>206-19G<br>206-20G                | PFTD206     | 0.51                 |
| SBPFTD207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122.5           | 100  | 89 | 12.7 | 23.8 | 11.8 | 10.3 | 8.5 | 35.3 | M10       | 3/8  | SB 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | PFTD207     | 0.75                 |

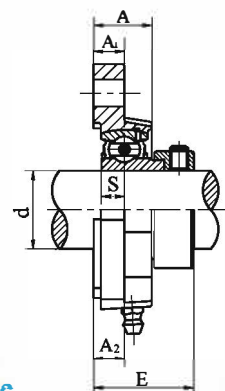
| Unit No.                                                   | Shaft Dia.                         |                | Dimensions(mm). |      |    |      |      |      |      |     |      | Bolt Size |      | Bearing No.                                             | Housing No. | Mass (kg)            |
|------------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|------|------|------|------|-----|------|-----------|------|---------------------------------------------------------|-------------|----------------------|
|                                                            | d                                  |                | H               | J    | L  | A1   | A    | A2   | N    | S   | E    |           |      |                                                         |             |                      |
|                                                            | (in.)                              | (mm)           |                 |      |    |      |      |      |      |     |      |           |      |                                                         |             |                      |
| SAPFTD201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 56 | 9    | 18   | 9    | 8.7  | 6.5 | 31.1 | M8        | 5/16 | SA 201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | PFTD203     | 0.28<br>0.27<br>0.25 |
| SAPFTD204-12G<br>204G                                      | 3/4                                | 20             | 91              | 71.5 | 63 | 10.2 | 20   | 10.2 | 8.7  | 7.5 | 33.6 | M8        | 5/16 | SA 204-12G<br>204G                                      | PFTD204     | 0.32                 |
| SAPFTD205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 96              | 76.2 | 69 | 10.5 | 19   | 8.7  | 8.7  | 7.5 | 32.1 | M8        | 5/16 | SA 205-14G<br>205-15G<br>205G<br>205-16G                | PFTD205     | 0.41                 |
| SAPFTD206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 79 | 11.5 | 22   | 11.5 | 10.3 | 9   | 38.2 | M10       | 3/8  | SA 206-18G<br>206G<br>206-19G<br>206-20G                | PFTD206     | 0.56                 |
| SAPFTD207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122.5           | 100  | 89 | 12.7 | 23.8 | 11.8 | 10.3 | 9.5 | 41.2 | M10       | 3/8  | SA 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | PFTD207     | 0.81                 |

Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

## DUCTILE IRON FLANGE UNITS (FCT TYPE)



**SBFCT2G**  
Setscrew type



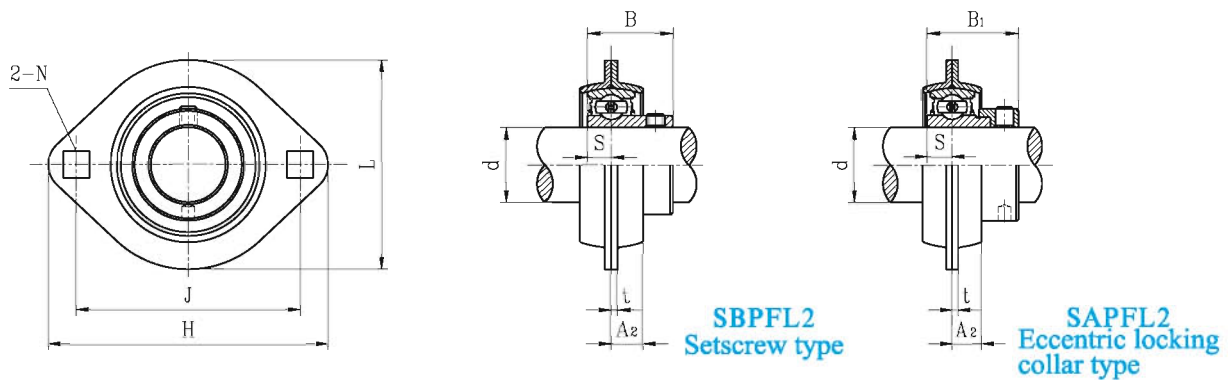
**SAFCT2G**  
Eccentric locking collar type

| Unit No.                                                  | Shaft Dia.                         |                | Dimensions(mm). |      |      |      |      |      |     |      | Bolt Size |      | Bearing No.                                             | Housing No. | Mass (kg)            |
|-----------------------------------------------------------|------------------------------------|----------------|-----------------|------|------|------|------|------|-----|------|-----------|------|---------------------------------------------------------|-------------|----------------------|
|                                                           | d                                  |                | L               | P    | A1   | A    | A2   | N    | S   | E    |           |      |                                                         |             |                      |
|                                                           | (in.)                              | (mm)           |                 |      |      |      |      |      |     |      |           |      |                                                         |             |                      |
| SBFCT201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 10.7 | 19.1 | 10.7 | 7.1  | 6   | 26.7 | M6        | 1/4  | SB 201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FCT203      | 0.24<br>0.23<br>0.22 |
| SBFCT204-12G<br>204G                                      | 3/4                                | 20             | 90.5            | 71.4 | 11.1 | 19.8 | 11.1 | 8.7  | 7   | 29.1 | M8        | 5/16 | SB 204-12G<br>204G                                      | FCT204      | 0.32                 |
| SBFCT205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95.2            | 76.2 | 10.3 | 19.8 | 10.3 | 8.7  | 7.5 | 29.8 | M8        | 5/16 | SB 205-14G<br>205-15G<br>205G<br>205-16G                | FCT205      | 0.37                 |
| SBFCT206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 12   | 22   | 12   | 10.3 | 8   | 34   | M10       | 3/8  | SB 206-18G<br>206G<br>206-19G<br>206-20G                | FCT206      | 0.51                 |
| SBFCT207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122.5           | 100  | 12.7 | 23.8 | 12.7 | 10.3 | 8.5 | 36.2 | M10       | 3/8  | SB 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FCT207      | 0.75                 |

| Unit No.                                                  | Shaft Dia.                         |                | Dimensions(mm). |      |                |      |                |      |     |      | Bolt Size |      | Bearing No.                                             | Housing No. | Mass (kg)            |
|-----------------------------------------------------------|------------------------------------|----------------|-----------------|------|----------------|------|----------------|------|-----|------|-----------|------|---------------------------------------------------------|-------------|----------------------|
|                                                           | d                                  |                | L               | P    | A <sub>1</sub> | A    | A <sub>2</sub> | N    | S   | E    |           |      |                                                         |             |                      |
|                                                           | (in.)                              | (mm)           |                 |      |                |      |                |      |     |      |           |      |                                                         |             |                      |
| SAFCT201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 10.7           | 19.1 | 10.7           | 7.1  | 6.5 | 32.8 | M6        | 1/4  | SA 201G<br>201-8G<br>202G<br>202-10G<br>203G<br>203-11G | FCT203      | 0.26<br>0.25<br>0.23 |
| SAFCT204-12G<br>204G                                      | 3/4                                | 20             | 90.5            | 71.4 | 11.1           | 19.8 | 11.1           | 8.7  | 7.5 | 34.5 | M8        | 5/16 | SA 204-12G<br>204G                                      | FCT204      | 0.35                 |
| SAFCT205-14G<br>205-15G<br>205G<br>205-16G                | 7/8<br>15/16<br>1                  | 25             | 95.2            | 76.2 | 10.3           | 19.8 | 10.3           | 8.7  | 7.5 | 33.7 | M8        | 5/16 | SA 205-14G<br>205-15G<br>205G<br>205-16G                | FCT205      | 0.39                 |
| SAFCT206-18G<br>206G<br>206-19G<br>206-20G                | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 12             | 22   | 12             | 10.3 | 9   | 38.7 | M10       | 3/8  | SA 206-18G<br>206G<br>206-19G<br>206-20G                | FCT206      | 0.39                 |
| SAFCT207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122.5           | 100  | 12.7           | 23.8 | 12.7           | 10.3 | 9.5 | 42.1 | M10       | 3/8  | SA 207-20G<br>207-21G<br>207-22G<br>207G<br>207-23G     | FCT207      | 0.81                 |

Remarks: The numbers indicate relubricatable type. If maintenance free type is needed, please order without suffix "G".

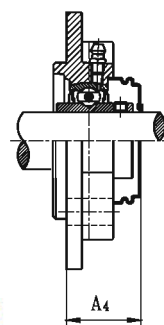
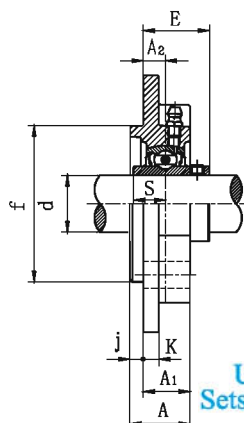
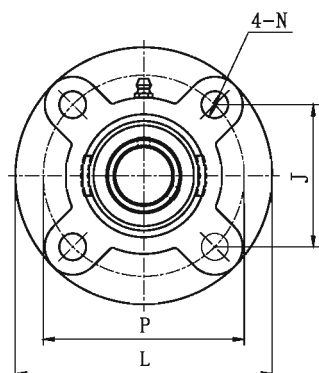
# PRESSED-STEEL OVAL FLANGE UNITS



| Unit No.                                            | Shaft Dia.                         |                | Dimensions(mm). |      |    |     |      |     |     |    | Bolt Size |      | Bearing No.                                      | Housing No. | Mass (kg)            |
|-----------------------------------------------------|------------------------------------|----------------|-----------------|------|----|-----|------|-----|-----|----|-----------|------|--------------------------------------------------|-------------|----------------------|
|                                                     | d                                  |                | H               | J    | A2 | L   | N    | t   | S   | B  |           |      |                                                  |             |                      |
|                                                     | (in.)                              | (mm)           |                 |      |    |     |      |     |     |    |           |      |                                                  |             |                      |
| SBPFL201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 7  | 59  | 7.5  | 2   | 6   | 22 | M6        | 1/4  | SB201<br>201-8<br>202<br>202-10<br>203<br>203-11 | PFL203      | 0.18<br>0.17<br>0.16 |
| SBPFL204-12<br>204                                  | 3/4                                | 20             | 90              | 71.5 | 8  | 67  | 9    | 2   | 7   | 25 | M8        | 5/16 | SB204-12<br>204                                  | PFL204      | 0.22                 |
| SBPFL205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 95              | 76   | 9  | 71  | 9    | 2   | 7.5 | 27 | M8        | 5/16 | SB205-14<br>205-15<br>205<br>205-16              | PFL205      | 0.27                 |
| SBPFL206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 9  | 84  | 10.5 | 2.5 | 8   | 30 | M10       | 3/8  | SB206-18<br>206<br>206-19<br>206-20              | PFL206      | 0.41                 |
| SBPFL207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122             | 100  | 10 | 94  | 10.5 | 2.5 | 8.5 | 32 | M10       | 3/8  | SB207-20<br>207-21<br>207-22<br>207<br>207-23    | PFL207      | 0.58                 |
| SBPFL208-24<br>208-25<br>208                        | 1-1/2<br>1-9/16                    | 40             | 148             | 119  | 12 | 100 | 13.5 | 3.5 | 9   | 34 | M12       | 1/2  | SB208-24<br>208-25<br>208                        | PFL208      | 0.81                 |

| Unit No.                                             | Shaft Dia.                         |                | Dimensions(mm). |      |    |     |      |     |     |      | Bolt Size |      | Bearing No.                                      | Housing No. | Mass (kg)            |
|------------------------------------------------------|------------------------------------|----------------|-----------------|------|----|-----|------|-----|-----|------|-----------|------|--------------------------------------------------|-------------|----------------------|
|                                                      | d                                  |                | H               | J    | A2 | L   | N    | t   | S   | B1   |           |      |                                                  |             |                      |
|                                                      | (in.)                              | (mm)           |                 |      |    |     |      |     |     |      |           |      |                                                  |             |                      |
| SAPFL 201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 81              | 63.5 | 7  | 59  | 7.5  | 2   | 6.5 | 28.6 | M6        | 1/4  | SA201<br>201-8<br>202<br>202-10<br>203<br>203-11 | PFL203      | 0.20<br>0.19<br>0.17 |
| SAPFL 204-12<br>204                                  | 3/4                                | 20             | 90              | 71.5 | 8  | 67  | 9    | 2   | 7.5 | 30.9 | M8        | 5/16 | SA204-12<br>204                                  | PFL204      | 0.25                 |
| SAPFL 205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 95              | 76   | 9  | 71  | 9    | 2   | 7.5 | 30.9 | M8        | 5/16 | SA205-14<br>205-15<br>205<br>205-16              | PFL205      | 0.29                 |
| SAPFL 206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90.5 | 9  | 84  | 10.5 | 2.5 | 9   | 35.7 | M10       | 3/8  | SA206-18<br>206<br>206-19<br>206-20              | PFL206      | 0.46                 |
| SAPFL 207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122             | 100  | 10 | 94  | 10.5 | 2.5 | 9.5 | 38.9 | M10       | 3/8  | SA207-20<br>207-21<br>207-22<br>207<br>207-23    | PFL207      | 0.64                 |
| SAPFL208-24<br>208-25<br>208                         | 1-1/2<br>1-9/16                    | 40             | 148             | 119  | 12 | 100 | 13.5 | 3.5 | 11  | 43.7 | M12       | 1/2  | SA208-24<br>208-25<br>208                        | PFL208      | 0.94                 |

# ROUND FLANGE CARTRIDGE UNITS

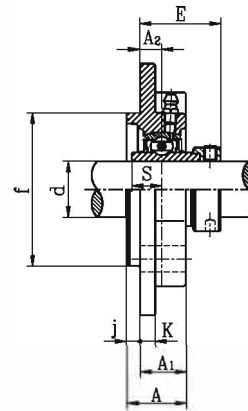
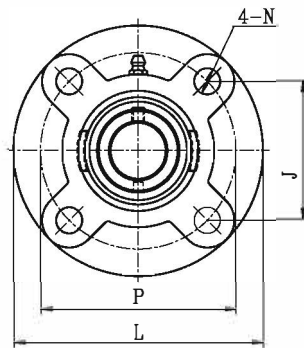


**UCFC2**  
Setscrew type

**S-UCFC200E1**  
**SM-UCFC200E1**  
With end cover

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |     |                |                |      |    |    |    |       |     |      |      |                | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|----------------|----------------|------|----|----|----|-------|-----|------|------|----------------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                  |                      | L               | P   | A <sub>2</sub> | A <sub>1</sub> | A    | j  | K  | N  | J     | f   | S    | E    | A <sub>4</sub> |           |                                                                   |             |                              |
|                                                                     | (in.)                              | (mm)                 |                 |     |                |                |      |    |    |    |       |     |      |      |                |           |                                                                   |             |                              |
| UCFC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 90              | 70  | 10             | 19             | 23   | 4  | 5  | 10 | 49.5  | 55  | 11.5 | 25.9 | --             | M8        | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FC203       | 0.53<br>0.52<br>0.51         |
| UCFC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 100             | 78  | 10             | 20.5           | 25.5 | 5  | 6  | 12 | 55.1  | 62  | 12.7 | 28.3 | 32.5           | M10       | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FC204       | 0.72<br>0.70<br>0.69<br>0.67 |
| UCFC205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 115             | 90  | 10             | 21             | 27   | 6  | 7  | 12 | 63.6  | 70  | 14.3 | 29.7 | 34             | M10       | UC205-14<br>205-15<br>205<br>205-16                               | FC205       | 0.98                         |
| UCFC206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 125             | 100 | 10             | 23             | 31   | 8  | 8  | 12 | 70.7  | 80  | 15.9 | 32.2 | 36             | M10       | UC206-18<br>206<br>206-19<br>206-20                               | FC206       | 1.33                         |
| UCFC207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 135             | 110 | 11             | 26             | 34   | 8  | 9  | 14 | 77.8  | 90  | 17.5 | 36.4 | 40.5           | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | FC207       | 1.64                         |
| UCFC208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 145             | 120 | 11             | 26             | 36   | 10 | 9  | 14 | 84.8  | 100 | 19   | 41.2 | 45             | M12       | UC208-24<br>208-25<br>208                                         | FC208       | 2.04                         |
| UCFC209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 160             | 132 | 10             | 26             | 38   | 12 | 10 | 16 | 93.3  | 105 | 19   | 40.2 | 45             | M14       | UC209-26<br>209-27<br>209-28<br>209                               | FC209       | 2.40                         |
| UCFC210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 165             | 138 | 10             | 28             | 40   | 12 | 14 | 16 | 97.6  | 110 | 19   | 42.6 | 48             | M14       | UC210-30<br>210-31<br>210                                         | FC210       | 2.83                         |
| UCFC211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 185             | 150 | 13             | 30             | 42   | 12 | 13 | 19 | 106.1 | 125 | 22.2 | 46.4 | 52             | M16       | UC211-32<br>211-34<br>211<br>211-35                               | FC211       | 3.82                         |
| UCFC212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 195             | 160 | 17             | 36             | 48   | 12 | 15 | 19 | 113.1 | 135 | 25.4 | 56.7 | 62.5           | M16       | UC212-36<br>212<br>212-38<br>212-39                               | FC212       | 4.84                         |
| UCFC213-40<br>213                                                   | 2-1/2                              | 65                   | 205             | 170 | 16             | 35             | 49   | 14 | 15 | 19 | 120.2 | 145 | 25.4 | 55.7 | 65             | M16       | UC213-40<br>213                                                   | FC213       | 5.43                         |
| UCFC214-44<br>214                                                   | 2-3/4                              | 70                   | 215             | 177 | 17             | 38             | 52   | 14 | 16 | 19 | 125.1 | 150 | 30.2 | 61.4 | --             | M16       | UC214-44<br>214                                                   | FC214       | 6.28                         |
| UCFC215<br>215-48                                                   | 3                                  | 75                   | 220             | 184 | 18             | 39             | 55   | 16 | 17 | 19 | 130.1 | 160 | 33.3 | 62.5 | --             | M16       | UC215<br>215-48                                                   | FC215       | 7.18                         |
| UCFC216                                                             |                                    | 80                   | 240             | 200 | 18             | 42             | 58   | 16 | 18 | 23 | 141.4 | 170 | 33.3 | 67.3 | --             | M20       | UC216                                                             | FC216       | 9.17                         |
| UCFC217-52<br>217                                                   | 3-1/4                              | 85                   | 250             | 208 | 18             | 45             | 63   | 18 | 20 | 23 | 147.1 | 180 | 34.1 | 69.6 | --             | M20       | UC217-52<br>217                                                   | FC217       | 10.6                         |
| UCFC218-56<br>218                                                   | 3-1/2                              | 90                   | 265             | 220 | 22             | 50             | 68   | 18 | 20 | 23 | 155.5 | 190 | 39.7 | 78.3 | --             | M20       | UC218-56<br>218                                                   | FC218       | 12.6                         |

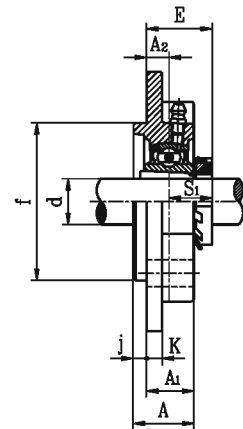
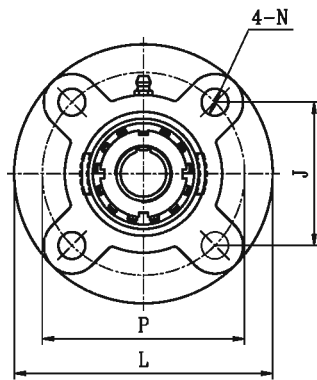
# ROUND FLANGE CARTRIDGE UNITS



**NAFC2**  
Eccentric locking collar type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |     |                |                |      |    |    |    |       |     |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|----------------|----------------|------|----|----|----|-------|-----|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d<br>(in.)                         | (mm)                 | L               | P   | A <sub>2</sub> | A <sub>1</sub> | A    | j  | K  | N  | J     | f   | S    | E    |           |                                                                   |             |                              |
| NAFC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 90              | 70  | 10             | 19             | 23   | 4  | 5  | 10 | 49.5  | 55  | 13.9 | 33.4 | M8        | NA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FC203       | 0.64<br>0.63<br>0.61         |
| NAFC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 100             | 78  | 10             | 20.5           | 25.5 | 5  | 6  | 12 | 55.1  | 62  | 17   | 36.5 | M10       | NA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FC204       | 0.79<br>0.76<br>0.75<br>0.72 |
| NAFC205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 115             | 90  | 10             | 21             | 27   | 6  | 7  | 12 | 63.6  | 70  | 17.4 | 36.9 | M10       | NA205-14<br>205-15<br>205<br>205-16                               | FC205       | 1.03                         |
| NAFC206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 125             | 100 | 10             | 23             | 31   | 8  | 8  | 12 | 70.7  | 80  | 18.2 | 40.1 | M10       | NA206-18<br>206<br>206-19<br>206-20                               | FC206       | 1.40                         |
| NAFC207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 135             | 110 | 11             | 26             | 34   | 8  | 9  | 14 | 77.8  | 90  | 18.8 | 43.3 | M12       | NA207-20<br>207-21<br>207-22<br>207<br>207-23                     | FC207       | 1.71                         |
| NAFC208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 145             | 120 | 11             | 26             | 36   | 10 | 9  | 14 | 84.8  | 100 | 21.4 | 45.9 | M12       | NA208-24<br>208-25<br>208                                         | FC208       | 2.15                         |
| NAFC209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 160             | 132 | 10             | 26             | 38   | 12 | 10 | 16 | 93.3  | 105 | 21.4 | 44.9 | M14       | NA209-26<br>209-27<br>209-28<br>209                               | FC209       | 2.52                         |
| NAFC210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 165             | 138 | 10             | 28             | 40   | 12 | 14 | 16 | 97.6  | 110 | 24.6 | 48.1 | M14       | NA210-30<br>210-31<br>210                                         | FC210       | 3.00                         |
| NAFC211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 185             | 150 | 13             | 30             | 42   | 12 | 13 | 19 | 106.1 | 125 | 27.7 | 56.6 | M16       | NA211-32<br>211-34<br>211<br>211-35                               | FC211       | 4.07                         |
| NAFC212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 195             | 160 | 17             | 36             | 48   | 12 | 15 | 19 | 113.1 | 135 | 30.9 | 63.8 | M16       | NA212-36<br>212<br>212-38<br>212-39                               | FC212       | 5.12                         |
| NAFC213-40<br>213                                                   | 2-1/2                              | 65                   | 205             | 170 | 16             | 35             | 49   | 14 | 15 | 19 | 120.2 | 145 | 34.1 | 67.6 | M16       | NA213-40<br>213                                                   | FC213       | 5.82                         |
| NAFC214-44<br>214                                                   | 2-3/4                              | 70                   | 215             | 177 | 17             | 38             | 52   | 14 | 16 | 19 | 125.1 | 150 | 34.1 | 68.6 | M16       | NA214-44<br>214                                                   | FC214       | 6.32                         |
| NAFC215<br>215-48                                                   | 3                                  | 75                   | 220             | 184 | 18             | 39             | 55   | 16 | 17 | 19 | 130.1 | 160 | 37.3 | 72.8 | M16       | NA215<br>215-48                                                   | FC215       | 7.64                         |
| NAFC216                                                             |                                    | 80                   | 240             | 200 | 18             | 42             | 58   | 16 | 18 | 23 | 141.4 | 170 | 37.3 | 75.9 | M20       | NA216                                                             | FC216       | 9.79                         |
| NAFC217-52<br>217                                                   | 3-1/4                              | 85                   | 250             | 208 | 18             | 45             | 63   | 18 | 20 | 23 | 147.1 | 180 | 23.4 | 67.8 | M20       | NA217-52<br>217                                                   | FC217       | 10.8                         |
| NAFC218-56<br>218                                                   | 3-1/2                              | 90                   | 265             | 220 | 22             | 50             | 68   | 18 | 20 | 23 | 155.5 | 190 | 24.5 | 70   | M20       | NA218-56<br>218                                                   | FC218       | 12.3                         |

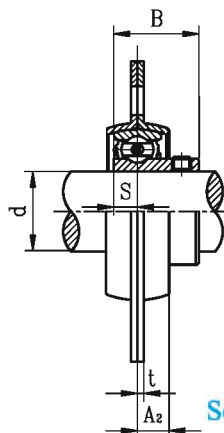
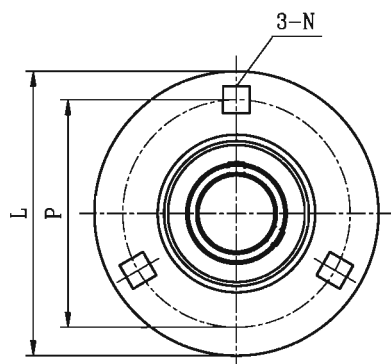
# ROUND FLANGE CARTRIDGE UNITS



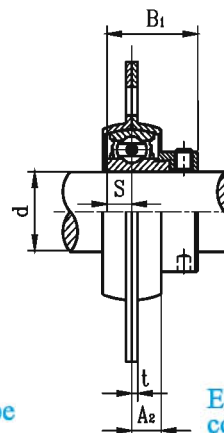
**UKFC2+H**  
Tapered bore, adapter type

| Unit No.                                                | Shaft Dia.                |      | Dimensions(mm). |     |                |                |    |    |    |    |       |     |                |      | Bolt Size | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|---------------------------------------------------------|---------------------------|------|-----------------|-----|----------------|----------------|----|----|----|----|-------|-----|----------------|------|-----------|-------------|-------------|-------------------------------------|-----------|
|                                                         | d                         |      | L               | P   | A <sub>2</sub> | A <sub>1</sub> | A  | j  | K  | N  | J     | f   | S <sub>1</sub> | E    |           |             |             |                                     |           |
|                                                         | (in.)                     | (mm) |                 |     |                |                |    |    |    |    |       |     |                |      |           |             |             |                                     |           |
| UKFC205+HE2305<br>205+H2305                             | 3/4                       | 20   | 115             | 90  | 10             | 21             | 27 | 6  | 7  | 12 | 63.6  | 70  | 18.5           | 28.5 | M10       | UK205       | FC205       | HE2305<br>H2305                     | 1.02      |
| UKFC206+HS2306<br>206+HA2306<br>206+H2306<br>206+HE2306 | 7/8<br>15/16<br>1         | 25   | 125             | 100 | 10             | 23             | 31 | 8  | 8  | 12 | 70.7  | 80  | 20.5           | 30.5 | M10       | UK206       | FC206       | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.40      |
| UKFC207+HS2307<br>207+H2307<br>207+HA2307               | 1-1/8<br>1-3/16           | 30   | 135             | 110 | 11             | 26             | 34 | 8  | 9  | 14 | 77.8  | 90  | 22.5           | 33.5 | M12       | UK207       | FC207       | HS2307<br>H2307<br>HA2307           | 1.69      |
| UKFC208+HE2308<br>208+HS2308<br>208+H2308               | 1-1/4<br>1-3/8            | 35   | 145             | 120 | 11             | 26             | 36 | 10 | 9  | 14 | 84.8  | 100 | 24.5           | 35.5 | M12       | UK208       | FC208       | HE2308<br>HS2308<br>H2308           | 2.10      |
| UKFC209+HA2309<br>209+HE2309<br>209+H2309               | 1-7/16<br>1-1/2           | 40   | 160             | 132 | 10             | 26             | 38 | 12 | 10 | 16 | 93.3  | 105 | 26             | 36   | M14       | UK209       | FC209       | HA2309<br>HE2309<br>H2309           | 2.51      |
| UKFC210+HS2310<br>210+HA2310<br>210+HE2310<br>210+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 165             | 138 | 10             | 28             | 40 | 12 | 14 | 16 | 97.6  | 110 | 27.5           | 37.5 | M14       | UK210       | FC210       | HS2310<br>HA2310<br>HE2310<br>H2310 | 3.01      |
| UKFC211+HS2311<br>211+HA2311<br>211+H2311<br>211+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 185             | 150 | 13             | 30             | 42 | 12 | 13 | 19 | 106.1 | 125 | 28.5           | 41.5 | M16       | UK211       | FC211       | HS2311<br>HA2311<br>H2311<br>HE2311 | 3.98      |
| UKFC212+HS2312<br>212+H2312                             | 2-1/8                     | 55   | 195             | 160 | 17             | 36             | 48 | 12 | 15 | 19 | 113.1 | 135 | 31             | 48   | M16       | UK212       | FC212       | HS2312<br>H2312                     | 4.94      |
| UKFC213+HA2313<br>213+HE2313<br>213+H2313<br>213+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 205             | 170 | 16             | 35             | 49 | 14 | 15 | 19 | 120.2 | 145 | 32             | 48   | M16       | UK213       | FC213       | HA2313<br>HE2313<br>H2313<br>HS2313 | 5.51      |
| UKFC215+HA2315<br>215+HE2315<br>215+H2315               | 2-7/16<br>2-1/2           | 65   | 220             | 184 | 18             | 39             | 55 | 16 | 17 | 19 | 130.1 | 160 | 35.5           | 53.5 | M16       | UK215       | FC215       | HA2315<br>HE2315<br>H2315           | 7.55      |
| UKFC216+HA2316<br>216+HE2316<br>216+H2316               | 2-11/16<br>2-3/4          | 70   | 240             | 200 | 18             | 42             | 58 | 16 | 18 | 23 | 141.4 | 170 | 39             | 57   | M20       | UK216       | FC216       | HA2316<br>HE2316<br>H2316           | 9.64      |
| UKFC217+HA2317<br>217+H2317<br>217+HE2317               | 2-15/16<br>3              | 75   | 250             | 208 | 18             | 45             | 63 | 18 | 20 | 23 | 147.1 | 180 | 40             | 58   | M20       | UK217       | FC217       | HA2317<br>H2317<br>HE2317           | 11.0      |
| UKFC218+H2318                                           |                           | 80   | 265             | 220 | 22             | 50             | 68 | 18 | 20 | 23 | 155.5 | 190 | 42             | 64   | M20       | UK218       | FC218       | H2318                               | 13.0      |

# PRESSED HOUSING ROUND FLANGE UNITS



**SBPF2**  
Setscrew type



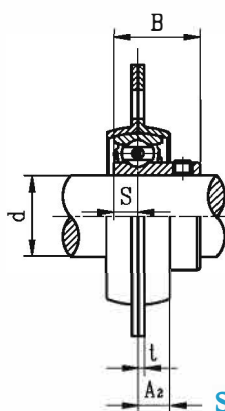
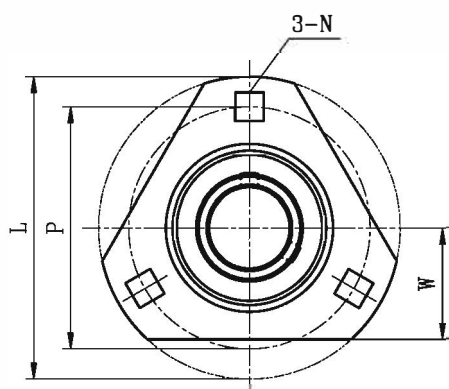
**SAPF2**  
Eccentric locking collar type

| Unit No.                                        | Shaft Dia.                         |                | Dimensions(mm). |     |                |     |                |     |    |      | Bolt Size |                                               | Bearing No. | Housing No.          | Mass (kg) |
|-------------------------------------------------|------------------------------------|----------------|-----------------|-----|----------------|-----|----------------|-----|----|------|-----------|-----------------------------------------------|-------------|----------------------|-----------|
|                                                 | d                                  |                | L               | P   | A <sub>2</sub> | t   | N <sup>Ø</sup> | S   | B  |      |           |                                               |             |                      |           |
|                                                 | (in.)                              | (mm)           |                 |     |                |     |                |     |    |      |           |                                               |             |                      |           |
| SBPF201-8<br>202<br>202-10<br>203<br>203-11     | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 82              | 64  | 7              | 2   | 7.5            | 6   | 22 | 1/4  | M6        | SB201-8<br>202<br>202-10<br>203<br>203-11     | PF203       | 0.24<br>0.23<br>0.22 |           |
| SBPF204-12<br>204                               | 3/4                                | 20             | 91              | 71  | 8              | 2   | 9              | 7   | 25 | 5/16 | M8        | SB204-12<br>204                               | PF204       | 0.29                 |           |
| SBPF205-14<br>205-15<br>205<br>205-16           | 7/8<br>15/16<br>1                  | 25             | 95              | 76  | 9              | 2   | 9              | 7.5 | 27 | 5/16 | M8        | SB205-14<br>205-15<br>205<br>205-16           | PF205       | 0.35                 |           |
| SBPF206-18<br>206<br>206-19<br>206-20           | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90  | 9              | 2.5 | 10.5           | 8   | 30 | 3/8  | M10       | SB206-18<br>206<br>206-19<br>206-20           | PF206       | 0.55                 |           |
| SBPF207-20<br>207-21<br>207-22<br>207<br>207-23 | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122             | 100 | 10             | 2.5 | 10.5           | 8.5 | 32 | 3/8  | M10       | SB207-20<br>207-21<br>207-22<br>207<br>207-23 | PF207       | 0.73                 |           |
| SBPF208-24<br>208-25<br>208                     | 1-1/2<br>1-9/16                    | 40             | 148             | 119 | 12             | 3.5 | 13.5           | 9   | 34 | 1/2  | M12       | SB208-24<br>208-25<br>208                     | PF208       | 1.18                 |           |

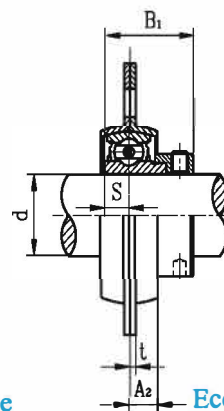
| Unit No.                                           | Shaft Dia.                         |                | Dimensions(mm). |     |                |     |                |     |                | Bolt Size |     | Bearing No.                                      | Housing No. | Mass (kg)            |
|----------------------------------------------------|------------------------------------|----------------|-----------------|-----|----------------|-----|----------------|-----|----------------|-----------|-----|--------------------------------------------------|-------------|----------------------|
|                                                    | d                                  |                | L               | P   | A <sub>2</sub> | t   | N <sup>Ø</sup> | S   | B <sub>1</sub> |           |     |                                                  |             |                      |
|                                                    | (in.)                              | (mm)           |                 |     |                |     |                |     |                |           |     |                                                  |             |                      |
| SAPF201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 82              | 64  | 7              | 2   | 7.5            | 6.5 | 28.6           | 1/4       | M6  | SA201<br>201-8<br>202<br>202-10<br>203<br>203-11 | PF203       | 0.26<br>0.25<br>0.23 |
| SAPF204-12<br>204                                  | 3/4                                | 20             | 91              | 71  | 8              | 2   | 9              | 7.5 | 30.9           | 5/16      | M8  | SA204-12<br>204                                  | PF204       | 0.32                 |
| SAPF205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 95              | 76  | 9              | 2   | 9              | 7.5 | 30.9           | 5/16      | M8  | SA205-14<br>205-15<br>205<br>205-16              | PF205       | 0.37                 |
| SAPF206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 113             | 90  | 9              | 2.5 | 10.5           | 9   | 35.7           | 3/8       | M10 | SA206-18<br>206<br>206-19<br>206-20              | PF206       | 0.60                 |
| SAPF207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 122             | 100 | 10             | 2.5 | 10.5           | 9.5 | 38.9           | 3/8       | M10 | SA207-20<br>207-21<br>207-22<br>207<br>207-23    | PF207       | 0.79                 |
| SAPF208-24<br>208-25<br>208                        | 1-1/2<br>1-9/16<br>40              | 40             | 148             | 119 | 12             | 3.5 | 13.5           | 11  | 43.7           | 1/2       | M12 | SA208-24<br>208-25<br>208                        | PF208       | 1.31                 |

Remarks: Ø SBPF208 and SAPF208 have four bolt holes.

# PRESSED HOUSING FLANGE UNITS(PFT TYPE)



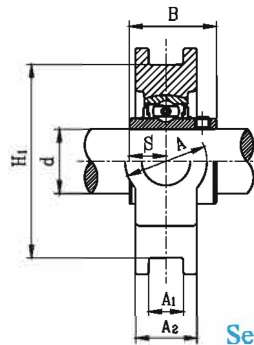
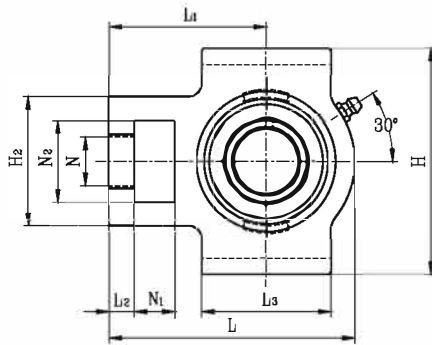
**SBPFT2**  
Setscrew type



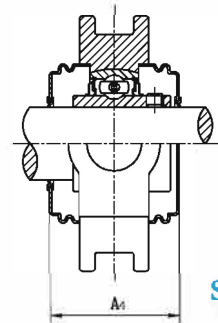
**SAPFT2**  
Eccentric locking collar type

| Unit No.    | Shaft Dia. |      | Dimensions(mm). |     |                |     |      |    |     |    | Bolt Size |     | Bearing No. | Housing No. | Mass (kg) |
|-------------|------------|------|-----------------|-----|----------------|-----|------|----|-----|----|-----------|-----|-------------|-------------|-----------|
|             | d          |      | L               | P   | A <sub>2</sub> | t   | N    | W  | S   | B  |           |     |             |             |           |
|             | (in.)      | (mm) |                 |     |                |     |      |    |     |    |           |     |             |             |           |
| SBPFT201    |            | 12   |                 |     |                |     |      |    |     |    |           |     | SB201       |             | 0.20      |
| 201-8       | 1/2        | 15   |                 |     |                |     |      |    |     |    |           |     | 201-8       |             |           |
| 202         |            |      | 82              | 64  | 7              | 2   | 7.5  | 29 | 6   | 22 | 1/4       | M6  | 202         | PFT203      | 0.19      |
| 202-10      | 5/8        |      |                 |     |                |     |      |    |     |    |           |     | 202-10      |             |           |
| 203         |            | 17   |                 |     |                |     |      |    |     |    |           |     | 203         |             | 0.18      |
| 203-11      | 11/16      |      |                 |     |                |     |      |    |     |    |           |     | 203-11      |             |           |
| SBPFT204-12 | 3/4        | 20   | 91              | 71  | 8              | 2   | 9    | 33 | 7   | 25 | 5/16      | M8  | SB204-12    | PFT204      | 0.24      |
| 204         |            |      |                 |     |                |     |      |    |     |    |           |     | 204         |             |           |
| SBPFT205-14 | 7/8        |      |                 |     |                |     |      |    |     |    |           |     | SB205-14    |             |           |
| 205-15      | 15/16      | 25   | 95              | 76  | 9              | 2   | 9    | 35 | 7.5 | 27 | 5/16      | M8  | 205-15      | PFT205      | 0.32      |
| 205         |            |      |                 |     |                |     |      |    |     |    |           |     | 205         |             |           |
| 205-16      | 1          |      |                 |     |                |     |      |    |     |    |           |     | 205-16      |             |           |
| SBPFT206-18 | 1-1/8      | 30   | 113             | 90  | 9              | 2.5 | 10.5 | 38 | 8   | 30 | 3/8       | M10 | SB206-18    |             |           |
| 206         |            |      |                 |     |                |     |      |    |     |    |           |     | 206         | PFT206      | 0.43      |
| 206-19      | 1-3/16     |      |                 |     |                |     |      |    |     |    |           |     | 206-19      |             |           |
| 206-20      | 1-1/4      |      |                 |     |                |     |      |    |     |    |           |     | 206-20      |             |           |
| SBPFT207-20 | 1-1/4      |      |                 |     |                |     |      |    |     |    |           |     | SB207-20    |             |           |
| 207-21      | 1-5/16     | 35   | 122             | 100 | 10             | 2.5 | 10.5 | 45 | 8.5 | 32 | 3/8       | M10 | 207-21      | PFT207      | 0.62      |
| 207-22      | 1-3/8      |      |                 |     |                |     |      |    |     |    |           |     | 207-22      |             |           |
| 207         |            |      |                 |     |                |     |      |    |     |    |           |     | 207         |             |           |
| 207-23      | 1-7/16     |      |                 |     |                |     |      |    |     |    |           |     | 207-23      |             |           |

| Unit No.    | Shaft Dia. |      | Dimensions(mm). |     |                |     |      |    |     |                | Bolt Size |     | Bearing No. | Housing No. | Mass (kg) |
|-------------|------------|------|-----------------|-----|----------------|-----|------|----|-----|----------------|-----------|-----|-------------|-------------|-----------|
|             | d          |      | L               | P   | A <sub>2</sub> | t   | N    | W  | S   | B <sub>1</sub> |           |     |             |             |           |
|             | (in.)      | (mm) |                 |     |                |     |      |    |     |                |           |     |             |             |           |
| SAPFT201    |            | 12   |                 |     |                |     |      |    |     |                |           |     | SA201       |             | 0.22      |
| 201-8       | 1/2        | 15   |                 |     |                |     |      |    |     |                |           |     | 201-8       |             |           |
| 202         |            |      | 82              | 64  | 7              | 2   | 7.5  | 29 | 6.5 | 28.6           | 1/4       | M6  | 202         | PFT203      | 0.21      |
| 202-10      | 5/8        | 17   |                 |     |                |     |      |    |     |                |           |     | 202-10      |             |           |
| 203         |            |      |                 |     |                |     |      |    |     |                |           |     | 203         |             | 0.19      |
| 203-11      | 11/16      |      |                 |     |                |     |      |    |     |                |           |     | 203-11      |             |           |
| SAPFT204-12 | 3/4        | 20   | 91              | 71  | 8              | 2   | 9    | 33 | 7.5 | 30.9           | 5/16      | M8  | SA204-12    | PFT204      | 0.27      |
| 204         |            |      |                 |     |                |     |      |    |     |                |           |     | 204         |             |           |
| SAPFT205-14 | 7/8        |      |                 |     |                |     |      |    |     |                |           |     | SA205-14    |             |           |
| 205-15      | 15/16      | 25   | 95              | 76  | 9              | 2   | 9    | 35 | 7.5 | 30.9           | 5/16      | M8  | 205-15      | PFT205      | 0.34      |
| 205         |            |      |                 |     |                |     |      |    |     |                |           |     | 205         |             |           |
| 205-16      | 1          |      |                 |     |                |     |      |    |     |                |           |     | 205-16      |             |           |
| SAPFT206-18 | 1-1/8      | 30   | 113             | 90  | 9              | 2.5 | 10.5 | 38 | 9   | 35.7           | 3/8       | M10 | SA206-18    |             |           |
| 206         |            |      |                 |     |                |     |      |    |     |                |           |     | 206         | PFT206      | 0.48      |
| 206-19      | 1-3/16     |      |                 |     |                |     |      |    |     |                |           |     | 206-19      |             |           |
| 206-20      | 1-1/4      |      |                 |     |                |     |      |    |     |                |           |     | 206-20      |             |           |
| SAPFT207-20 | 1-1/4      |      |                 |     |                |     |      |    |     |                |           |     | SA207-20    |             |           |
| 207-21      | 1-5/16     | 35   | 122             | 100 | 10             | 2.5 | 10.5 | 45 | 9.5 | 38.9           | 3/8       | M10 | 207-21      | PFT207      | 0.68      |
| 207-22      | 1-3/8      |      |                 |     |                |     |      |    |     |                |           |     | 207-22      |             |           |
| 207         |            |      |                 |     |                |     |      |    |     |                |           |     | 207         |             |           |
| 207-23      | 1-7/16     |      |                 |     |                |     |      |    |     |                |           |     | 207-23      |             |           |

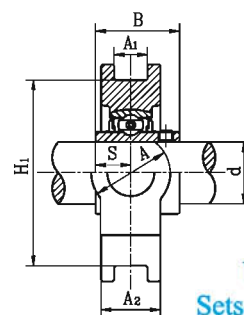
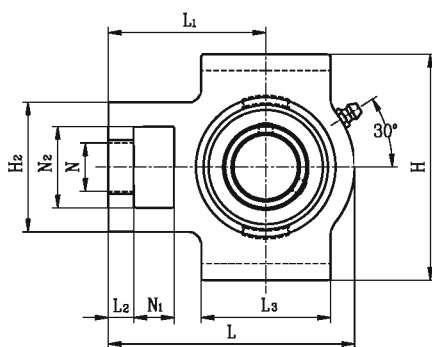


**UCT2**  
Setscrew type



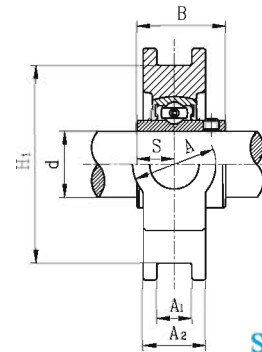
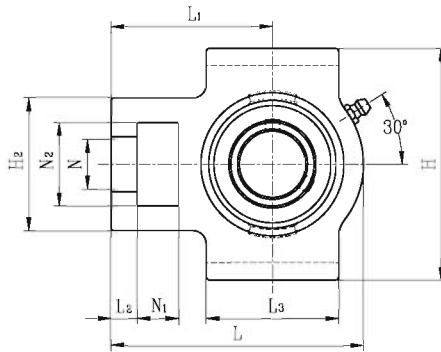
**S-UCT200E1**  
**SM-UCT200E1**  
With end cover

| Unit No.                                                           | Shaft Dia.                         |                      | Dimensions(mm). |    |     |    |    |     |    |     |     |     |    |    |     |      |      |    | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|--------------------------------------------------------------------|------------------------------------|----------------------|-----------------|----|-----|----|----|-----|----|-----|-----|-----|----|----|-----|------|------|----|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                    | d                                  |                      | N1              | L2 | H2  | N2 | N  | L3  | A1 | H1  | H   | L   | A  | A2 | L1  | B    | S    | A4 |                                                                   |             |                              |
|                                                                    | (in.)                              | (mm)                 |                 |    |     |    |    |     |    |     |     |     |    |    |     |      |      |    |                                                                   |             |                              |
| UCT201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 15              | 9  | 46  | 31 | 18 | 46  | 12 | 70  | 82  | 88  | 30 | 21 | 58  | 27.4 | 11.5 | -- | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | T203        | 0.62<br>0.61<br>0.60         |
| UCT201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 16              | 10 | 51  | 32 | 19 | 51  | 12 | 76  | 89  | 94  | 32 | 21 | 61  | 31   | 12.7 | 45 | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | T204        | 0.78<br>0.76<br>0.75<br>0.73 |
| UCT205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 16              | 10 | 51  | 32 | 19 | 51  | 12 | 76  | 89  | 97  | 32 | 24 | 62  | 34   | 14.3 | 48 | UC205-14<br>205-15<br>205<br>205-16                               | T205        | 0.82                         |
| UCT206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 16              | 10 | 56  | 37 | 22 | 57  | 12 | 89  | 102 | 113 | 37 | 28 | 70  | 38.1 | 15.9 | 52 | UC206-18<br>206<br>206-19<br>206-20                               | T206        | 1.23                         |
| UCT207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 16              | 13 | 64  | 37 | 22 | 64  | 12 | 89  | 102 | 129 | 37 | 30 | 78  | 42.9 | 17.5 | 59 | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | T207        | 1.61                         |
| UCT208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 19              | 16 | 83  | 49 | 29 | 83  | 16 | 102 | 114 | 144 | 49 | 33 | 88  | 49.2 | 19   | 68 | UC208-24<br>208-25<br>208                                         | T208        | 2.34                         |
| UCT209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 19              | 16 | 83  | 49 | 29 | 83  | 16 | 102 | 117 | 144 | 49 | 35 | 87  | 49.2 | 19   | 70 | UC209-26<br>209-27<br>209-28<br>209                               | T209        | 2.33                         |
| UCT210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 19              | 16 | 83  | 49 | 29 | 86  | 16 | 102 | 117 | 149 | 49 | 37 | 90  | 51.6 | 19   | 75 | UC210-30<br>210-31<br>210                                         | T210        | 2.48                         |
| UCT211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 25              | 19 | 102 | 64 | 35 | 95  | 22 | 130 | 146 | 171 | 64 | 38 | 106 | 55.6 | 22.2 | 78 | UC211-32<br>211-34<br>211<br>211-35                               | T211        | 3.79                         |
| UCT212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 32              | 19 | 102 | 64 | 35 | 102 | 22 | 130 | 146 | 194 | 64 | 42 | 119 | 65.1 | 25.4 | 91 | UC212-36<br>212<br>212-38<br>212-39                               | T212        | 4.61                         |
| UCT213-40<br>213                                                   | 2-1/2                              | 65                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 151 | 167 | 224 | 70 | 44 | 137 | 65.1 | 25.4 | 98 | UC213-40<br>213                                                   | T213        | 6.62                         |
| UCT214-44<br>214                                                   | 2-3/4                              | 70                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 151 | 167 | 224 | 70 | 46 | 137 | 74.6 | 30.2 | -- | UC214-44<br>214                                                   | T214        | 6.76                         |
| UCT215<br>215-48                                                   | 3                                  | 75                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 151 | 167 | 232 | 70 | 48 | 140 | 77.8 | 33.3 | -- | UC215<br>215-48                                                   | T215        | 7.18                         |
| UCT216                                                             |                                    | 80                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 165 | 184 | 235 | 70 | 51 | 140 | 82.6 | 33.3 | -- | UCT216                                                            | T216        | 8.40                         |
| UCT217-52<br>217                                                   | 3-1/4                              | 85                   | 38              | 29 | 124 | 73 | 48 | 157 | 30 | 173 | 198 | 260 | 73 | 54 | 162 | 85.7 | 34.1 | -- | UC217-52<br>217                                                   | T217        | 10.7                         |
| UCT218-56<br>218                                                   | 3-1/2                              | 90                   | 40              | 30 | 130 | 80 | 48 | 140 | 30 | 190 | 215 | 275 | 80 | 55 | 170 | 96   | 39.7 | -- | UC218-56<br>218                                                   | T218        | 11.8                         |



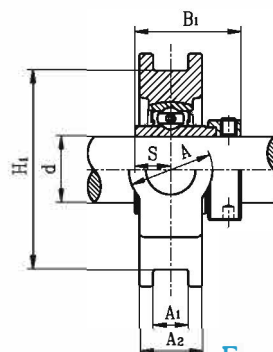
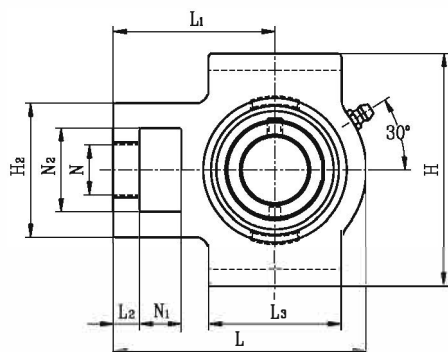
UCT3  
Setscrew type

| Unit No.                             | Shaft Dia.                |      | Dimensions(mm). |                |                |                |    |                |                |                |     |     |     |                |                |     |    | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|-----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|-----|-----|-----|----------------|----------------|-----|----|-------------------------------------|-------------|-----------|
|                                      | d                         |      | N <sub>1</sub>  | L <sub>2</sub> | H <sub>2</sub> | N <sub>2</sub> | N  | L <sub>3</sub> | A <sub>1</sub> | H <sub>1</sub> | H   | L   | A   | A <sub>2</sub> | L <sub>1</sub> | B   | S  |                                     |             |           |
|                                      | (in. )                    | (mm) |                 |                |                |                |    |                |                |                |     |     |     |                |                |     |    |                                     |             |           |
| UCT305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 16              | 14             | 62             | 36             | 26 | 65             | 12             | 80             | 89  | 122 | 36  | 26             | 76             | 38  | 15 | UC305-14<br>305-15<br>305<br>305-16 | T305        | 1.25      |
| UCT306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 18              | 16             | 70             | 41             | 28 | 74             | 16             | 90             | 100 | 137 | 41  | 28             | 85             | 43  | 17 | UC306-18<br>306<br>306-19           | T306        | 1.79      |
| UCT307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 20              | 17             | 75             | 45             | 30 | 80             | 16             | 100            | 111 | 150 | 45  | 32             | 94             | 48  | 19 | UC307-20<br>307-21<br>307-22<br>307 | T307        | 2.34      |
| UCT308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 22              | 19             | 83             | 50             | 32 | 89             | 18             | 112            | 124 | 162 | 50  | 34             | 100            | 52  | 19 | UC308-24<br>308-25<br>308           | T308        | 2.99      |
| UCT309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 24              | 20             | 90             | 55             | 34 | 97             | 18             | 125            | 138 | 178 | 55  | 38             | 110            | 57  | 22 | UC309-26<br>309-27<br>309-28<br>309 | T309        | 3.93      |
| UCT310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 27              | 22             | 98             | 61             | 37 | 106            | 20             | 140            | 151 | 192 | 61  | 40             | 118            | 61  | 22 | UC310-30<br>310-31<br>310           | T310        | 5.03      |
| UCT311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 29              | 23             | 105            | 66             | 39 | 115            | 22             | 150            | 163 | 207 | 66  | 44             | 127            | 66  | 25 | UC311-32<br>311-34<br>311<br>311-35 | T311        | 6.19      |
| UCT312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 31              | 25             | 113            | 71             | 41 | 123            | 22             | 160            | 178 | 220 | 71  | 46             | 135            | 71  | 26 | UC312-36<br>312<br>312-38<br>312-39 | T312        | 7.48      |
| UCT313-40<br>313                     | 2-1/2                     | 65   | 32              | 27             | 116            | 70             | 43 | 134            | 26             | 170            | 190 | 238 | 80  | 50             | 146            | 75  | 30 | UC313-40<br>313                     | T313        | 9.48      |
| UCT314-44<br>314                     | 2-3/4                     | 70   | 36              | 27             | 130            | 85             | 46 | 140            | 26             | 180            | 202 | 252 | 90  | 52             | 155            | 78  | 31 | UC314-44<br>314                     | T314        | 11.0      |
| UCT315<br>315-48                     | 3                         | 75   | 36              | 27             | 132            | 85             | 46 | 150            | 26             | 192            | 216 | 262 | 90  | 55             | 160            | 82  | 32 | UCT315<br>315-48                    | T315        | 12.7      |
| UCT316                               |                           | 80   | 42              | 30             | 150            | 98             | 53 | 160            | 30             | 204            | 230 | 282 | 102 | 60             | 174            | 86  | 34 | UCT316                              | T316        | 16.1      |
| UCT317-52<br>317                     | 3-1/4                     | 85   | 42              | 32             | 152            | 98             | 53 | 170            | 32             | 214            | 240 | 298 | 102 | 64             | 183            | 96  | 40 | UCT317-52<br>317                    | T317        | 18.6      |
| UCT318-56<br>318                     | 3-1/2                     | 90   | 46              | 32             | 160            | 106            | 57 | 175            | 32             | 228            | 255 | 312 | 110 | 66             | 192            | 96  | 40 | UCT318-56<br>318                    | T318        | 21.3      |
| UCT319<br>319-60                     | 3-3/4                     | 95   | 46              | 33             | 165            | 106            | 57 | 180            | 35             | 240            | 270 | 322 | 110 | 72             | 197            | 103 | 41 | UCT319<br>319-60                    | T319        | 24.7      |
| UCT320<br>320-64                     | 4                         | 100  | 48              | 34             | 175            | 115            | 59 | 200            | 35             | 260            | 290 | 345 | 120 | 75             | 210            | 108 | 42 | UCT320<br>320-64                    | T320        | 30.2      |
| UCT322                               |                           | 110  | 52              | 40             | 185            | 125            | 65 | 215            | 38             | 285            | 320 | 385 | 130 | 80             | 235            | 117 | 46 | UCT322                              | T322        | 40.2      |
| UCT324                               |                           | 120  | 60              | 44             | 210            | 140            | 70 | 230            | 45             | 320            | 355 | 432 | 140 | 90             | 267            | 126 | 51 | UCT324                              | T324        | 55.0      |
| UCT326                               |                           | 130  | 65              | 47             | 220            | 150            | 75 | 240            | 50             | 350            | 385 | 465 | 150 | 100            | 285            | 135 | 54 | UCT326                              | T326        | 69.0      |
| UCT328                               |                           | 140  | 70              | 52             | 230            | 160            | 80 | 255            | 50             | 380            | 415 | 515 | 155 | 100            | 315            | 145 | 59 | UCT328                              | T328        | 83.7      |



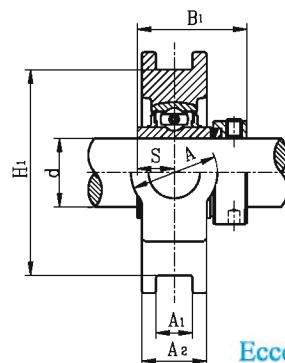
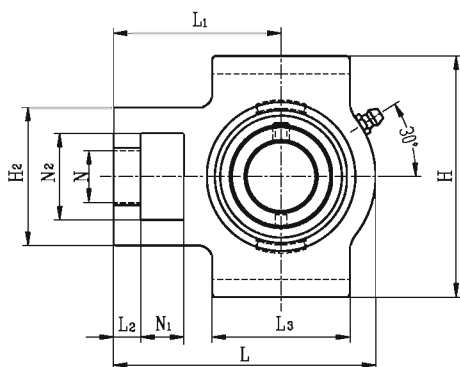
**UCST2**  
Setscrew type

| Unit No.                                                            | Shaft Dia.                                   |                                          | Dimensions(mm). |    |     |    |    |     |      |     |     |     |    |    |     |      |      | Bearing No.                                                       | Housing No. | Mass (kg)                                        |
|---------------------------------------------------------------------|----------------------------------------------|------------------------------------------|-----------------|----|-----|----|----|-----|------|-----|-----|-----|----|----|-----|------|------|-------------------------------------------------------------------|-------------|--------------------------------------------------|
|                                                                     | d                                            |                                          | N1              | L2 | H2  | N2 | N  | L3  | A1   | H1  | H   | L   | A  | A2 | L1  | B    | S    |                                                                   |             |                                                  |
|                                                                     | (in.)                                        | (mm)                                     |                 |    |     |    |    |     |      |     |     |     |    |    |     |      |      |                                                                   |             |                                                  |
| UCST201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br><br>5/8<br><br>11/16<br>3/4<br><br>20 | 12<br><br>15<br><br>17<br><br><br><br>20 |                 |    |     |    |    |     |      |     |     |     |    |    |     |      |      | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | ST204       | 0.77<br><br>0.75<br><br>0.74<br><br><br><br>0.72 |
| UCST205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br><br>1                        | <br><br>25<br><br>1                      | 16              | 10 | 51  | 32 | 19 | 51  | 13.5 | 76  | 89  | 97  | 32 | 24 | 62  | 34   | 14.3 | UC205-14<br>205-15<br>205<br>205-16                               | ST205       | 0.81                                             |
| UCST206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br><br>1-3/16<br>1-1/4                 | <br><br>30<br><br>1-1/4                  | 16              | 10 | 56  | 37 | 22 | 57  | 13.5 | 89  | 102 | 113 | 37 | 28 | 70  | 38.1 | 15.9 | UC206-18<br>206<br>206-19<br>206-20                               | ST206       | 1.23                                             |
| UCST207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br><br>1-7/16       | <br><br><br>35<br><br>1-7/16             | 16              | 13 | 64  | 37 | 22 | 64  | 13.5 | 89  | 102 | 129 | 37 | 30 | 78  | 42.9 | 17.5 | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | ST207       | 1.61                                             |
| UCST208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16<br><br>40                    | <br><br>40                               | 19              | 16 | 83  | 49 | 29 | 83  | 17.5 | 102 | 114 | 144 | 49 | 33 | 88  | 49.2 | 19   | UC208-24<br>208-25<br>208                                         | ST208       | 2.28                                             |
| UCST209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4<br><br>45          | <br><br><br>45                           | 19              | 16 | 83  | 49 | 29 | 83  | 17.5 | 102 | 117 | 144 | 49 | 35 | 87  | 49.2 | 19   | UC209-26<br>209-27<br>209-28<br>209                               | ST209       | 2.27                                             |
| UCST210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16<br><br>50                   | <br><br>50                               | 19              | 16 | 83  | 49 | 29 | 86  | 17.5 | 102 | 117 | 149 | 49 | 37 | 90  | 51.6 | 19   | UC210-30<br>210-31<br>210                                         | ST210       | 2.40                                             |
| UCST211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br><br>55<br><br>2-3/16           | <br><br>55<br><br>2-3/16                 | 25              | 19 | 102 | 64 | 35 | 95  | 27   | 130 | 146 | 171 | 64 | 38 | 106 | 55.6 | 22.2 | UC211-32<br>211-34<br>211<br>211-35                               | ST211       | 3.65                                             |
| UCST212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br><br>2-3/8<br>2-7/16                 | <br>60<br><br>2-3/8<br>2-7/16            | 32              | 19 | 102 | 64 | 35 | 102 | 27   | 130 | 146 | 194 | 64 | 42 | 119 | 65.1 | 25.4 | UC212-36<br>212<br>212-38<br>212-39                               | ST212       | 4.59                                             |



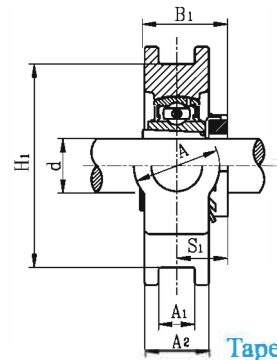
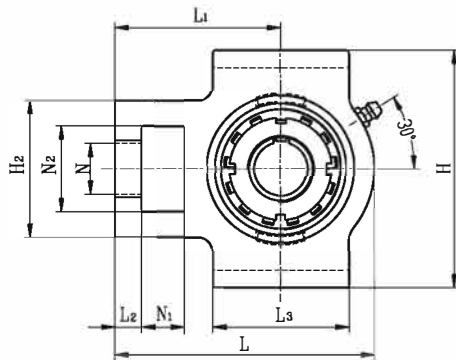
**NAT2**  
Eccentric locking collar type

| Unit No.                                                           | Shaft Dia.                         |                      | Dimensions(mm). |    |     |    |    |     |    |     |     |     |    |    |     |      |      | Bearing No.                                                        | Housing No. | Mass (kg)                    |
|--------------------------------------------------------------------|------------------------------------|----------------------|-----------------|----|-----|----|----|-----|----|-----|-----|-----|----|----|-----|------|------|--------------------------------------------------------------------|-------------|------------------------------|
|                                                                    | d                                  |                      | N1              | L2 | H2  | N2 | N  | L3  | A1 | H1  | H   | L   | A  | A2 | L1  | B1   | S    |                                                                    |             |                              |
|                                                                    | (in.)                              | (mm)                 |                 |    |     |    |    |     |    |     |     |     |    |    |     |      |      |                                                                    |             |                              |
| NAT201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 15              | 9  | 46  | 31 | 18 | 46  | 12 | 70  | 82  | 88  | 30 | 21 | 58  | 37.3 | 13.9 | NA 201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | T203        | 0.73<br>0.72<br>0.70         |
| NAT201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4<br>20   | 12<br>15<br>17<br>20 | 16              | 10 | 51  | 32 | 19 | 51  | 12 | 76  | 89  | 94  | 32 | 21 | 61  | 43.5 | 17   | NA 201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | T204        | 0.85<br>0.82<br>0.81<br>0.78 |
| NAT205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 16              | 10 | 51  | 32 | 19 | 51  | 12 | 76  | 89  | 97  | 32 | 24 | 62  | 44.3 | 17.4 | NA 205-14<br>205-15<br>205<br>205-16                               | T205        | 0.87                         |
| NAT206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 16              | 10 | 56  | 37 | 22 | 57  | 12 | 89  | 102 | 113 | 37 | 28 | 70  | 48.3 | 18.2 | NA 206-18<br>206<br>206-19<br>206-20                               | T206        | 1.30                         |
| NAT207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 16              | 13 | 64  | 37 | 22 | 64  | 12 | 89  | 102 | 129 | 37 | 30 | 78  | 51.1 | 18.8 | NA 207-20<br>207-21<br>207-22<br>207<br>207-23                     | T207        | 1.68                         |
| NAT208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 19              | 16 | 83  | 49 | 29 | 83  | 16 | 102 | 114 | 144 | 49 | 33 | 88  | 56.3 | 21.4 | NA 208-24<br>208-25<br>208                                         | T208        | 2.45                         |
| NAT209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 19              | 16 | 83  | 49 | 29 | 83  | 16 | 102 | 117 | 144 | 49 | 35 | 87  | 56.3 | 21.4 | NA 209-26<br>209-27<br>209-28<br>209                               | T209        | 2.45                         |
| NAT210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 19              | 16 | 83  | 49 | 29 | 86  | 16 | 102 | 117 | 149 | 49 | 37 | 90  | 62.7 | 24.6 | NA 210-30<br>210-31<br>210                                         | T210        | 2.65                         |
| NAT211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 25              | 19 | 102 | 64 | 35 | 95  | 22 | 130 | 146 | 171 | 64 | 38 | 106 | 71.3 | 27.7 | NA 211-32<br>211-34<br>211<br>211-35                               | T211        | 4.04                         |
| NAT212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 32              | 19 | 102 | 64 | 35 | 102 | 22 | 130 | 146 | 194 | 64 | 42 | 119 | 77.7 | 30.9 | NA 212-36<br>212<br>212-38<br>212-39                               | T212        | 4.89                         |
| NAT213-40<br>213                                                   | 2-1/2                              | 65                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 151 | 167 | 224 | 70 | 44 | 137 | 85.7 | 34.1 | NA 213-40<br>213                                                   | T213        | 7.01                         |
| NAT214-44<br>214                                                   | 2-3/4                              | 70                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 151 | 167 | 224 | 70 | 46 | 137 | 85.7 | 34.1 | NA 214-44<br>214                                                   | T214        | 6.80                         |
| NAT215<br>215-48                                                   | 3                                  | 75                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 151 | 167 | 232 | 70 | 48 | 140 | 92.1 | 37.3 | NA 215<br>215-48                                                   | T215        | 7.64                         |
| NAT216                                                             |                                    | 80                   | 32              | 21 | 111 | 70 | 41 | 121 | 26 | 165 | 184 | 235 | 70 | 51 | 140 | 95.2 | 37.3 | NA 216                                                             | T216        | 9.02                         |
| NAT217-52<br>217                                                   | 3-1/4                              | 85                   | 38              | 29 | 124 | 73 | 48 | 157 | 30 | 173 | 198 | 260 | 73 | 54 | 162 | 73.2 | 23.4 | NA 217-52<br>217                                                   | T217        | 10.9                         |
| NAT218-56<br>218                                                   | 3-1/2                              | 90                   | 40              | 30 | 130 | 80 | 48 | 140 | 30 | 190 | 215 | 275 | 80 | 55 | 170 | 72.5 | 24.5 | NA 218-56<br>218                                                   | T218        | 11.5                         |



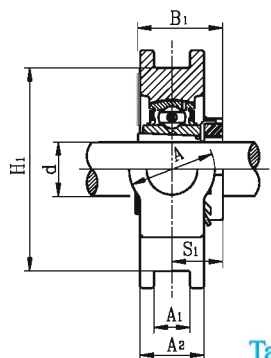
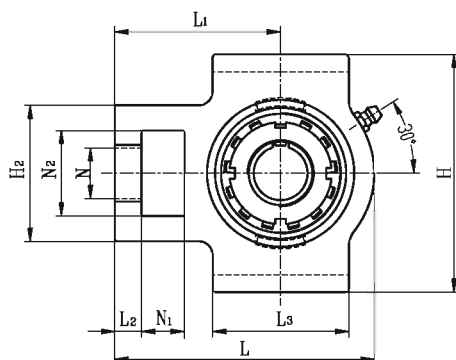
**NAT3**  
Eccentric locking collar type

| Unit No.                             | Shaft Dia.                      |      | Dimensions(mm). |                |                |                |    |                |                |                |     |     |     |                |                |                |       | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------------|------|-----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|-----|-----|-----|----------------|----------------|----------------|-------|-------------------------------------|-------------|-----------|
|                                      | d                               |      | N <sub>1</sub>  | L <sub>2</sub> | H <sub>2</sub> | N <sub>2</sub> | N  | L <sub>3</sub> | A <sub>1</sub> | H <sub>1</sub> | H   | L   | A   | A <sub>2</sub> | L <sub>1</sub> | B <sub>1</sub> | S     |                                     |             |           |
|                                      | (in. )                          | (mm) |                 |                |                |                |    |                |                |                |     |     |     |                |                |                |       |                                     |             |           |
| NAT305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1               | 25   | 16              | 14             | 62             | 36             | 26 | 65             | 12             | 80             | 89  | 122 | 36  | 26             | 76             | 46.8           | 16.7  | NA305-14<br>305-15<br>305<br>305-16 | T305        | 1.32      |
| NAT306-18<br>306<br>306-19           | 1-1/8<br>1-3/16                 | 30   | 18              | 16             | 70             | 41             | 28 | 74             | 16             | 90             | 100 | 137 | 41  | 28             | 85             | 50             | 17.5  | NA306-18<br>306<br>306-19           | T306        | 1.93      |
| NAT307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8<br>35  | 35   | 20              | 17             | 75             | 45             | 30 | 80             | 16             | 100            | 111 | 150 | 45  | 32             | 94             | 51.6           | 18.3  | NA307-20<br>307-21<br>307-22<br>307 | T307        | 2.43      |
| NAT308-24<br>308-25<br>308           | 1-1/2<br>1-9/16<br>40           | 40   | 22              | 19             | 83             | 50             | 32 | 89             | 18             | 112            | 124 | 162 | 50  | 34             | 100            | 57.1           | 19.8  | NA308-24<br>308-25<br>308           | T308        | 3.13      |
| NAT309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4<br>45 | 45   | 24              | 20             | 90             | 55             | 34 | 97             | 18             | 125            | 138 | 178 | 55  | 38             | 110            | 58.7           | 19.8  | NA309-26<br>309-27<br>309-28<br>309 | T309        | 4.06      |
| NAT310-30<br>310-31<br>310           | 1-7/8<br>1-15/16<br>50          | 50   | 27              | 22             | 98             | 61             | 37 | 106            | 20             | 140            | 151 | 192 | 61  | 40             | 118            | 66.6           | 24.6  | NA310-30<br>310-31<br>310           | T310        | 5.25      |
| NAT311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16<br>55      | 55   | 29              | 23             | 105            | 66             | 39 | 115            | 22             | 150            | 163 | 207 | 66  | 44             | 127            | 73             | 27.8  | NA311-32<br>311-34<br>311<br>311-35 | T311        | 6.44      |
| NAT312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16<br>60  | 60   | 31              | 25             | 113            | 71             | 41 | 123            | 22             | 160            | 178 | 220 | 71  | 46             | 135            | 79.4           | 29.5  | NA312-36<br>312<br>312-38<br>312-39 | T312        | 7.79      |
| NAT313-40<br>313                     | 2-1/2<br>65                     | 65   | 32              | 27             | 116            | 70             | 43 | 134            | 26             | 170            | 190 | 238 | 80  | 50             | 146            | 85.7           | 32.5  | NA313-40<br>313                     | T313        | 10.0      |
| NAT314-44<br>314                     | 2-3/4<br>70                     | 70   | 36              | 27             | 130            | 85             | 46 | 140            | 26             | 180            | 202 | 252 | 90  | 52             | 155            | 92.1           | 34.15 | NA314-44<br>314                     | T314        | 11.6      |
| NAT315<br>315-48                     | 3<br>75                         | 75   | 36              | 27             | 132            | 85             | 46 | 150            | 26             | 192            | 216 | 262 | 90  | 55             | 160            | 100            | 37.3  | NA315<br>315-48                     | T315        | 13.7      |
| NAT316                               |                                 | 80   | 42              | 30             | 150            | 98             | 53 | 160            | 30             | 204            | 230 | 282 | 102 | 60             | 174            | 106.4          | 40.5  | NA316                               | T316        | 17.2      |
| NAT317-52<br>317                     | 3-1/4<br>85                     | 85   | 42              | 32             | 152            | 98             | 53 | 170            | 32             | 214            | 240 | 298 | 102 | 64             | 183            | 109.5          | 42    | NA317-52<br>317                     | T317        | 19.7      |
| NAT318-56<br>318                     | 3-1/2<br>90                     | 90   | 46              | 32             | 160            | 106            | 57 | 175            | 32             | 228            | 255 | 312 | 110 | 66             | 192            | 115.9          | 43.6  | NA318-56<br>318                     | T318        | 22.8      |
| NAT319<br>319-60                     | 3-3/4<br>95                     | 95   | 46              | 33             | 165            | 106            | 57 | 180            | 35             | 240            | 270 | 322 | 110 | 72             | 197            | 122.3          | 46.8  | NA319<br>319-60                     | T319        | 26.1      |
| NAT320<br>320-64                     | 4<br>100                        | 100  | 48              | 34             | 175            | 115            | 59 | 200            | 35             | 260            | 290 | 345 | 120 | 75             | 210            | 128.6          | 50    | NA320<br>320-64                     | T320        | 32.5      |



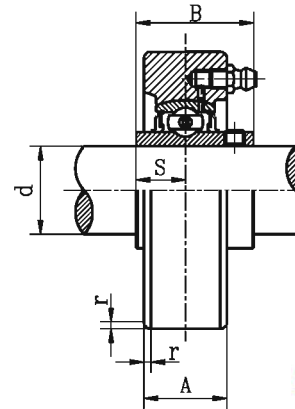
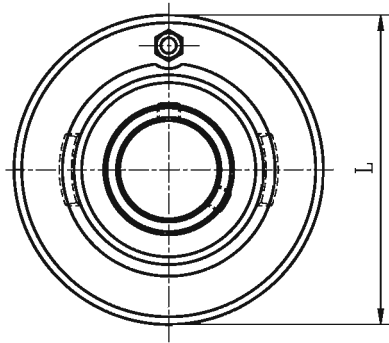
**UKT2+H**  
Tapered bore, adapter type

| Unit No.                                               | Shaft Dia.                |      | Dimensions(mm). |                |                |                |    |                |                |                |     |     |    |                |                |                |                | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|--------------------------------------------------------|---------------------------|------|-----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|-----|-----|----|----------------|----------------|----------------|----------------|-------------|-------------|-------------------------------------|-----------|
|                                                        | d                         |      | N <sub>1</sub>  | L <sub>2</sub> | H <sub>2</sub> | N <sub>2</sub> | N  | L <sub>3</sub> | A <sub>1</sub> | H <sub>1</sub> | H   | L   | A  | A <sub>2</sub> | L <sub>1</sub> | B <sub>1</sub> | S <sub>1</sub> |             |             |                                     |           |
|                                                        | (in. )                    | (mm) |                 |                |                |                |    |                |                |                |     |     |    |                |                |                |                |             |             |                                     |           |
| UKT205+HE2305<br>205+H2305                             | 3/4                       | 20   | 16              | 10             | 51             | 32             | 19 | 51             | 12             | 76             | 89  | 97  | 32 | 24             | 62             | 35             | 18.5           | UK205       | T205        | HE2305<br>H2305                     | 0.86      |
| UKT206+HS2306<br>206+HA2306<br>206+H2306<br>206+HE2306 | 7/8<br>15/16<br>1         | 25   | 16              | 10             | 56             | 37             | 22 | 57             | 12             | 89             | 102 | 113 | 37 | 28             | 70             | 38             | 20.5           | UK206       | T206        | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.30      |
| UKT207+HS2307<br>207+H2307<br>207+HA2307               | 1-1/8<br>1-3/16           | 30   | 16              | 13             | 64             | 37             | 22 | 64             | 12             | 89             | 102 | 129 | 37 | 30             | 78             | 43             | 22.5           | UK207       | T207        | HS2307<br>H2307<br>HA2307           | 1.66      |
| UKT208+HE2308<br>208+HS2308<br>208+H2308               | 1-1/4<br>1-3/8            | 35   | 19              | 16             | 83             | 49             | 29 | 83             | 16             | 102            | 114 | 144 | 49 | 33             | 88             | 46             | 24.5           | UK208       | T208        | HE2308<br>HS2308<br>H2308           | 2.40      |
| UKT209+HA2309<br>209+HE2309<br>209+H2309               | 1-7/16<br>1-1/2           | 40   | 19              | 16             | 83             | 49             | 29 | 83             | 16             | 102            | 117 | 144 | 49 | 35             | 87             | 50             | 26             | UK209       | T209        | HA2309<br>HE2309<br>H2309           | 2.44      |
| UKT210+HS2310<br>210+HA2310<br>210+HE2310<br>210+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 19              | 16             | 83             | 49             | 29 | 86             | 16             | 102            | 117 | 149 | 49 | 37             | 90             | 55             | 27.5           | UK210       | T210        | HS2310<br>HA2310<br>HE2310<br>H2310 | 2.66      |
| UKT211+HS2311<br>211+HA2311<br>211+H2311<br>211+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 25              | 19             | 102            | 64             | 35 | 95             | 22             | 130            | 146 | 171 | 64 | 38             | 106            | 59             | 28.5           | UK211       | T211        | HS2311<br>HA2311<br>H2311<br>HE2311 | 3.95      |
| UKT212+HS2312<br>212+H2312                             | 2-1/8                     | 55   | 32              | 19             | 102            | 64             | 35 | 102            | 22             | 130            | 146 | 194 | 64 | 42             | 119            | 62             | 31             | UK212       | T212        | HS2312<br>H2312                     | 4.71      |
| UKT213+HA2313<br>213+HE2313<br>213+H2313<br>213+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 32              | 21             | 111            | 70             | 41 | 121            | 26             | 151            | 167 | 224 | 70 | 44             | 137            | 65             | 32             | UK213       | T213        | HA2313<br>HE2313<br>H2313<br>HS2313 | 6.70      |
| UKT215+HA2315<br>215+HE2315<br>215+H2315               | 2-7/16<br>2-1/2           | 65   | 32              | 21             | 111            | 70             | 41 | 121            | 26             | 151            | 167 | 232 | 70 | 48             | 140            | 73             | 35.5           | UC215       | T215        | HA2315<br>HE2315<br>A2315           | 7.55      |
| UKT216+HA2316<br>216+HE2316<br>216+H2316               | 2-11/16<br>2-3/4          | 70   | 32              | 21             | 111            | 70             | 41 | 121            | 26             | 165            | 184 | 235 | 70 | 51             | 140            | 78             | 39             | UC216       | T216        | HA2316<br>HE2316<br>H2316           | 8.87      |
| UKT217+H2317                                           |                           | 75   | 38              | 29             | 124            | 73             | 48 | 157            | 30             | 173            | 198 | 260 | 73 | 54             | 162            | 82             | 40             | UC217       | T217        | H2317                               | 11.1      |
| UKT218+H2318                                           |                           | 80   | 40              | 30             | 130            | 80             | 48 | 140            | 30             | 190            | 215 | 275 | 80 | 55             | 170            | 86             | 42             | UK218       | T218        | H2318                               | 12.2      |



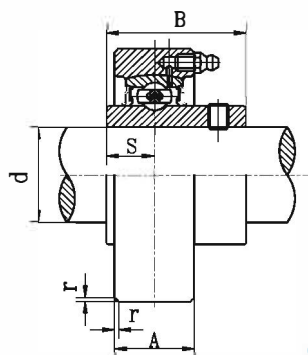
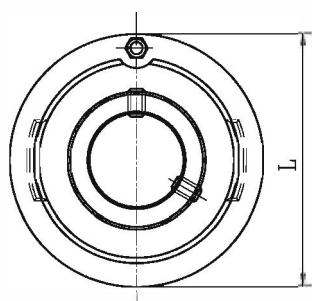
**UKT3+H**  
Tapered bore, adapter type

| Unit No.                                               | Shaft Dia.                |      | Dimensions(mm). |                |                |                |    |                |                |                |     |     |     |                |                |                |                | Bearing No. | Housing No. | Adapter No.                         | Mass (kg) |
|--------------------------------------------------------|---------------------------|------|-----------------|----------------|----------------|----------------|----|----------------|----------------|----------------|-----|-----|-----|----------------|----------------|----------------|----------------|-------------|-------------|-------------------------------------|-----------|
|                                                        | d                         |      | N <sub>1</sub>  | L <sub>2</sub> | H <sub>2</sub> | N <sub>2</sub> | N  | L <sub>3</sub> | A <sub>1</sub> | H <sub>1</sub> | H   | L   | A   | A <sub>2</sub> | L <sub>1</sub> | B <sub>1</sub> | S <sub>1</sub> |             |             |                                     |           |
|                                                        | (in. )                    | (mm) |                 |                |                |                |    |                |                |                |     |     |     |                |                |                |                |             |             |                                     |           |
| UKT305+HE2305<br>305+H2305                             | 3/4                       | 20   | 16              | 14             | 62             | 36             | 26 | 65             | 12             | 80             | 89  | 122 | 36  | 26             | 76             | 35             | 21.5           | UK305       | T305        | HE2305<br>H2305                     | 1.30      |
| UKT306+HS2306<br>306+HA2306<br>306+H2306<br>306+HE2306 | 7/8<br>15/16<br>1         | 25   | 18              | 16             | 70             | 41             | 28 | 74             | 16             | 90             | 100 | 137 | 41  | 28             | 85             | 38             | 23             | UK306       | T306        | HS2306<br>HA2306<br>H2306<br>HE2306 | 1.84      |
| UKT307+HS2307<br>307+H2307<br>307+HA2307               | 1-1/8<br>1-3/16           | 30   | 20              | 17             | 75             | 45             | 30 | 80             | 16             | 100            | 111 | 150 | 45  | 32             | 94             | 43             | 25.5           | UK307       | T307        | HS2307<br>H2307<br>HA2307           | 2.38      |
| UKT308+HE2308<br>308+HS2308<br>308+H2308               | 1-1/4<br>1-3/8            | 35   | 22              | 19             | 83             | 50             | 32 | 89             | 18             | 112            | 124 | 162 | 50  | 34             | 100            | 46             | 27.5           | UK308       | T308        | HE2308<br>HS2308<br>H2308           | 3.04      |
| UKT309+HA2309<br>309+HE2309<br>309+H2309               | 1-7/16<br>1-1/2           | 40   | 24              | 20             | 90             | 55             | 34 | 97             | 18             | 125            | 138 | 178 | 55  | 38             | 110            | 50             | 30             | UK309       | T309        | HA2309<br>HE2309<br>H2309           | 4.07      |
| UKT310+HS2310<br>310+HA2310<br>310+HE2310<br>310+H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 27              | 22             | 98             | 61             | 37 | 106            | 20             | 140            | 151 | 192 | 61  | 40             | 118            | 55             | 32             | UK310       | T310        | HS2310<br>HA2310<br>HE2310<br>H2310 | 5.07      |
| UKT311+HS2311<br>311+HA2311<br>311+H2311<br>311+HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 29              | 23             | 105            | 66             | 39 | 115            | 22             | 150            | 163 | 207 | 66  | 44             | 127            | 59             | 33.5           | UK311       | T311        | HS2311<br>HA2311<br>H2311<br>HE2311 | 6.21      |
| UKT312+HS2312<br>312+H2312                             | 2-1/8                     | 55   | 31              | 25             | 113            | 71             | 41 | 123            | 22             | 160            | 178 | 220 | 71  | 46             | 135            | 62             | 36.5           | UK312       | T312        | HS2312<br>H2312                     | 7.48      |
| UKT313+HA2313<br>313+HE2313<br>313+H2313<br>313+HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 32              | 27             | 116            | 70             | 43 | 134            | 26             | 170            | 190 | 238 | 80  | 50             | 146            | 65             | 38.5           | UK313       | T313        | HA2313<br>HE2313<br>H2313<br>HS2313 | 9.44      |
| UKT315+HA2315<br>315+HE2315<br>315+H2315               | 2-7/16<br>2-1/2           | 65   | 36              | 27             | 132            | 85             | 46 | 150            | 26             | 192            | 216 | 262 | 90  | 55             | 160            | 73             | 42.5           | UC315       | T315        | HA2315<br>HE2315<br>H2315           | 13.0      |
| UKT316+HA2316<br>316+HE2316<br>316+H2316               | 2-11/16<br>2-3/4          | 70   | 42              | 30             | 150            | 98             | 53 | 160            | 30             | 204            | 230 | 282 | 102 | 60             | 174            | 78             | 44.5           | UC316       | T316        | HA2316<br>HE2316<br>H2316           | 16.3      |
| UKT317+HA2317<br>317+H2317<br>317+HE2317               | 2-15/16<br>3              | 75   | 42              | 32             | 152            | 98             | 53 | 170            | 32             | 214            | 240 | 298 | 102 | 64             | 183            | 82             | 48             | UC317       | T317        | HA2317<br>H2317<br>HE2317           | 18.6      |
| UKT318+H2318                                           |                           | 80   | 46              | 32             | 160            | 106            | 57 | 175            | 32             | 228            | 255 | 312 | 110 | 66             | 192            | 86             | 48             | UK318       | T318        | H2318                               | 21.5      |
| UKT319+HE2319<br>319+H2319                             | 3-1/4                     | 85   | 46              | 33             | 165            | 106            | 57 | 180            | 35             | 240            | 270 | 322 | 110 | 72             | 197            | 90             | 52             | UK319       | T319        | HE2319<br>H2319                     | 24.5      |
| UKT320+HE2320<br>320+H2320                             | 3-1/2                     | 90   | 48              | 34             | 175            | 115            | 59 | 200            | 35             | 260            | 290 | 345 | 120 | 75             | 210            | 97             | 54             | UK320       | T320        | HE2320<br>H2320                     | 30.2      |
| UKT322                                                 |                           | 100  | 52              | 40             | 185            | 125            | 65 | 215            | 38             | 285            | 320 | 385 | 130 | 80             | 235            | 105            | 61             | UK322       | T322        | H2322                               | 40.2      |
| UKT324                                                 |                           | 110  | 60              | 44             | 210            | 140            | 70 | 230            | 45             | 320            | 355 | 432 | 140 | 90             | 267            | 112            | 65.5           | UK324       | T324        | H2324                               | 54.6      |
| UKT326                                                 |                           | 115  | 65              | 47             | 220            | 150            | 75 | 240            | 50             | 350            | 385 | 465 | 150 | 100            | 285            | 121            | 68             | UK326       | T326        | H2326                               | 68.8      |
| UKT328                                                 |                           | 125  | 70              | 52             | 230            | 160            | 80 | 255            | 50             | 380            | 415 | 515 | 155 | 100            | 315            | 131            | 73             | UK328       | T328        | H2328                               | 83.5      |



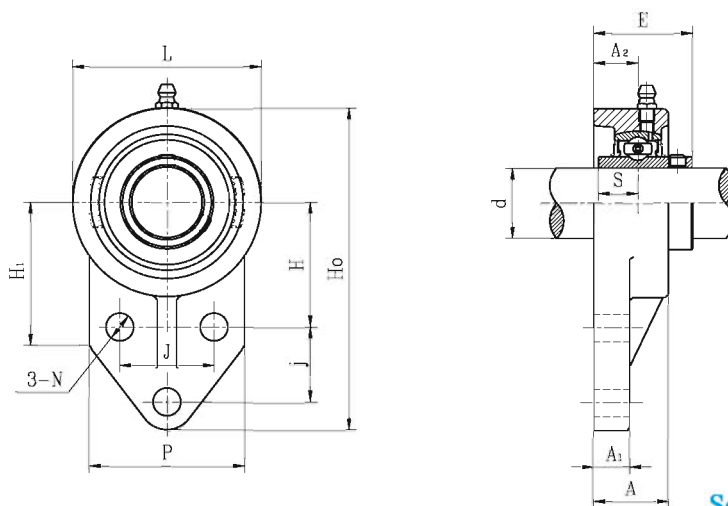
**UCC2**  
Setscrew type

| Unit No.                                                           | Shaft Dia.                         |                      | Dimensions(mm). |    |      |      |     | Bearing No.                                                        | Housing No. | Mass (kg)                    |
|--------------------------------------------------------------------|------------------------------------|----------------------|-----------------|----|------|------|-----|--------------------------------------------------------------------|-------------|------------------------------|
|                                                                    | d                                  |                      | L               | A  | S    | B    | r   |                                                                    |             |                              |
|                                                                    | (in.)                              | (mm)                 |                 |    |      |      |     |                                                                    |             |                              |
| UCC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 67              | 20 | 11.5 | 27.4 | 1.5 | UC 201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | C203        | 0.43<br>0.42<br>0.41         |
| UCC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 72              | 20 | 12.7 | 31   | 1.5 | UC 201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | C204        | 0.53<br>0.51<br>0.50<br>0.48 |
| UCC205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 80              | 22 | 14.3 | 34   | 1.5 | UC 205-14<br>205-15<br>205<br>205-16                               | C205        | 0.64                         |
| UCC206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 85              | 27 | 15.9 | 38.1 | 1.5 | UC 206-18<br>206<br>206-19<br>206-20                               | C206        | 0.79                         |
| UCC207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 90              | 28 | 17.5 | 42.9 | 1.5 | UC 207-20<br>207-21<br>207-22<br>207<br>207-23                     | C207        | 0.92                         |
| UCC208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 100             | 30 | 19   | 49.2 | 1.5 | UC 208-24<br>208-25<br>208                                         | C208        | 1.20                         |
| UCC209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 110             | 31 | 19   | 49.2 | 2   | UC 209-26<br>209-27<br>209-28<br>209                               | C209        | 1.47                         |
| UCC210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 120             | 33 | 19   | 51.6 | 2   | UC 210-30<br>210-31<br>210<br>210-32                               | C210        | 1.90                         |
| UCC211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 125             | 35 | 22.2 | 55.6 | 2   | UC 211-32<br>211-34<br>211<br>211-35                               | C211        | 2.12                         |
| UCC212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 130             | 38 | 25.4 | 65.1 | 2   | UC 212-36<br>212<br>212-38<br>212-39                               | C212        | 2.51                         |
| UCC213-40<br>213                                                   | 2-1/2                              | 65                   | 140             | 40 | 25.4 | 65.1 | 2   | UC 213-40<br>213                                                   | C213        | 2.90                         |
| UCC214-44<br>214                                                   | 2-3/4                              | 70                   | 150             | 44 | 30.2 | 74.6 | 2.5 | UC 214-44<br>214                                                   | C214        | 3.72                         |
| UCC215-47<br>215<br>UCC215-48                                      | 2-15/16<br>3                       | 75                   | 160             | 44 | 33.3 | 77.8 | 2.5 | UC 215-47<br>215<br>UC 215-48                                      | C215        | 4.39                         |
| UCC216                                                             |                                    | 80                   | 170             | 48 | 33.3 | 82.6 | 2.5 | UC 216                                                             | C216        | 5.28                         |



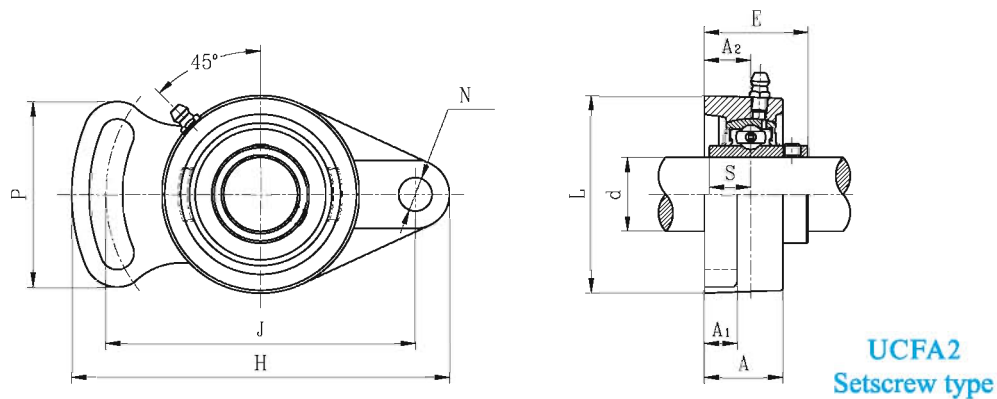
UCC3  
Setscrew type

| Unit No.                             | Shaft Dia.                |      | Dimensions(mm). |     |    |     |     | Bearing No.                         | Housing No. | Mass (kg) |
|--------------------------------------|---------------------------|------|-----------------|-----|----|-----|-----|-------------------------------------|-------------|-----------|
|                                      | d                         |      | L               | A   | S  | B   | r   |                                     |             |           |
|                                      | (in. )                    | (mm) |                 |     |    |     |     |                                     |             |           |
| UCC305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 90              | 26  | 15 | 38  | 2.5 | UC305-14<br>305-15<br>305<br>305-16 | C305        | 0.96      |
| UCC306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 100             | 28  | 17 | 43  | 2.5 | UC306-18<br>306<br>306-19           | C306        | 1.36      |
| UCC307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 110             | 32  | 19 | 48  | 3   | UC307-20<br>307-21<br>307-22<br>307 | C307        | 1.72      |
| UCC308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 120             | 34  | 19 | 52  | 3   | UC308-24<br>308-25<br>308           | C308        | 2.17      |
| UCC309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 130             | 38  | 22 | 57  | 3.5 | UC309-26<br>309-27<br>309-28<br>309 | C309        | 2.69      |
| UCC310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 140             | 40  | 22 | 61  | 3.5 | UC310-30<br>310-31<br>310           | C310        | 3.32      |
| UCC311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 150             | 44  | 25 | 66  | 3.5 | UC311-32<br>311-34<br>311<br>311-35 | C311        | 4.01      |
| UCC312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 160             | 46  | 26 | 71  | 3.5 | UC312-36<br>312<br>312-38<br>312-39 | C312        | 4.73      |
| UCC313-40<br>313                     | 2-1/2                     | 65   | 170             | 50  | 30 | 75  | 3.5 | UC313-40<br>313                     | C313        | 5.62      |
| UCC314-44<br>314                     | 2-3/4                     | 70   | 180             | 52  | 31 | 78  | 2.5 | UC314-44<br>314                     | C314        | 6.55      |
| UCC315<br>315-48                     | 3                         | 75   | 190             | 55  | 32 | 82  | 2.5 | UC315<br>315-48                     | C315        | 7.92      |
| UCC316                               |                           | 80   | 200             | 60  | 34 | 86  | 2.5 | UC316                               | C316        | 8.93      |
| UCC317-52<br>317                     | 3-1/4                     | 85   | 215             | 64  | 40 | 96  | 4   | UC317-52<br>317                     | C317        | 11.2      |
| UCC318-56<br>318                     | 3-1/2                     | 90   | 225             | 66  | 40 | 96  | 4   | UC318-56<br>318                     | C318        | 12.4      |
| UCC319<br>319-60                     | 3-3/4                     | 95   | 240             | 72  | 41 | 103 | 4   | UC319<br>319-60                     | C319        | 15.6      |
| UCC320<br>320-64                     | 4                         | 100  | 260             | 75  | 42 | 108 | 4   | UC320<br>320-64                     | C320        | 19.3      |
| UCC322                               |                           | 110  | 300             | 80  | 46 | 117 | 5   | UC322                               | C322        | 29.0      |
| UCC324                               |                           | 120  | 320             | 90  | 51 | 126 | 5   | UC324                               | C324        | 36.0      |
| UCC326                               |                           | 130  | 340             | 100 | 54 | 135 | 5   | UC326                               | C326        | 43.0      |
| UCC328                               |                           | 140  | 360             | 100 | 59 | 145 | 5   | UC328                               | C328        | 49.7      |

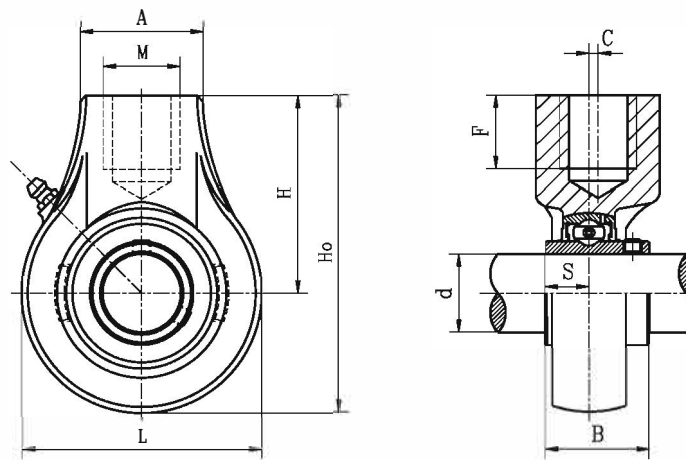


**UCFCB2**  
Setscrew type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |     |    |     |    |    |    |      |    |    |    |      |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|----|-----|----|----|----|------|----|----|----|------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                  |                      | Ho              | L   | H1 | P   | H  | j  | J  | A    | A1 | A2 | N  | E    | S    |           |                                                                   |             |                              |
|                                                                     | (in.)                              | (mm)                 |                 |     |    |     |    |    |    |      |    |    |    |      |      |           |                                                                   |             |                              |
| UCFB201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 104             | 55  | 50 | 49  | 40 | 27 | 30 | 23.5 | 10 | 14 | 10 | 29.9 | 11.5 | M8        | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FB203       | 0.42<br>0.41<br>0.40         |
| UCFB201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 109             | 60  | 52 | 52  | 42 | 27 | 32 | 25.5 | 11 | 15 | 10 | 33.3 | 12.7 | M8        | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FB204       | 0.52<br>0.50<br>0.49<br>0.47 |
| UCFB205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 116             | 68  | 52 | 56  | 45 | 27 | 34 | 27   | 13 | 16 | 10 | 35.7 | 14.3 | M8        | UC205-14<br>205-15<br>205<br>205-16                               | FB205       | 0.66                         |
| UCFB206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 132             | 80  | 55 | 65  | 50 | 29 | 40 | 31   | 13 | 18 | 10 | 40.2 | 15.9 | M8        | UC206-18<br>206<br>206-19<br>206-20                               | FB206       | 0.95                         |
| UCFB207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 144             | 90  | 62 | 70  | 55 | 32 | 46 | 33   | 14 | 19 | 10 | 44.4 | 17.5 | M8        | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | FB207       | 1.27                         |
| UCFB208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 164             | 100 | 72 | 78  | 60 | 41 | 50 | 35   | 17 | 21 | 12 | 51.2 | 19   | M10       | UC208-24<br>208-25<br>208                                         | FB208       | 1.71                         |
| UCFB209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 175             | 108 | 76 | 80  | 65 | 43 | 54 | 38   | 16 | 22 | 12 | 52.2 | 19   | M10       | UC209-26<br>209-27<br>209-28<br>209                               | FB209       | 1.97                         |
| UCFB210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 184             | 114 | 82 | 86  | 68 | 46 | 58 | 39   | 16 | 22 | 12 | 54.6 | 19   | M10       | UC210-30<br>210-31<br>210<br>210-32                               | FB210       | 2.26                         |
| UCFB211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 207             | 128 | 86 | 90  | 78 | 50 | 62 | 42.5 | 18 | 25 | 14 | 58.4 | 22.2 | M12       | UC211-32<br>211-34<br>211<br>211-35                               | FB211       | 2.94                         |
| UCFB212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 224             | 140 | 90 | 94  | 84 | 55 | 66 | 47.5 | 19 | 29 | 14 | 68.7 | 25.4 | M12       | UC212-36<br>212<br>212-38<br>212-39                               | FB212       | 4.04                         |
| UCFB213-40<br>213                                                   | 2-1/2                              | 65                   | 244             | 152 | 95 | 102 | 92 | 60 | 70 | 49   | 20 | 30 | 14 | 69.7 | 25.4 | M12       | UC213-40<br>213                                                   | FB213       | 4.76                         |



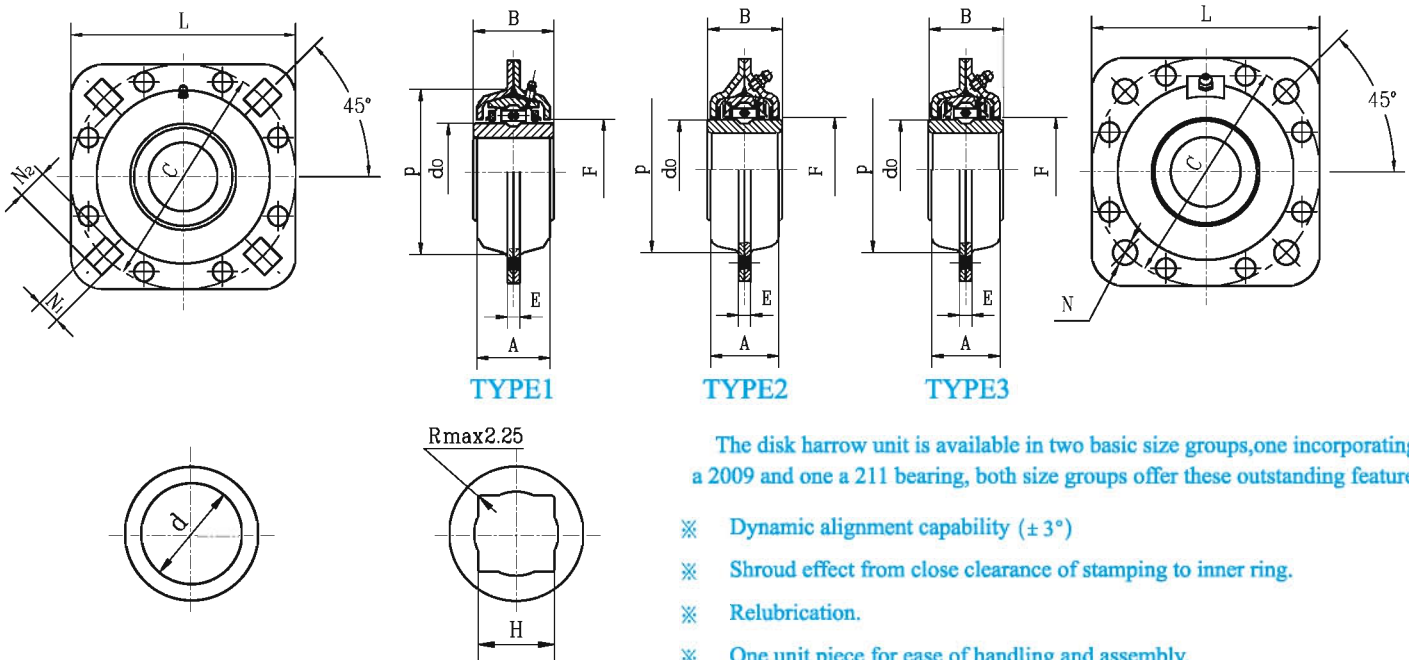
| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |     |     |     |    |       |      |    |       |      | Bolt Size | Bearing No.                                                       | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|-----|-----|----|-------|------|----|-------|------|-----------|-------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                  |                      | H               | J   | L   | P   | A1 | A2    | A    | N  | E     | S    |           |                                                                   |             |                              |
|                                                                     | (in.)                              | (mm)                 |                 |     |     |     |    |       |      |    |       |      |           |                                                                   |             |                              |
| UCFA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 95              | 75  | 57  | 47  | 9  | 13    | 22   | 10 | 28.9  | 11.5 | M8        | UC201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | FA203       | 0.36<br>0.35<br>0.34         |
| UCFA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 98              | 78  | 59  | 50  | 11 | 13.74 | 24   | 10 | 32.04 | 12.7 | M8        | UC201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | FA204       | 0.43<br>0.41<br>0.40<br>0.38 |
| UCFA205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 122             | 96  | 70  | 64  | 13 | 16    | 27   | 12 | 35.7  | 14.3 | M10       | UC205-14<br>205-15<br>205<br>205-16                               | FA205       | 0.65                         |
| UCFA206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 141             | 115 | 80  | 68  | 14 | 18    | 30.5 | 12 | 40.2  | 15.9 | M10       | UC206-18<br>206<br>206-19<br>206-20                               | FA206       | 0.96                         |
| UCFA207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 155             | 128 | 92  | 75  | 15 | 19    | 33   | 13 | 44.4  | 17.5 | M12       | UC207-20<br>207-21<br>207-22<br>207<br>207-23                     | FA207       | 1.27                         |
| UCFA208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 171             | 144 | 105 | 84  | 14 | 21    | 38   | 13 | 51.2  | 19   | M12       | UC208-24<br>208-25<br>208                                         | FA208       | 1.80                         |
| UCFA209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 178             | 146 | 108 | 88  | 16 | 22    | 38   | 16 | 52.2  | 19   | M14       | UC209-26<br>209-27<br>209-28<br>209                               | FA209       | 1.91                         |
| UCFA210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 188             | 155 | 114 | 92  | 16 | 22    | 39   | 16 | 54.6  | 19   | M14       | UC210-30<br>210-31<br>210<br>210-32                               | FA210       | 2.09                         |
| UCFA211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 216             | 182 | 128 | 102 | 18 | 25    | 42.5 | 16 | 58.4  | 22.2 | M14       | UC211-32<br>211-34<br>211<br>211-35                               | FA211       | 2.98                         |
| UCFA212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 238             | 202 | 140 | 122 | 19 | 29    | 47.5 | 18 | 68.7  | 25.4 | M16       | UC212-36<br>212<br>212-38<br>212-39                               | FA212       | 4.14                         |
| UCFA213-40<br>213                                                   | 2-1/2                              | 65                   | 248             | 210 | 152 | 126 | 20 | 30    | 49   | 18 | 69.7  | 25.4 | M16       | UC213-40<br>213                                                   | FA213       | 4.82                         |



**UCHA2**  
Setscrew type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm). |     |     |     |    |    |        |      |      | Bearing No.                                                        | Housing No. | Mass (kg)                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|-----------------|-----|-----|-----|----|----|--------|------|------|--------------------------------------------------------------------|-------------|------------------------------|
|                                                                     | d                                  |                      | Ho              | L   | C   | H   | A  | F  | M      | B    | S    |                                                                    |             |                              |
|                                                                     | (in.)                              | (mm)                 |                 |     |     |     |    |    |        |      |      |                                                                    |             |                              |
| UCHA201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 88.5            | 57  | 0   | 60  | 38 | 19 | G3/4   | 27.4 | 11.5 | UC 201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | HA203       | 0.47<br>0.46<br>0.45         |
| UCHA201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 96              | 64  | 0   | 64  | 40 | 19 | G3/4   | 31   | 12.7 | UC 201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | HA204       | 0.69<br>0.67<br>0.66<br>0.64 |
| UCHA205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 103             | 78  | 0   | 64  | 40 | 19 | G3/4   | 34   | 14.3 | UC205-14<br>205-15<br>205<br>205-16                                | HA205       | 0.81                         |
| UCHA206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 103             | 78  | 0   | 64  | 40 | 19 | G3/4   | 38.1 | 15.9 | UC206-18<br>206<br>206-19<br>206-20                                | HA206       | 0.79                         |
| UCHA207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 116             | 92  | 0   | 70  | 40 | 19 | G3/4   | 42.9 | 17.5 | UC207-20<br>207-21<br>207-22<br>207<br>207-23                      | HA207       | 1.16                         |
| UCHA208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 121             | 96  | 2   | 73  | 40 | 19 | G3/4   | 49.2 | 19   | UC208-24<br>208-25<br>208                                          | HA208       | 1.26                         |
| UCHA209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 136             | 108 | 5   | 82  | 48 | 21 | G1     | 49.2 | 19   | UC209-26<br>209-27<br>209-28<br>209                                | HA209       | 1.74                         |
| UCHA210-30<br>210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 140.5           | 115 | 5   | 83  | 48 | 21 | G1     | 51.6 | 19   | UC210-30<br>210-31<br>210<br>210-32                                | HA210       | 1.89                         |
| UCHA211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 150             | 126 | 7   | 87  | 60 | 24 | G1-1/4 | 55.6 | 22.2 | UC211-32<br>211-34<br>211<br>211-35                                | HA211       | 2.52                         |
| UCHA212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 173             | 142 | 9   | 102 | 60 | 28 | G1-1/4 | 65.1 | 25.4 | UC212-36<br>212<br>212-38<br>212-39                                | HA212       | 3.54                         |
| UCHA213-40<br>213                                                   | 2-1/2                              | 65                   | 200             | 166 | 9.5 | 117 | 70 | 32 | G1-1/2 | 65.1 | 25.4 | UC213-40<br>213                                                    | HA213       | 5.33                         |
| UCHA214-44<br>214                                                   | 2-3/4                              | 70                   | 200             | 166 | 9.5 | 117 | 70 | 32 | G1-1/2 | 74.6 | 30.2 | UC214-44<br>214                                                    | HA214       | 5.46                         |
| UCHA215-47<br>215<br>215-48                                         | 2-15/16<br>3                       | 75                   | 200             | 166 | 9.5 | 117 | 70 | 32 | G1-1/2 | 77.8 | 33.2 | UC215-47<br>215<br>215-48                                          | HA215       | 5.33                         |

# PRESSED HOUSING AGRICULTURAL DISK BEARINGS



ROUND BORE(RD)

SQUARE BORE(SQ)

The disk harrow unit is available in two basic size groups, one incorporating a 209 and one a 211 bearing, both size groups offer these outstanding features.

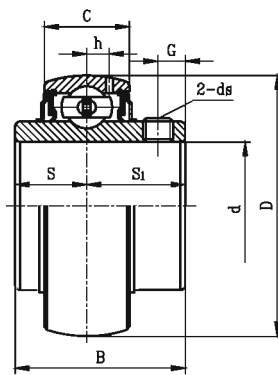
- ※ Dynamic alignment capability ( $\pm 3^\circ$ )
- ※ Shroud effect from close clearance of stamping to inner ring.
- ※ Relubrication.
- ※ One unit piece for ease of handling and assembly.
- ※ Fitting flange mates with outer ring milled recess, preventing possibility of outer ring circumferential movement.

## 209 Series

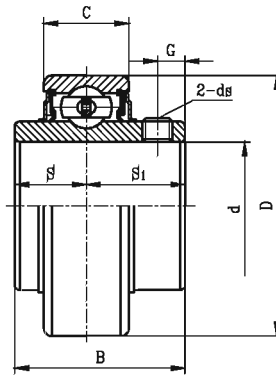
| Unit No.       | TYPE | Bearing Bore Size (mm) |        | Dimensions(mm). |    |      |        |    |        |   |     |           | Basic Dynamic Load Rating (N). | Basic Static Load Rating (N). |           |
|----------------|------|------------------------|--------|-----------------|----|------|--------|----|--------|---|-----|-----------|--------------------------------|-------------------------------|-----------|
|                |      | H (SQ)                 | d (RD) | L               | P  | B    | A      | F  | do     | E | C   | N (N1XN2) |                                |                               |           |
| ST491A         | 1    | --                     | 45     | 127             | 98 | 42.8 | 42     | 60 | 57.547 | 7 | 127 | Φ 13.5    | 31850                          | 17500                         |           |
| ST491A-I       | 2    | --                     |        |                 |    |      | 37     |    |        |   |     |           |                                |                               | 13.5×16.7 |
| ST491A-II      | 3    | --                     |        |                 |    |      | Φ 13.5 |    |        |   |     |           |                                |                               |           |
| DHU45R-209     | 1    | --                     | 42     |                 |    |      |        |    |        |   |     |           |                                |                               |           |
| ST491B         | 1    | --                     | 38.86  |                 |    |      |        |    |        |   |     | 37        |                                |                               | 13.5×16.7 |
| ST491B-I       | 2    | --                     |        |                 |    |      |        |    |        |   |     |           |                                |                               |           |
| ST491B-II      | 3    | --                     |        |                 |    |      |        |    |        |   |     |           |                                |                               |           |
| ST209-1 1/8    | 1    | 29.972                 | --     |                 |    |      | 42     |    |        |   |     | 37        |                                |                               |           |
| ST209-1 1/8-I  | 2    |                        | --     |                 |    |      |        |    |        |   |     |           |                                |                               |           |
| ST209-1 1/8-II | 3    |                        | --     |                 |    |      |        |    |        |   |     |           |                                |                               |           |

## 211 Series

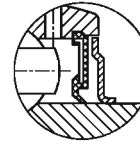
| Unit No.       | TYPE | Bearing Bore Size (mm) |        | Dimensions(mm). |       |      |      |    |    |   |       | Basic Dynamic Load Rating (N). | Basic Static Load Rating (N). |           |       |
|----------------|------|------------------------|--------|-----------------|-------|------|------|----|----|---|-------|--------------------------------|-------------------------------|-----------|-------|
|                |      | H (SQ)                 | d (RD) | L               | P     | B    | A    | F  | do | E | C     |                                |                               | N (N1XN2) |       |
| DHU55R-211     | 1    | --                     | 55     | 139.7           | 113.5 | 51   | 46.4 | 73 | 69 | 9 | 139.7 | 13.5×15.1                      | 43550                         | 25000     |       |
| DHU55R-211-I   | 2    | --                     |        |                 |       |      | 42   | 71 |    | 8 |       |                                |                               |           |       |
| ST211-1 3/4    | 1    | --                     | 45.212 |                 |       | 55.5 | 46.4 | 73 |    | 9 |       |                                |                               |           | Φ13.5 |
| ST211-2 3/16   | 1    | --                     | 55.575 |                 |       |      | 42   | 71 |    | 8 |       |                                |                               |           |       |
| ST211-2 3/16-I | 2    | --                     |        |                 |       |      |      |    |    |   |       |                                |                               |           |       |
| DHU40S-211     | 1    | 40.878                 | --     |                 |       | 51   | 46.4 | 73 |    | 9 |       | 13.5×15.1                      |                               |           |       |
| FD211-1 1/2    | 2    | 38.89                  | --     |                 |       |      | 42   | 71 |    | 8 |       |                                |                               |           |       |



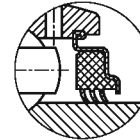
**UC2**  
Setescrew type



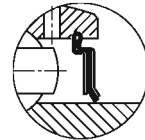
**RB2**  
Cylindrical O.D.



Dual seals

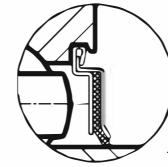
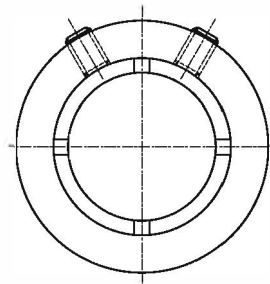
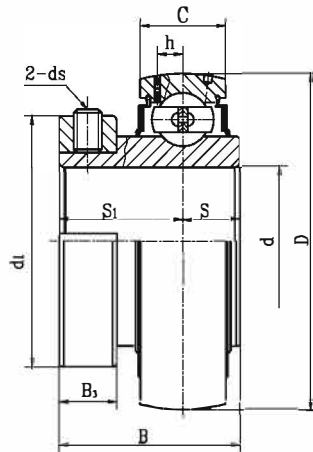


Tripple-lip seal  
(+Suffix-R3)



F seal  
(+Suffix-F)

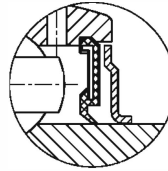
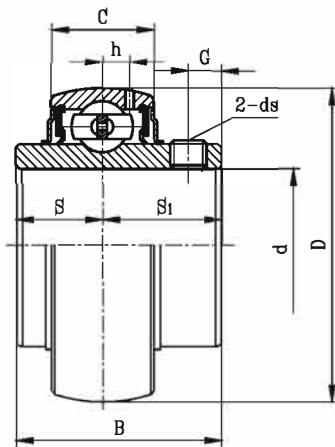
| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm)/(in.) |                |              |                |                |                |                |                        | Basic load rating (N) |            | Mass(kg)                                                     |                                                              |
|---------------------------------------------------------------------|------------------------------------|----------------------|----------------------|----------------|--------------|----------------|----------------|----------------|----------------|------------------------|-----------------------|------------|--------------------------------------------------------------|--------------------------------------------------------------|
|                                                                     | d                                  |                      | D                    | B              | C            | S              | S1             | G              | h              | ds                     | Dynamic Cr            | Static Cor | UC                                                           | RB                                                           |
|                                                                     | (in.)                              | (mm)                 |                      |                |              |                |                |                |                |                        |                       |            |                                                              |                                                              |
| UC201S<br>RB201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 40<br>1.5748         | 27.4<br>1.0787 | 14<br>0.5512 | 11.5<br>0.4528 | 15.9<br>0.6260 | 4.2<br>0.1654  | 3.5<br>0.1378  | M5X0.8<br>10 #32UNF    | 9550                  | 4780       | 0.12<br>0.12<br>0.11<br>0.11<br>0.10<br>0.10                 | --                                                           |
| UC201<br>RB201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4<br>20   | 12<br>15<br>17<br>20 | 47<br>1.8504         | 31<br>1.2205   | 16<br>0.6299 | 12.7<br>0.5000 | 18.3<br>0.7205 | 4.7<br>0.1850  | 4.4<br>0.1732  | M6X1<br>1/4-28UNF      | 12800                 | 6650       | 0.21<br>0.20<br>0.19<br>0.19<br>0.18<br>0.18<br>0.17<br>0.16 | 0.22<br>0.21<br>0.20<br>0.20<br>0.19<br>0.19<br>0.18<br>0.17 |
| UC205-14<br>RB205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 52<br>2.0472         | 34<br>1.3386   | 17<br>0.6693 | 14.3<br>0.5630 | 19.7<br>0.7756 | 5.5<br>0.2165  | 4.3<br>0.1693  | M6X1<br>1/4-28UNF      | 14000                 | 7880       | 0.23<br>0.21<br>0.20<br>0.19                                 | 0.24<br>0.22<br>0.21<br>0.20                                 |
| UC206-18<br>RB206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 62<br>2.4409         | 38.1<br>1.5000 | 19<br>0.7480 | 15.9<br>0.6260 | 22.2<br>0.8740 | 5.5<br>0.2165  | 5<br>0.1969    | M6X1<br>1/4-28UNF      | 19500                 | 11200      | 0.33<br>0.31<br>0.31<br>0.29                                 | 0.34<br>0.32<br>0.32<br>0.30                                 |
| UC207-20<br>RB207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 72<br>2.8346         | 42.9<br>1.6890 | 20<br>0.7874 | 17.5<br>0.6890 | 25.4<br>1.0000 | 6.5<br>0.2559  | 5.8<br>0.2283  | M8X1<br>5/16-24UNF     | 25700                 | 15200      | 0.53<br>0.50<br>0.48<br>0.48<br>0.45                         | 0.55<br>0.52<br>0.50<br>0.50<br>0.47                         |
| UC208-24<br>RB208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 80<br>3.1496         | 49.2<br>1.9370 | 21<br>0.8268 | 19<br>0.7480   | 30.2<br>1.1890 | 8<br>0.3150    | 6.3<br>0.2480  | M8X1<br>5/16-24UNF     | 29600                 | 18200      | 0.68<br>0.65<br>0.63                                         | 0.70<br>0.67<br>0.65                                         |
| UC209-26<br>RB209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 85<br>3.3465         | 49.2<br>1.9370 | 22<br>0.8661 | 19<br>0.7480   | 30.2<br>1.1890 | 8<br>0.3150    | 6.8<br>0.2677  | M8X1<br>5/16-24UNF     | 31850                 | 20800      | 0.77<br>0.74<br>0.69<br>0.68                                 | 0.79<br>0.76<br>0.71<br>0.70                                 |
| UC210-30<br>RB210-31<br>210<br>210-32                               | 1-7/8<br>1-15/16<br>2              | 50                   | 90<br>3.5433         | 51.6<br>2.0315 | 23<br>0.9055 | 19<br>0.7480   | 32.6<br>1.2835 | 9<br>0.3543    | 6.5<br>0.2559  | M10X1.25<br>3/8-24UNF  | 35100                 | 23200      | 0.82<br>0.79<br>0.75<br>0.72                                 | 0.85<br>0.82<br>0.78<br>0.75                                 |
| UC211-32<br>RB211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 100<br>3.9370        | 55.6<br>2.1890 | 25<br>0.9843 | 22.2<br>0.8740 | 33.4<br>1.3150 | 9<br>0.3543    | 7.2<br>0.2835  | M10X1.25<br>3/8-24UNF  | 43550                 | 29200      | 1.19<br>1.08<br>1.04<br>1.02                                 | 1.22<br>1.11<br>1.07<br>1.05                                 |
| UC212-36<br>RB212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 110<br>4.3307        | 65.1<br>2.5630 | 27<br>1.0630 | 25.4<br>1.0000 | 39.7<br>1.5630 | 10.5<br>0.4134 | 8.2<br>0.3228  | M10X1.25<br>3/8-24UNF  | 47800                 | 32800      | 1.54<br>1.41<br>1.39<br>1.32                                 | 1.58<br>1.45<br>1.43<br>1.36                                 |
| UC213-40<br>213                                                     | 2-1/2                              | 65                   | 120<br>4.7244        | 65.1<br>2.5630 | 28<br>1.1024 | 25.4<br>1.0000 | 39.7<br>1.5630 | 12<br>0.4724   | 8<br>0.3150    | M12X1.25<br>3/8-24UNF  | 57200                 | 40000      | 1.84<br>1.76                                                 | ---                                                          |
| UC214-44<br>214                                                     | 2-3/4                              | 70                   | 125<br>4.9213        | 74.6<br>2.9370 | 30<br>1.1811 | 30.2<br>1.1890 | 44.4<br>1.7480 | 12<br>0.4724   | 9<br>0.3543    | M12X1.25<br>7/16-20UNF | 60800                 | 45000      | 2.01<br>2.00                                                 | ---                                                          |
| UC215-47<br>215<br>215-48                                           | 2-15/16<br>3                       | 75                   | 130<br>5.1181        | 77.8<br>3.0630 | 30<br>1.1811 | 33.3<br>1.3110 | 44.5<br>1.7520 | 12<br>0.4724   | 9<br>0.3543    | M12X1.25<br>7/16-20UNF | 66000                 | 49500      | 2.22<br>2.20<br>2.11                                         | ---                                                          |
| UC216                                                               |                                    | 80                   | 140<br>5.5118        | 82.6<br>3.2520 | 33<br>1.2992 | 33.3<br>1.3110 | 49.3<br>1.9410 | 14<br>0.5512   | 10.3<br>0.4055 | M12X1.25<br>7/16-20UNF | 71500                 | 54200      | 2.73                                                         | ---                                                          |
| UC217-52<br>217                                                     | 3-1/4                              | 85                   | 150<br>5.9055        | 85.7<br>3.3740 | 35<br>1.3780 | 34.1<br>1.3425 | 51.6<br>2.0315 | 14<br>0.5512   | 11<br>0.4331   | M12X1.25<br>7/16-20UNF | 83200                 | 63800      | 3.58<br>3.39                                                 | ---                                                          |
| UC218-56<br>218                                                     | 3-1/2                              | 90                   | 160<br>6.2992        | 96<br>3.7795   | 37<br>1.4567 | 39.7<br>1.5630 | 56.3<br>2.2165 | 14<br>0.5512   | 12<br>0.4724   | M12X1.25<br>1/2-20UNF  | 95900                 | 71500      | 4.23<br>4.11                                                 | ---                                                          |
| UC220<br>220-64                                                     | 4                                  | 100                  | 180<br>7.0866        | 108<br>4.2520  | 40<br>1.5748 | 42<br>1.6535   | 66<br>2.5984   | 16<br>0.6299   | 12.1<br>0.4764 | M16X1.5<br>5/8-18UNF   | 122000                | 92800      | 6.11<br>5.90                                                 | ---                                                          |



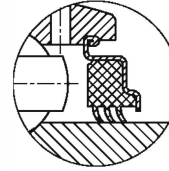
F seal

## UC2T Centric locking collar type

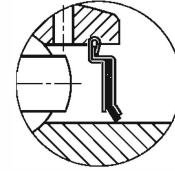
| Unit No.                                                                 | Shaft Dia.                                           |      | Dimensions(mm)/(in.) |                |              |                |                |                |               |                                                      |                       | Basic load rating<br>(N) |               | Mass<br>(kg) |
|--------------------------------------------------------------------------|------------------------------------------------------|------|----------------------|----------------|--------------|----------------|----------------|----------------|---------------|------------------------------------------------------|-----------------------|--------------------------|---------------|--------------|
|                                                                          | d                                                    |      | D                    | B              | C            | S              | S <sub>1</sub> | B <sub>3</sub> | h             | d <sub>1</sub><br>(mm)                               | d <sub>s</sub>        | Dynamic<br>Cr            | Static<br>Cor |              |
|                                                                          | (in.)                                                | (mm) |                      |                |              |                |                |                |               |                                                      |                       |                          |               |              |
| UC204-12T<br>204T                                                        | 3/4                                                  | 20   | 47<br>1.8504         | 31<br>1.2205   | 16<br>0.6299 | 12.7<br>0.5000 | 18.3<br>0.7205 | 8.0<br>0.3150  | 4.4<br>0.1732 | 34.9                                                 | M5X0.8<br>10#-32UNF   | 12800                    | 6650          | 0.20         |
| UC205-13T<br>205-14T<br>205-15T<br>205T<br>205-16T                       | 13/16<br>7/8<br>15/16<br>1                           | 25   | 52<br>2.0472         | 34<br>1.3386   | 17<br>0.6693 | 14.3<br>0.5630 | 19.7<br>0.7756 | 8.8<br>0.3465  | 4.3<br>0.1693 | 34.9<br>39.7<br>39.7<br>39.7<br>39.7                 | M6×1<br>1/4-28UNF     | 14000                    | 7880          | 0.24         |
| UC206-16T<br>206-17T<br>206-18T<br>206T<br>206-19T<br>206-20T            | 1<br>1-1/16<br>1-1/8<br>1-3/16<br>1-1/4              | 30   | 62<br>2.4409         | 38.1<br>1.5000 | 19<br>0.7480 | 15.9<br>0.6260 | 22.2<br>0.8740 | 8.8<br>0.3465  | 5<br>0.1969   | 46.0<br>46.0<br>46.0<br>50.8<br>50.8<br>50.8         | M6×1<br>1/4-28UNF     | 19500                    | 11200         | 0.35         |
| UC207-19T<br>207-20T<br>207-21T<br>207-22T<br>207T<br>207-23T            | 1-3/16<br>1-1/4<br>1-5/16<br>1-3/8<br>1-7/16         | 35   | 72<br>2.8346         | 42.9<br>1.6890 | 20<br>0.7874 | 17.5<br>0.6890 | 25.4<br>1.0000 | 11.2<br>0.4409 | 5.8<br>0.2283 | 50.8<br>50.8<br>57.2<br>57.2<br>57.2                 | M8X1<br>5/16-24UNF    | 25700                    | 15200         | 0.55         |
| UC208-23T<br>208-24T<br>208-25T<br>208T<br>208-26T                       | 1-7/16<br>1-1/2<br>1-9/16<br>1-5/8                   | 40   | 80<br>3.1496         | 49.2<br>1.9370 | 21<br>0.8268 | 19<br>0.7480   | 30.2<br>1.1890 | 11.2<br>0.4409 | 6.3<br>0.2480 | 63.5                                                 | M8X1<br>5/16-24UNF    | 29600                    | 18200         | 0.72         |
| UC209-24T<br>209-26T<br>209-27T<br>209-28T<br>209T<br>209-29T            | 1-1/2<br>1-5/8<br>1-11/16<br>1-3/4<br>1-13/16        | 45   | 85<br>3.3465         | 49.2<br>1.9370 | 22<br>0.8661 | 19<br>0.7480   | 30.2<br>1.1890 | 11.2<br>0.4409 | 6.8<br>0.2677 | 63.5<br>63.5<br>68.3<br>68.3<br>68.3<br>68.3         | M8X1<br>5/16-24UNF    | 31850                    | 20800         | 0.82         |
| UC210-27T<br>210-28T<br>210-29T<br>210-30T<br>210-31T<br>210T<br>210-32T | 1-11/16<br>1-3/4<br>1-13/16<br>1-7/8<br>1-15/16<br>2 | 50   | 90<br>3.5433         | 51.6<br>2.0315 | 23<br>0.9055 | 19<br>0.7480   | 32.6<br>1.2835 | 14.2<br>0.5591 | 6.5<br>0.2559 | 69.9<br>69.9<br>69.9<br>73.0<br>73.0<br>73.0<br>73.0 | M10X1.25<br>3/8-24UNF | 35100                    | 23200         | 0.95         |
| UC211-31T<br>211-32T<br>211-33T<br>211-34T<br>211T<br>211-35T<br>211-36T | 1-15/16<br>2<br>2-1/16<br>2-1/8<br>2-3/16<br>2-1/4   | 55   | 100<br>3.9370        | 55.6<br>2.1890 | 25<br>0.9843 | 22.2<br>0.8740 | 33.4<br>1.3150 | 14.2<br>0.5591 | 7.2<br>0.2835 | 73.0<br>73.0<br>79.4<br>79.4<br>79.4<br>79.4<br>79.4 | M10X1.25<br>3/8-24UNF | 43550                    | 29200         | 1.35         |
| UC212-35T<br>212-36T<br>212-37T<br>212T<br>212-38T<br>212-39T            | 2-3/16<br>2-1/4<br>2-5/16<br>2-3/8<br>2-7/16         | 60   | 110<br>4.3307        | 65.1<br>2.5630 | 27<br>1.0630 | 25.4<br>1.0000 | 39.7<br>1.5630 | 14.2<br>0.5591 | 8.2<br>0.3228 | 79.4<br>79.4<br>85.7<br>85.7<br>85.7<br>85.7         | M10X1.25<br>3/8-24UNF | 47800                    | 32800         | 1.72         |
| UC214-40T<br>214-42T<br>214-43T<br>214T                                  | 2-1/2<br>2-5/8<br>2-11/16                            | 70   | 125<br>4.9213        | 74.6<br>2.9370 | 30<br>1.1811 | 30.2<br>1.1890 | 44.4<br>1.7480 | 14.2<br>0.5591 | 9<br>0.3543   | 100                                                  | M10X1.25<br>3/8-24UNF | 60800                    | 45000         | 2.20         |
| UC215-44T<br>215-45T<br>215-46T<br>215-47T<br>215T                       | 2-3/4<br>2-13/16<br>2-7/8<br>2-15/16                 | 75   | 130<br>5.1181        | 77.8<br>3.0630 | 30<br>1.1811 | 33.3<br>1.3110 | 44.5<br>1.7520 | 14.2<br>0.5591 | 9<br>0.3543   | 100.0<br>106.4<br>106.4<br>106.4<br>106.4            | M10X1.25<br>3/8-24UNF | 66000                    | 49500         | 2.50         |



Dual seals



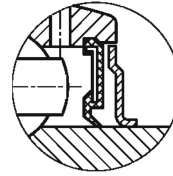
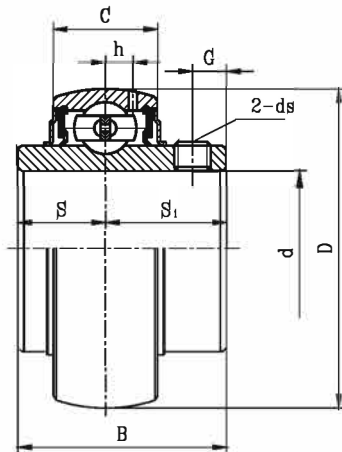
Triple-lip seal  
(+Suffix-R3)



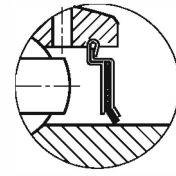
F seal  
(+Suffix-F)

## UCX Setscrew type

| Unit No.                            | Shaft Dia.                |      | Dimensions(mm)/(in.) |                 |              |                |                |                |                |                        | Basic load rating(N) |            | Mass (kg)                    |
|-------------------------------------|---------------------------|------|----------------------|-----------------|--------------|----------------|----------------|----------------|----------------|------------------------|----------------------|------------|------------------------------|
|                                     | d<br>(in.)                | (mm) | D                    | B               | C            | S              | S1             | G              | h              | ds                     | Dynamic Cr           | Static Cor |                              |
| UCX05-14<br>X05-15<br>X05<br>X05-16 | 7/8<br>15/16<br>1         | 25   | 62<br>2.4409         | 38.1<br>1.5000  | 19<br>0.7480 | 15.9<br>0.6260 | 22.2<br>0.8740 | 6<br>0.2362    | 5<br>0.1969    | M6X1<br>1/4-28UNF      | 19500                | 11200      | 0.41<br>0.40<br>0.38<br>0.37 |
| UCX06-18<br>X06<br>X06-19<br>X06-20 | 1-1/8<br>1-3/16<br>1-1/4  | 30   | 72<br>2.8346         | 42.9<br>1.6890  | 20<br>0.7874 | 17.5<br>0.6890 | 25.4<br>1.0000 | 6.5<br>0.2559  | 5.8<br>0.2283  | M8X1<br>5/16-24UNF     | 25700                | 15200      | 0.57<br>0.55<br>0.55<br>0.52 |
| UCX07-22<br>X07<br>X07-23           | 1-3/8<br>1-7/16           | 35   | 80<br>3.1496         | 49.2<br>1.9370  | 21<br>0.8268 | 19<br>0.7480   | 30.2<br>1.1890 | 8<br>0.3150    | 6.3<br>0.2480  | M8X1<br>5/16-24UNF     | 29600                | 18200      | 0.75<br>0.75<br>0.72         |
| UCX08-24<br>X08-25<br>X08           | 1-1/2<br>1-9/16           | 40   | 85<br>3.3465         | 49.2<br>1.9370  | 22<br>0.8661 | 19<br>0.7480   | 30.2<br>1.1890 | 8<br>0.3150    | 6.8<br>0.2677  | M8X1<br>5/16-24UNF     | 31850                | 20800      | 0.84<br>0.80<br>0.79         |
| UCX09-26<br>X09-27<br>X09-28<br>X09 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 90<br>3.5433         | 51.6<br>2.0315  | 23<br>0.9055 | 19<br>0.7480   | 32.6<br>1.2835 | 9<br>0.3543    | 6.5<br>0.2559  | M10X1.25<br>3/8-24UNF  | 35100                | 23200      | 0.82<br>0.78<br>0.74<br>0.72 |
| UCX10-30<br>X10-31<br>X10<br>X10-32 | 1-7/8<br>1-15/16<br>2     | 50   | 100<br>3.9370        | 55.6<br>2.1890  | 25<br>0.9843 | 22.2<br>0.8740 | 33.4<br>1.3150 | 9<br>0.3543    | 7.2<br>0.2835  | M10X1.25<br>3/8-24UNF  | 43550                | 29200      | 1.30<br>1.24<br>1.22<br>1.19 |
| UCX11-34<br>X11<br>X11-35<br>X11-36 | 2-1/8<br>2-3/16<br>2-1/4  | 55   | 110<br>4.3307        | 65.1<br>2.5630  | 27<br>1.0630 | 25.4<br>1.0000 | 39.7<br>1.5630 | 10.5<br>0.4134 | 8.2<br>0.3228  | M10X1.25<br>3/8-24UNF  | 47800                | 32800      | 1.67<br>1.63<br>1.61<br>1.53 |
| UCX12<br>X12-38<br>X12-39           | 2-3/8<br>2-7/16           | 60   | 120<br>4.7244        | 65.1<br>2.5630  | 28<br>1.1024 | 25.4<br>1.0000 | 39.7<br>1.5630 | 12<br>0.4724   | 8<br>0.3150    | M12X1.25<br>3/8-24UNF  | 57200                | 40000      | 1.99<br>1.97<br>1.91         |
| UCX13-40<br>X13                     | 2-1/2                     | 65   | 125<br>4.9213        | 74.6<br>2.9370  | 30<br>1.1811 | 30.2<br>1.1890 | 44.4<br>1.7480 | 12<br>0.4724   | 9<br>0.3543    | M12X1.25<br>7/16-20UNF | 60800                | 45000      | 2.39<br>2.31                 |
| UCX14-44<br>X14                     | 2-3/4                     | 70   | 130<br>5.1181        | 77.8<br>3.0630  | 30<br>1.1811 | 33.3<br>1.3110 | 44.5<br>1.7520 | 12<br>0.4724   | 9<br>0.3543    | M12X1.25<br>7/16-20UNF | 66000                | 49500      | 2.54<br>2.53                 |
| UCX15<br>X15-48                     | 3                         | 75   | 140<br>5.5118        | 82.6<br>3.2520  | 33<br>1.2992 | 33.3<br>1.3110 | 49.3<br>1.9410 | 14<br>0.5512   | 10.3<br>0.4055 | M12X1.25<br>7/16-20UNF | 71500                | 54200      | 3.11<br>3.03                 |
| UCX16                               |                           | 80   | 150<br>5.9055        | 85.7<br>3.3740  | 35<br>1.3780 | 34.1<br>1.3425 | 51.6<br>2.0315 | 14<br>0.5512   | 11<br>0.4331   | M12X1.25<br>7/16-20UNF | 83200                | 63800      | 3.83                         |
| UCX17-52<br>X17                     | 3-1/4                     | 85   | 160<br>6.2992        | 96<br>3.7795    | 37<br>1.4567 | 39.7<br>1.5630 | 56.3<br>2.2165 | 14<br>0.5512   | 12<br>0.4724   | M12X1.25<br>7/16-20UNF | 95900                | 71500      | 4.87<br>4.63                 |
| UCX18-56<br>X18                     | 3-1/2                     | 90   | 170<br>6.6929        | 104<br>4.0945   | 39<br>1.5354 | 42.9<br>1.6890 | 61.1<br>2.4055 | 14<br>0.5512   | 12.1<br>0.4764 | M14X1.5<br>9/16-18UNF  | 109000               | 82800      | 5.72<br>5.59                 |
| UCX20<br>X20-64                     | 4                         | 100  | 190<br>7.4803        | 117.5<br>4.6260 | 44<br>1.7323 | 49.2<br>1.9370 | 68.3<br>2.6890 | 16<br>0.6299   | 13.7<br>0.5394 | M16X1.5<br>5/8-18UNF   | 133000               | 105000     | 8.06<br>7.83                 |



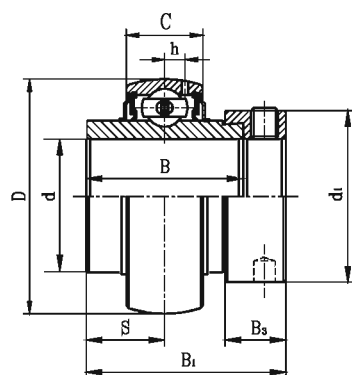
Dual seals



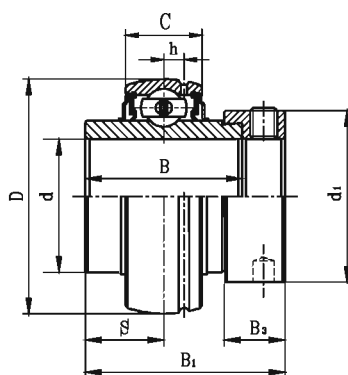
F seal  
(+Suffix-F)

UC3  
Setscrew type

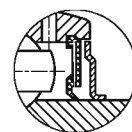
| Unit No.                            | Shaft Dia.                |      | Dimensions(mm)/(in.) |               |              |              |                |              |                |                        | Basic load rating(N) |               | Mass<br>(kg)                  |
|-------------------------------------|---------------------------|------|----------------------|---------------|--------------|--------------|----------------|--------------|----------------|------------------------|----------------------|---------------|-------------------------------|
|                                     | d                         |      | D                    | B             | C            | S            | S <sub>1</sub> | G            | h              | ds                     | Dynamic<br>Cr        | Static<br>Cor |                               |
|                                     | (in.)                     | (mm) |                      |               |              |              |                |              |                |                        |                      |               |                               |
| UC305-14<br>305-15<br>305<br>305-16 | 7/8<br>15/16<br>1         | 25   | 62<br>2.4409         | 38<br>1.4961  | 21<br>0.8268 | 15<br>0.5906 | 23<br>0.9055   | 6<br>0.2362  | 6.2<br>0.2441  | M6X1<br>1/4-28UNF      | 22360                | 11500         | 0.37<br>0.35<br>0.34<br>0.34  |
| UC306-18<br>306<br>306-19           | 1-1/8<br>1-3/16           | 30   | 72<br>2.8346         | 43<br>1.6929  | 24<br>0.9449 | 17<br>0.6693 | 26<br>1.0236   | 6<br>0.2362  | 6.5<br>0.2559  | M6X1<br>1/4-28UNF      | 27000                | 15200         | 0.56<br>0.54<br>0.54          |
| UC307-20<br>307-21<br>307-22<br>307 | 1-1/4<br>1-5/16<br>1-3/8  | 35   | 80<br>3.1496         | 48<br>1.8898  | 25<br>0.9843 | 19<br>0.7480 | 29<br>1.1417   | 8<br>0.3150  | 7.2<br>0.2835  | M8X1<br>5/16-24UNF     | 33500                | 19200         | 0.73<br>0.70<br>0.67<br>0.67  |
| UC308-24<br>308-25<br>308           | 1-1/2<br>1-9/16           | 40   | 90<br>3.5433         | 52<br>2.0472  | 28<br>1.1024 | 19<br>0.7480 | 33<br>1.2992   | 10<br>0.3937 | 8.5<br>0.3346  | M10X1.25<br>3/8-24UNF  | 40560                | 24000         | 1.01<br>0.99<br>0.98          |
| UC309-26<br>309-27<br>309-28<br>309 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 100<br>3.9370        | 57<br>2.2441  | 30<br>1.1811 | 22<br>0.8661 | 35<br>1.3780   | 10<br>0.3937 | 9<br>0.3543    | M10X1.25<br>3/8-24UNF  | 53000                | 31800         | 1.335<br>1.30<br>1.26<br>1.24 |
| UC310-30<br>310-31<br>310           | 1-7/8<br>1-15/16          | 50   | 110<br>4.3307        | 61<br>2.4016  | 32<br>1.2598 | 22<br>0.8661 | 39<br>1.5354   | 12<br>0.4724 | 9.9<br>0.3898  | M12X1.25<br>7/16-20UNF | 61750                | 37800         | 1.71<br>1.65<br>1.62          |
| UC311-32<br>311-34<br>311<br>311-35 | 2<br>2-1/8<br>2-3/16      | 55   | 120<br>4.7244        | 66<br>2.5984  | 34<br>1.3386 | 25<br>0.9843 | 41<br>1.6142   | 12<br>0.4724 | 10.6<br>0.4173 | M12X1.25<br>7/16-20UNF | 71500                | 44800         | 2.22<br>2.10<br>2.05<br>2.02  |
| UC312-36<br>312<br>312-38<br>312-39 | 2-1/4<br>2-3/8<br>2-7/16  | 60   | 130<br>5.1181        | 71<br>2.7953  | 36<br>1.4173 | 26<br>1.0236 | 45<br>1.7717   | 12<br>0.4724 | 11.3<br>0.4449 | M12X1.25<br>7/16-20UNF | 81600                | 51800         | 2.68<br>2.54<br>2.52<br>2.44  |
| UC313-40<br>313                     | 2-1/2                     | 65   | 140<br>5.5118        | 75<br>2.9528  | 38<br>1.4961 | 30<br>1.1811 | 45<br>1.7717   | 12<br>0.4724 | 12.1<br>0.4764 | M12X1.25<br>7/16-20UNF | 93860                | 60500         | 3.16<br>3.07                  |
| UC314-44<br>314                     | 2-3/4                     | 70   | 150<br>5.9055        | 78<br>3.0709  | 40<br>1.5748 | 31<br>1.2205 | 47<br>1.8504   | 12<br>0.4724 | 12.8<br>0.5039 | M12X1.25<br>7/16-20UNF | 104260               | 68000         | 3.75<br>3.74                  |
| UC315<br>315-48                     | 3                         | 75   | 160<br>6.2992        | 82<br>3.2283  | 42<br>1.6535 | 32<br>1.2598 | 50<br>1.9685   | 14<br>0.5512 | 13.5<br>0.5315 | M14X1.5<br>1/2-20UNF   | 113360               | 76800         | 4.45<br>4.37                  |
| UC316                               |                           | 80   | 170<br>6.6929        | 86<br>3.3858  | 44<br>1.7323 | 34<br>1.3386 | 52<br>2.0472   | 14<br>0.5512 | 14.5<br>0.5709 | M14X1.5<br>1/2-20UNF   | 122850               | 86500         | 5.33                          |
| UC317-52<br>317                     | 3-1/4                     | 85   | 180<br>7.0866        | 96<br>3.7795  | 46<br>1.8110 | 40<br>1.5748 | 56<br>2.2047   | 16<br>0.6299 | 15.5<br>0.6102 | M16X1.5<br>5/8-18UNF   | 132600               | 96500         | 6.66<br>6.42                  |
| UC318-56<br>318                     | 3-1/2                     | 90   | 190<br>7.4803        | 96<br>3.7795  | 48<br>1.8898 | 40<br>1.5748 | 56<br>2.2047   | 16<br>0.6299 | 16.5<br>0.6496 | M16X1.5<br>5/8-18UNF   | 143000               | 108000        | 7.32<br>7.20                  |
| UC319<br>319-60                     | 3-3/4                     | 95   | 200<br>7.8740        | 103<br>4.0551 | 50<br>1.9685 | 41<br>1.6142 | 62<br>2.4409   | 18<br>0.7087 | 16.7<br>0.6574 | M16X1.5<br>5/8-18UNF   | 156000               | 122000        | 8.70<br>8.67                  |
| UC320<br>320-64                     | 4                         | 100  | 215<br>8.4646        | 108<br>4.2520 | 54<br>2.2160 | 42<br>1.6535 | 66<br>2.5984   | 18<br>0.7087 | 19<br>0.7480   | M18X1.5<br>5/8-18UNF   | 171600               | 140000        | 10.5<br>10.3                  |
| UC322                               |                           | 110  | 240<br>9.4488        | 117<br>4.6063 | 60<br>2.3622 | 46<br>1.8110 | 71<br>2.7953   | 18<br>0.7087 | 21<br>0.8268   | M18X1.5                | 158000               | 178000        | 14.5                          |
| UC324                               |                           | 120  | 260<br>10.2362       | 126<br>4.9606 | 64<br>2.5197 | 51<br>2.0079 | 75<br>2.9528   | 18<br>0.7087 | 22<br>0.8661   | M18X1.5                | 175000               | 208000        | 18.5                          |
| UC326                               |                           | 130  | 280<br>11.0236       | 135<br>5.3150 | 68<br>2.6772 | 54<br>2.1260 | 81<br>3.1890   | 20<br>0.7874 | 23<br>0.9055   | M20X1.5                | 195000               | 242000        | 23.0                          |
| UC328                               |                           | 140  | 300<br>11.8110       | 145<br>5.7087 | 72<br>2.8346 | 59<br>2.3228 | 86<br>3.3858   | 20<br>0.7874 | 25<br>0.9843   | M20X1.5                | 212000               | 272000        | 28.2                          |



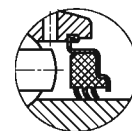
NA2



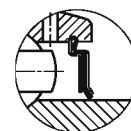
HC2



Dual seals



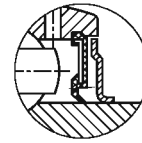
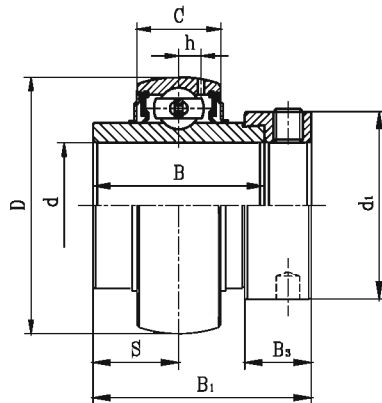
Tripple-lip seal  
(+Suffix-R3)



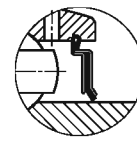
F seal  
(+Suffix-F)

Eccentric locking collar type

| Unit No.                                                            | Shaft Dia.                         |                      | Dimensions(mm)/(in.) |              |                |                |                 |                |                |                | Eccentric collar                                                 | Basic load rating(N) |            | Mass (kg)                                                    |
|---------------------------------------------------------------------|------------------------------------|----------------------|----------------------|--------------|----------------|----------------|-----------------|----------------|----------------|----------------|------------------------------------------------------------------|----------------------|------------|--------------------------------------------------------------|
|                                                                     | d<br>(in.)                         | (mm)                 | D                    | C            | B              | S              | B <sub>1</sub>  | B <sub>3</sub> | h              | d <sub>1</sub> |                                                                  | Dynamic Cr           | Static Cor |                                                              |
| NA201S<br>HC201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 40<br>1.5748         | 14<br>0.5512 | 27.8<br>1.0945 | 13.9<br>0.5472 | 37.3<br>1.4685  | 13.5<br>0.5315 | 3.5<br>0.1378  | 27.2<br>1.0709 | A201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 9550                 | 4780       | 0.23<br>0.23<br>0.22<br>0.21<br>0.20<br>0.19                 |
| NA201<br>HC201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 47<br>1.8540         | 16<br>0.6299 | 34<br>1.3386   | 17<br>0.6693   | 43.5<br>1.7126  | 13.5<br>0.5315 | 4.4<br>0.1732  | 32.4<br>1.2756 | A201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 12800                | 6650       | 0.28<br>0.27<br>0.25<br>0.25<br>0.24<br>0.24<br>0.22<br>0.21 |
| NA205-14<br>HC205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 52<br>2.0472         | 17<br>0.6693 | 34.8<br>1.3701 | 17.4<br>0.6850 | 44.3<br>1.7441  | 13.5<br>0.5315 | 4.3<br>0.1693  | 37.4<br>1.4724 | A205-14<br>205-15<br>205<br>205-16                               | 14000                | 7880       | 0.29<br>0.27<br>0.25<br>0.24                                 |
| NA206-18<br>HC206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 62<br>2.4409         | 19<br>0.7480 | 36.4<br>1.4331 | 18.2<br>0.7165 | 48.3<br>1.9016  | 15.9<br>0.6260 | 5<br>0.1969    | 44.1<br>1.7362 | A206-18<br>206<br>206-19<br>206-20                               | 19500                | 11200      | 0.40<br>0.38<br>0.38<br>0.35                                 |
| NA207-20<br>HC207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 72<br>2.8346         | 20<br>0.7874 | 37.6<br>1.4803 | 18.8<br>0.7402 | 51.1<br>2.0118  | 17.5<br>0.6890 | 5.8<br>0.2283  | 51.1<br>2.0118 | A207-20<br>207-21<br>207-22<br>207<br>207-23                     | 25700                | 15200      | 0.62<br>0.59<br>0.55<br>0.55<br>0.52                         |
| NA208-24<br>HC208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 80<br>3.1496         | 21<br>0.8268 | 42.8<br>1.6850 | 21.4<br>0.8425 | 56.3<br>2.2165  | 18.3<br>0.7205 | 6.3<br>0.2480  | 58<br>2.2835   | A208-24<br>208-25<br>208                                         | 29600                | 18200      | 0.79<br>0.75<br>0.74                                         |
| NA209-26<br>HC209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 85<br>3.3465         | 22<br>0.8661 | 42.8<br>1.6850 | 21.4<br>0.8425 | 56.3<br>2.2165  | 18.3<br>0.7205 | 6.8<br>0.2677  | 63.5<br>2.5000 | A209-26<br>209-27<br>209-28<br>209                               | 31850                | 20800      | 0.90<br>0.86<br>0.81<br>0.80                                 |
| NA210-30<br>HC210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 90<br>3.5433         | 23<br>0.9055 | 49.2<br>1.9370 | 24.6<br>0.9685 | 62.7<br>2.4685  | 18.3<br>0.7205 | 6.5<br>0.2559  | 67.2<br>2.6457 | A210-30<br>210-31<br>210                                         | 35100                | 23200      | 1.01<br>0.95<br>0.92                                         |
| NA211-32<br>HC211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 100<br>3.9370        | 25<br>0.9843 | 55.4<br>2.1811 | 27.7<br>1.0906 | 71.3<br>2.8071  | 20.7<br>0.8150 | 7.2<br>0.2835  | 74.5<br>2.9331 | A211-32<br>211-34<br>211<br>211-35                               | 43550                | 29200      | 1.50<br>1.34<br>1.29<br>1.27                                 |
| NA212-36<br>HC212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 110<br>4.3307        | 27<br>1.0630 | 61.8<br>2.4331 | 30.9<br>1.2165 | 77.7<br>3.0591  | 22.3<br>0.8780 | 8.2<br>0.3228  | 82<br>3.2283   | A212-36<br>212<br>212-38<br>212-39                               | 47800                | 32800      | 1.85<br>1.69<br>1.67<br>1.58                                 |
| NA213-40<br>HC213                                                   | 2-1/2                              | 65                   | 120<br>4.7244        | 28<br>1.1024 | 68.2<br>2.6850 | 34.1<br>1.3425 | 85.7<br>3.3740  | 23.5<br>0.9252 | 8<br>0.3150    | 86<br>3.3858   | A213-40<br>213                                                   | 57200                | 40000      | 2.25<br>2.15                                                 |
| NA214-44<br>HC214                                                   | 2-3/4                              | 70                   | 125<br>4.9213        | 30<br>1.1811 | 68.2<br>2.6850 | 34.1<br>1.3425 | 85.7<br>3.3740  | 23.5<br>0.9252 | 9<br>0.3543    | 96.8<br>3.8110 | A214-44<br>214                                                   | 60800                | 45000      | 2.42<br>2.04                                                 |
| NA215<br>HC215-48                                                   | 3                                  | 75                   | 130<br>5.1181        | 30<br>1.1811 | 74.6<br>2.9370 | 37.3<br>1.4685 | 92.1<br>3.6260  | 23.9<br>0.9409 | 9<br>0.3543    | 102<br>4.0160  | A215<br>215-48                                                   | 66000                | 49500      | 2.66<br>2.60                                                 |
| NA216<br>HC216                                                      |                                    | 80                   | 140<br>5.5118        | 33<br>1.2992 | 74.6<br>2.9370 | 37.3<br>1.4685 | 95.2<br>3.7480  | 27<br>1.0630   | 10.3<br>0.4055 | 110<br>4.3307  | A216                                                             | 71500                | 54200      | 3.35                                                         |
| NA217-52<br>HC217                                                   | 3-1/4                              | 85                   | 150<br>5.9055        | 35<br>1.3780 | 53.2<br>2.0945 | 23.4<br>0.9213 | 73.2<br>2.8819  | 27<br>1.0630   | 11<br>0.4331   | 119<br>4.6850  | A217-52<br>217                                                   | 83200                | 63800      | 3.78<br>3.60                                                 |
| NA218-56<br>HC218                                                   | 3-1/2                              | 90                   | 160<br>6.2992        | 37<br>1.4567 | 55<br>2.1654   | 24.5<br>0.9646 | 72.5<br>2.8543  | 24<br>0.9449   | 12<br>0.4724   | 120<br>4.7244  | A218-56<br>218                                                   | 95900                | 71500      | 3.86<br>3.77                                                 |
| NA220<br>HC220                                                      |                                    | 100                  | 180<br>7.0866        | 40<br>1.5748 | 100<br>3.9370  | 50<br>1.9685   | 125.4<br>4.9370 | 31.8<br>1.2519 | 12.1<br>0.4763 | 139.7<br>5.500 | A220                                                             | 122000               | 92800      | 7.45                                                         |



Dual seals

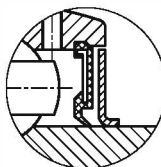
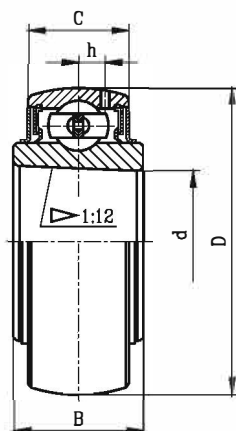


F seal  
(+Suffix-F)

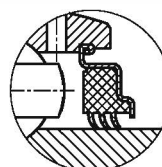
## NA3 Eccentric locking collar type

| Unit No.                                      | Shaft Dia.                         |      | Dimensions(mm)/(in.) |                |              |                 |                 |                |                |                | Eccentric collar                             | Basic load rating(N) |            | Mass (kg)                            |
|-----------------------------------------------|------------------------------------|------|----------------------|----------------|--------------|-----------------|-----------------|----------------|----------------|----------------|----------------------------------------------|----------------------|------------|--------------------------------------|
|                                               | d                                  |      | D                    | B              | C            | S               | B <sub>1</sub>  | B <sub>3</sub> | h              | d <sub>1</sub> |                                              | Dynamic Cr           | Static Cor |                                      |
|                                               | (in.)                              | (mm) |                      |                |              |                 |                 |                |                |                |                                              |                      |            |                                      |
| NA305-14<br>305-15<br>305<br>305-16           | 7/8<br>15/16<br>1                  | 25   | 62<br>2.4409         | 34.9<br>1.3740 | 21<br>0.8268 | 16.7<br>0.6575  | 46.8<br>1.8425  | 15.9<br>0.6260 | 6.2<br>0.2441  | 42.8<br>1.6850 | A305-14<br>305-15<br>305<br>305-16           | 22360                | 11500      | 0.45<br>0.43<br>0.41<br>0.40         |
| NA306-18<br>306<br>306-19                     | 1-1/8<br>1-3/16                    | 30   | 72<br>2.8346         | 36.5<br>1.4370 | 24<br>0.9449 | 17.5<br>0.6890  | 50<br>1.9685    | 17.5<br>0.6890 | 6.5<br>0.2559  | 50<br>1.9685   | A306-18<br>306<br>306-19                     | 27000                | 15200      | 0.71<br>0.68<br>0.68                 |
| NA307-20<br>307-21<br>307-22<br>307<br>307-23 | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35   | 80<br>3.1496         | 38.1<br>1.5000 | 25<br>0.9843 | 18.3<br>0.7205  | 51.6<br>2.0315  | 17.5<br>0.6890 | 7.2<br>0.2835  | 55<br>2.1654   | A307-20<br>307-21<br>307-22<br>307<br>307-23 | 33500                | 19200      | 0.84<br>0.81<br>0.77<br>0.77<br>0.74 |
| NA308-24<br>308-25<br>308                     | 1-1/2<br>1-9/16                    | 40   | 90<br>3.5433         | 41.3<br>1.6260 | 28<br>1.1024 | 19.8<br>0.7795  | 57.1<br>2.2480  | 20.6<br>0.8110 | 8.5<br>0.3346  | 63.5<br>2.5000 | A308-24<br>308-25<br>308                     | 40560                | 24000      | 1.17<br>1.13<br>1.12                 |
| NA309-26<br>309-27<br>309-28<br>309           | 1-5/8<br>1-11/16<br>1-3/4          | 45   | 100<br>3.9370        | 42.9<br>1.6890 | 30<br>1.1811 | 19.8<br>0.7795  | 58.7<br>2.3110  | 20.6<br>0.8110 | 9<br>0.3543    | 70<br>2.7559   | A309-26<br>309-27<br>309-28<br>309           | 53000                | 31800      | 1.49<br>1.44<br>1.39<br>1.37         |
| NA310-30<br>310-31<br>310                     | 1-7/8<br>1-15/16                   | 50   | 110<br>4.3307        | 49.2<br>1.9370 | 32<br>1.2598 | 24.6<br>0.9685  | 66.6<br>2.6220  | 22.2<br>0.8740 | 9.9<br>0.3898  | 76.2<br>3.0000 | A310-30<br>310-31<br>310                     | 61750                | 37800      | 1.93<br>1.87<br>1.84                 |
| NA311-32<br>311-34<br>311<br>311-35           | 2<br>2-1/8<br>2-3/16               | 55   | 120<br>4.7244        | 55.6<br>2.1890 | 34<br>1.3386 | 27.8<br>1.0945  | 73<br>2.8740    | 22.2<br>0.8740 | 10.6<br>0.4173 | 83<br>3.2677   | A311-32<br>311-34<br>311<br>311-35           | 71500                | 44800      | 2.52<br>2.36<br>2.30<br>2.27         |
| NA312-36<br>312<br>312-38<br>312-39           | 2-1/4<br>2-3/8<br>2-7/16           | 60   | 130<br>5.1181        | 61.9<br>2.4370 | 36<br>1.4173 | 30.95<br>1.2185 | 79.4<br>3.1260  | 23.9<br>0.9409 | 11.3<br>0.4449 | 89<br>3.5039   | A312-36<br>312<br>312-38<br>312-39           | 81600                | 51800      | 3.01<br>2.85<br>2.83<br>2.74         |
| NA313-40<br>313                               | 2-1/2                              | 65   | 140<br>5.5118        | 65.1<br>2.5630 | 38<br>1.4961 | 32.5<br>1.2795  | 85.7<br>3.3740  | 27<br>1.0630   | 12.1<br>0.4764 | 97<br>3.8189   | A313-40<br>313                               | 93860                | 60500      | 3.69<br>3.59                         |
| NA314-44<br>314                               | 2-3/4                              | 70   | 150<br>5.9055        | 68.3<br>2.6890 | 40<br>1.5748 | 34.15<br>1.3445 | 92.1<br>3.6260  | 30.2<br>1.1890 | 12.8<br>0.5039 | 102<br>4.0157  | A314-44<br>314                               | 104260               | 68000      | 4.42<br>4.40                         |
| NA315<br>315-48                               | 3                                  | 75   | 160<br>6.2992        | 74.6<br>2.9370 | 42<br>1.6535 | 37.3<br>1.4685  | 100<br>3.9370   | 31.8<br>1.2520 | 13.5<br>0.5315 | 113<br>4.4488  | A315<br>315-48                               | 113360               | 76800      | 5.42<br>5.31                         |
| NA316                                         |                                    | 80   | 170<br>6.6929        | 81<br>3.1890   | 44<br>1.7323 | 40.5<br>1.5945  | 106.4<br>4.1890 | 31.8<br>1.2520 | 14.5<br>0.5709 | 119<br>4.6850  | A316                                         | 122850               | 86500      | 6.45                                 |
| NA317-52<br>317                               | 3-1/4                              | 85   | 180<br>7.0866        | 84.1<br>3.3110 | 46<br>1.8110 | 42<br>1.6535    | 109.5<br>4.3110 | 31.8<br>1.2520 | 15.5<br>0.6102 | 127<br>5.0000  | A317-52<br>317                               | 132600               | 96500      | 7.74<br>7.46                         |
| NA318-56<br>318                               | 3-1/2                              | 90   | 190<br>7.4803        | 87.3<br>3.4370 | 48<br>1.8898 | 43.6<br>1.7165  | 115.9<br>4.5630 | 36.5<br>1.4370 | 16.5<br>0.6496 | 133<br>5.2362  | A318-56<br>318                               | 143000               | 108000     | 8.76<br>8.61                         |
| NA319<br>319-60                               | 3-3/4                              | 95   | 200<br>7.8740        | 93.7<br>3.6890 | 50<br>1.9685 | 46.8<br>1.8425  | 122.3<br>4.8150 | 36.5<br>1.4370 | 16.7<br>0.6574 | 140<br>5.5118  | A319<br>319-60                               | 156000               | 122000     | 10.1<br>10.0                         |
| NA320<br>320-64                               | 4                                  | 100  | 215<br>8.4646        | 100<br>3.9370  | 54<br>2.2160 | 50<br>1.9685    | 128.6<br>5.0630 | 36.5<br>1.4370 | 19<br>0.7480   | 146<br>5.7480  | A320<br>320-64                               | 171600               | 140000     | 12.9<br>12.6                         |

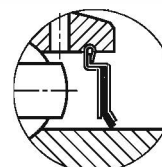
# BALL BEARING INSERTS



Dual seals



Tripple-lip seal  
(+Suffix-R3)

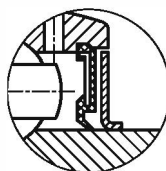
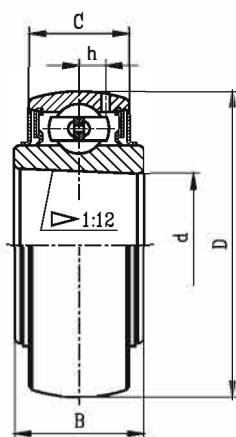


F seal  
(+Suffix-F)

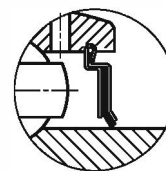
## UK2 Tapered bore

| Bearing No. | Dimensions(mm)/(in). |               |              |              |                | Basic load rating(N) |            | Mass (kg) |
|-------------|----------------------|---------------|--------------|--------------|----------------|----------------------|------------|-----------|
|             | d                    | D             | B            | C            | h              | Dynamic Cr           | Static Cor |           |
| UK205       | 25<br>0.9843         | 52<br>2.0472  | 21<br>0.8268 | 17<br>0.6693 | 4.3<br>0.1693  | 14000                | 7880       | 0.15      |
| UK206       | 30<br>1.1811         | 62<br>2.4409  | 25<br>0.9843 | 19<br>0.7480 | 5<br>0.1969    | 19500                | 11200      | 0.25      |
| UK207       | 35<br>1.3780         | 72<br>2.8346  | 27<br>1.0630 | 20<br>0.7874 | 5.8<br>0.2283  | 25700                | 15200      | 0.36      |
| UK208       | 40<br>1.5748         | 80<br>3.1496  | 29<br>1.1417 | 21<br>0.8268 | 6.3<br>0.2480  | 29600                | 18200      | 0.47      |
| UK209       | 45<br>1.7717         | 85<br>3.3465  | 30<br>1.1811 | 22<br>0.8661 | 6.8<br>0.2677  | 31850                | 20800      | 0.51      |
| UK210       | 50<br>1.9685         | 90<br>3.5433  | 31<br>1.2205 | 23<br>0.9055 | 6.5<br>0.2559  | 35100                | 23200      | 0.57      |
| UK211       | 55<br>2.1654         | 100<br>3.9370 | 33<br>1.2992 | 25<br>0.9843 | 7.2<br>0.2835  | 43550                | 29200      | 0.78      |
| UK212       | 60<br>2.3622         | 110<br>4.3307 | 36<br>1.4173 | 27<br>1.0630 | 8.2<br>0.3228  | 47800                | 32800      | 1.03      |
| UK213       | 65<br>2.5591         | 120<br>4.7244 | 36<br>1.4173 | 28<br>1.1024 | 8<br>0.3150    | 57200                | 40000      | 1.29      |
| UK215       | 75<br>2.9528         | 130<br>5.1181 | 41<br>1.6142 | 30<br>1.1811 | 9<br>0.3543    | 66000                | 49500      | 1.52      |
| UK216       | 80<br>3.1496         | 140<br>5.5118 | 44<br>1.7323 | 33<br>1.2992 | 10.3<br>0.4055 | 71500                | 54200      | 1.90      |
| UK217       | 85<br>3.3465         | 150<br>5.9055 | 44<br>1.7323 | 35<br>1.3780 | 11<br>0.4331   | 83200                | 63800      | 2.33      |
| UK218       | 90<br>3.5433         | 160<br>6.2992 | 48<br>1.8898 | 37<br>1.4567 | 12<br>0.4724   | 95900                | 71500      | 2.77      |

# BALL BEARING INSERTS



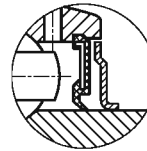
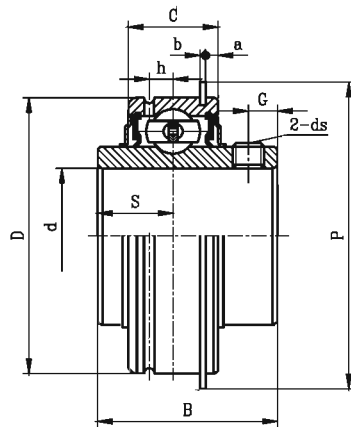
Dual seals



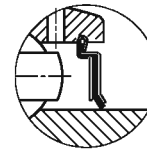
F seal  
(+Suffix-F)

## UK3 Tapered bore

| Bearing No. | Dimensions(mm)/(in.) |                |              |              |                | Basic load rating(N) |            | Mass (kg) |
|-------------|----------------------|----------------|--------------|--------------|----------------|----------------------|------------|-----------|
|             | d                    | D              | B            | C            | h              | Dynamic Cr           | Static Cor |           |
| UK305       | 25<br>0.9843         | 62<br>2.4409   | 27<br>1.0630 | 21<br>0.8268 | 6.2<br>0.2441  | 22360                | 11500      | 0.30      |
| UK306       | 30<br>1.1811         | 72<br>2.8346   | 30<br>1.1811 | 24<br>0.9449 | 6.5<br>0.2559  | 27000                | 15200      | 0.46      |
| UK307       | 35<br>1.3780         | 80<br>3.1496   | 33<br>1.2992 | 25<br>0.9843 | 7.2<br>0.2835  | 33500                | 19200      | 0.54      |
| UK308       | 40<br>1.5748         | 90<br>3.5433   | 35<br>1.3780 | 28<br>1.1024 | 8.5<br>0.3346  | 40560                | 24000      | 0.81      |
| UK309       | 45<br>1.7717         | 100<br>3.9370  | 38<br>1.4961 | 30<br>1.1811 | 9<br>0.3543    | 53000                | 31800      | 1.10      |
| UK310       | 50<br>1.9685         | 110<br>4.3307  | 40<br>1.5748 | 32<br>1.2598 | 9.9<br>0.3898  | 61750                | 37800      | 1.30      |
| UK311       | 55<br>2.1654         | 120<br>4.7244  | 43<br>1.6929 | 34<br>1.3386 | 10.6<br>0.4173 | 71500                | 44800      | 1.65      |
| UK312       | 60<br>2.3622         | 130<br>5.1181  | 47<br>1.8504 | 36<br>1.4173 | 11.3<br>0.4449 | 81600                | 51800      | 2.06      |
| UK313       | 65<br>2.5591         | 140<br>5.5118  | 49<br>1.9291 | 38<br>1.4961 | 12.1<br>0.4764 | 93860                | 60500      | 2.48      |
| UK315       | 75<br>2.9528         | 160<br>6.2992  | 55<br>2.1654 | 42<br>1.6535 | 13.5<br>0.5315 | 113360               | 76800      | 3.70      |
| UK316       | 80<br>3.1496         | 170<br>6.6929  | 55<br>2.1654 | 44<br>1.7323 | 14.5<br>0.5709 | 122850               | 86500      | 4.30      |
| UK317       | 85<br>3.3465         | 180<br>7.0866  | 60<br>2.3622 | 46<br>1.8110 | 15.5<br>0.6102 | 132600               | 96500      | 5.00      |
| UK318       | 90<br>3.5433         | 190<br>7.4803  | 60<br>2.3622 | 48<br>1.8898 | 16.5<br>0.6496 | 143000               | 108000     | 5.65      |
| UK319       | 95<br>3.7402         | 200<br>7.8740  | 66<br>2.5984 | 50<br>1.9685 | 16.7<br>0.6574 | 156000               | 122000     | 6.58      |
| UK320       | 100<br>3.9370        | 215<br>8.4646  | 68<br>2.6772 | 54<br>2.1260 | 19<br>0.7480   | 171600               | 140000     | 8.40      |
| UK322       | 110<br>4.3307        | 240<br>9.4488  | 80<br>3.1496 | 60<br>2.3622 | 21<br>0.8268   | 158000               | 178000     | 11.7      |
| UK324       | 120<br>4.7244        | 260<br>10.2362 | 87<br>3.4252 | 64<br>2.5196 | 22<br>0.8661   | 175000               | 208000     | 14.9      |
| UK326       | 130<br>5.1181        | 280<br>11.0236 | 90<br>3.5433 | 68<br>2.6771 | 23<br>0.9055   | 195000               | 242000     | 18.2      |
| UK328       | 140<br>5.5118        | 300<br>11.8110 | 98<br>3.8583 | 72<br>2.8346 | 25<br>0.9843   | 212000               | 272000     | 22.5      |



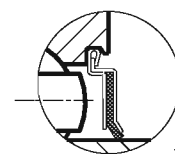
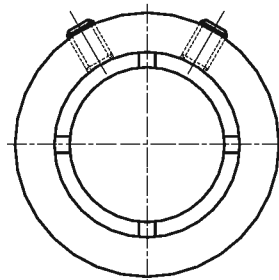
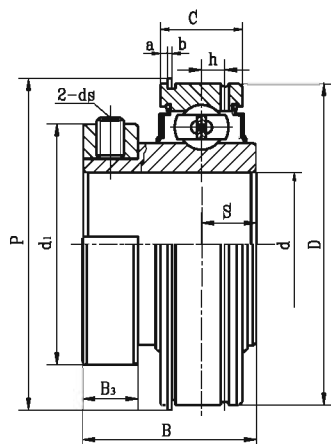
Dual seals



F seal  
(+Suffix-F)

## ER2 Setscrew type

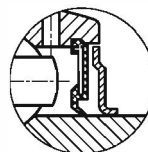
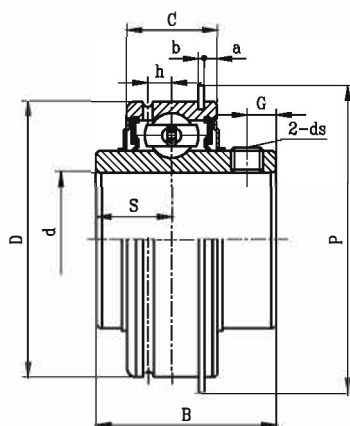
| Unit No.                                                          | Shaft Dia.                         |                      | Dimensions(mm)/(in.) |                |                |                |                |                |                 |                |               |                        | Basic load rating<br>(N) |               | Mass<br>(kg)                                                 |
|-------------------------------------------------------------------|------------------------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|------------------------|--------------------------|---------------|--------------------------------------------------------------|
|                                                                   | d<br>(in.)                         | d<br>(mm)            | D                    | B              | C              | S              | a              | b              | p               | G              | h             | ds                     | Dynamic<br>Cr            | Static<br>Cor |                                                              |
| ER201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 47<br>1.8504         | 31<br>1.2205   | 15.9<br>0.6260 | 12.7<br>0.5000 | 2.38<br>0.0937 | 1.07<br>0.0421 | 52.7<br>2.0748  | 4.7<br>0.1850  | 4.4<br>0.1732 | M6X1<br>1/4-28UNF      | 12800                    | 6650          | 0.22<br>0.21<br>0.20<br>0.20<br>0.19<br>0.19<br>0.18<br>0.17 |
| ER205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 52<br>2.0472         | 34<br>1.3386   | 19<br>0.7480   | 14.3<br>0.5630 | 2.38<br>0.0937 | 1.07<br>0.0421 | 57.9<br>2.2795  | 5.5<br>0.2165  | 4.5<br>0.1772 | M6X1<br>1/4-28UNF      | 14000                    | 7880          | 0.25<br>0.23<br>0.22<br>0.21                                 |
| ER206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 62<br>2.4409         | 38.1<br>1.5000 | 22.2<br>0.8740 | 15.9<br>0.6260 | 3.18<br>0.1252 | 1.65<br>0.0650 | 67.7<br>2.6654  | 5.5<br>0.2165  | 5.3<br>0.2087 | M6X1<br>1/4-28UNF      | 19500                    | 11200         | 0.37<br>0.35<br>0.35<br>0.33                                 |
| ER207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 72<br>2.8346         | 42.9<br>1.6890 | 23.8<br>0.9370 | 17.5<br>0.6890 | 3.18<br>0.1252 | 1.65<br>0.0650 | 78.6<br>3.0945  | 6.5<br>0.2559  | 5.8<br>0.2283 | M8X1<br>5/16-24UNF     | 25700                    | 15200         | 0.58<br>0.55<br>0.53<br>0.53<br>0.50                         |
| ER208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 80<br>3.1496         | 49.2<br>1.9370 | 27.8<br>1.0945 | 19<br>0.7480   | 3.18<br>0.1252 | 1.65<br>0.0650 | 86.6<br>3.4094  | 8<br>0.3150    | 6.3<br>0.2480 | M8X1<br>5/16-24UNF     | 29600                    | 18200         | 0.78<br>0.75<br>0.73                                         |
| ER209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 85<br>3.3465         | 49.2<br>1.9370 | 27.8<br>1.0945 | 19<br>0.7480   | 3.18<br>0.1252 | 1.65<br>0.0650 | 91.6<br>3.6063  | 8<br>0.3150    | 7.5<br>0.2953 | M8X1<br>5/16-24UNF     | 31850                    | 20800         | 0.86<br>0.83<br>0.78<br>0.77                                 |
| ER210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 90<br>3.5433         | 51.6<br>2.0315 | 28.6<br>1.1260 | 19<br>0.7480   | 3.18<br>0.1252 | 2.41<br>0.0949 | 96.5<br>3.7992  | 9<br>0.3543    | 6.8<br>0.2677 | M10X1.25<br>3/8-24UNF  | 35100                    | 23200         | 0.91<br>0.88<br>0.84                                         |
| ER211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 100<br>3.9370        | 55.6<br>2.1890 | 30.2<br>1.1890 | 22.2<br>0.8740 | 3.18<br>0.1252 | 2.41<br>0.0949 | 106.5<br>4.1929 | 9<br>0.3543    | 7.6<br>0.2992 | M10X1.25<br>3/8-24UNF  | 43550                    | 29200         | 1.31<br>1.20<br>1.16<br>1.14                                 |
| ER212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 110<br>4.3307        | 65.1<br>2.5630 | 31.8<br>1.2520 | 25.4<br>1.0000 | 3.18<br>0.1252 | 2.41<br>0.0949 | 116.6<br>4.5906 | 10.5<br>0.4134 | 8.4<br>0.3307 | M10X1.25<br>3/8-24UNF  | 47800                    | 32800         | 1.67<br>1.54<br>1.52<br>1.45                                 |
| ER214-40<br>214-43<br>214                                         | 2-1/2<br>2-11/16                   | 70                   | 125<br>4.9213        | 74.6<br>2.9370 | 34.9<br>1.3740 | 30.2<br>1.1890 | 3.96<br>0.1559 | 2.77<br>0.1091 | 134.7<br>5.3031 | 12<br>0.4724   | 9<br>0.3543   | M12X1.25<br>7/16-20UNF | 60800                    | 45000         | 2.57<br>2.28<br>2.17                                         |
| ER215-46<br>215-47<br>215                                         | 2-7/8<br>2-15/16                   | 75                   | 130<br>5.1181        | 77.8<br>3.0630 | 38.1<br>1.5000 | 33.3<br>1.3110 | 3.96<br>0.1559 | 2.77<br>0.1091 | 139.7<br>5.5000 | 12<br>0.4724   | 9.5<br>0.3740 | M12X1.25<br>7/16-20UNF | 66000                    | 49500         | 2.59<br>2.47<br>2.45                                         |



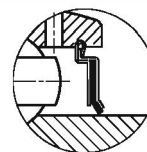
F seal

## ER2T Centric locking collar type

| Unit No.                                                                 | Shaft Dia.                                           |           | Dimensions(mm)/(in.) |                |                |                |                |                |                 |                |               |                                                      |                       | Basic load rating<br>(N) |               | Mass<br>(kg) |
|--------------------------------------------------------------------------|------------------------------------------------------|-----------|----------------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|------------------------------------------------------|-----------------------|--------------------------|---------------|--------------|
|                                                                          | d<br>(in.)                                           | d<br>(mm) | D                    | B              | C              | S              | a              | b              | p               | B <sub>3</sub> | h             | d <sub>1</sub><br>(mm)                               | d <sub>s</sub>        | Dynamic<br>Cr            | Static<br>Cor |              |
| ER204-12T<br>204T                                                        | 3/4                                                  | 20        | 47<br>1.8504         | 31<br>1.2205   | 15.9<br>0.6260 | 10.3<br>0.4055 | 2.38<br>0.0937 | 1.07<br>0.0421 | 52.7<br>2.0748  | 8.0<br>0.3150  | 4.4<br>0.1732 | 34.9                                                 | M5X0.8<br>10#-32UNF   | 12800                    | 6650          | 0.27         |
| ER205-13T<br>205-14T<br>205-15T<br>205T<br>205-16T                       | 13/16<br>7/8<br>15/16<br>1                           | 25        | 52<br>2.0472         | 34.9<br>1.3740 | 19<br>0.7480   | 13.1<br>0.5157 | 2.38<br>0.0937 | 1.07<br>0.0421 | 57.9<br>2.2795  | 8.8<br>0.3465  | 4.5<br>0.1772 | 34.9<br>39.7<br>39.7<br>39.7<br>39.7                 | M6X1<br>1/4-28UNF     | 14000                    | 7880          | 0.30         |
| ER206-16T<br>206-17T<br>206-18T<br>206T<br>206-19T<br>206-20T            | 1<br>1-1/16<br>1-1/8<br>1-3/16<br>1-1/4              | 30        | 62<br>2.4409         | 38.1<br>1.5000 | 22.2<br>0.8740 | 15.9<br>0.6260 | 3.18<br>0.1252 | 1.65<br>0.0650 | 67.7<br>2.6654  | 8.8<br>0.3465  | 5.3<br>0.2087 | 46.0<br>46.0<br>46.0<br>50.8<br>50.8<br>50.8         | M6X1<br>1/4-28UNF     | 19500                    | 11200         | 0.42         |
| ER207-19T<br>207-20T<br>207-21T<br>207-22T<br>207T<br>207-23T            | 1-3/16<br>1-1/4<br>1-5/16<br>1-3/8<br>1-7/16         | 35        | 72<br>2.8346         | 42.9<br>1.6890 | 23.8<br>0.9370 | 17.5<br>0.6890 | 3.18<br>0.1252 | 1.65<br>0.0650 | 78.6<br>3.0945  | 11.2<br>0.4409 | 5.8<br>0.2283 | 50.8<br>50.8<br>57.2<br>57.2<br>57.2<br>57.2         | M8X1<br>5/16-24UNF    | 25700                    | 15200         | 0.66         |
| ER208-23T<br>208-24T<br>208-25T<br>208T<br>208-26T                       | 1-7/16<br>1-1/2<br>1-9/16<br>1-5/8                   | 40        | 80<br>3.1496         | 49.2<br>1.9370 | 27.8<br>1.0945 | 19<br>0.7480   | 3.18<br>0.1252 | 1.65<br>0.0650 | 86.6<br>3.4094  | 11.2<br>0.4409 | 6.3<br>0.2480 | 63.5                                                 | M8X1<br>5/16-24UNF    | 29600                    | 18200         | 0.86         |
| ER209-24T<br>209-26T<br>209-27T<br>209-28T<br>209T<br>209-29T            | 1-1/2<br>1-5/8<br>1-11/16<br>1-3/4<br>1-13/16        | 45        | 85<br>3.3465         | 49.2<br>1.9370 | 27.8<br>1.0945 | 19<br>0.7480   | 3.18<br>0.1252 | 1.65<br>0.0650 | 91.6<br>3.6063  | 11.2<br>0.4409 | 7.5<br>0.2953 | 63.5<br>63.5<br>68.3<br>68.3<br>68.3<br>68.3         | M8X1<br>5/16-24UNF    | 31850                    | 20800         | 0.95         |
| ER210-27T<br>210-28T<br>210-29T<br>210-30T<br>210-31T<br>210T<br>210-32T | 1-11/16<br>1-3/4<br>1-13/16<br>1-7/8<br>1-15/16<br>2 | 50        | 90<br>3.5433         | 51.6<br>2.0315 | 28.6<br>1.1260 | 19<br>0.7480   | 3.18<br>0.1252 | 2.41<br>0.0949 | 96.5<br>3.7992  | 14.2<br>0.5591 | 6.8<br>0.2677 | 69.9<br>69.9<br>69.9<br>73.0<br>73.0<br>73.0<br>73.0 | M10X1.25<br>3/8-24UNF | 35100                    | 23200         | 1.03         |
| ER211-31T<br>211-32T<br>211-33T<br>211-34T<br>211T<br>211-35T<br>211-36T | 1-15/16<br>2<br>2-1/16<br>2-1/8<br>2-3/16<br>2-1/4   | 55        | 100<br>3.9370        | 55.6<br>2.1890 | 30.2<br>1.1890 | 22.2<br>0.8740 | 3.18<br>0.1252 | 2.41<br>0.0949 | 106.5<br>4.1929 | 14.2<br>0.5591 | 7.6<br>0.2992 | 73.0<br>73.0<br>79.4<br>79.4<br>79.4<br>79.4<br>79.4 | M10X1.25<br>3/8-24UNF | 43550                    | 29200         | 1.48         |
| ER212-35T<br>212-36T<br>212-37T<br>212T<br>212-38T<br>212-39T            | 2-3/16<br>2-1/4<br>2-5/16<br>2-3/8<br>2-7/16         | 60        | 110<br>4.3307        | 65.1<br>2.5630 | 31.8<br>1.2520 | 25.4<br>1.000  | 3.18<br>0.1252 | 2.41<br>0.0949 | 116.6<br>4.5906 | 14.2<br>0.5591 | 8.4<br>0.3307 | 79.4<br>79.4<br>85.7<br>85.7<br>85.7<br>85.7         | M10X1.25<br>3/8-24UNF | 47800                    | 32800         | 2.02         |
| ER214-40T<br>214-42T<br>214-43T<br>214T                                  | 2-1/2<br>2-5/8<br>2-11/16                            | 70        | 125<br>4.9213        | 74.6<br>2.9370 | 34.9<br>1.3740 | 30.2<br>1.1890 | 3.96<br>0.1559 | 2.77<br>0.1091 | 134.7<br>5.3031 | 14.2<br>0.5591 | 9<br>0.3543   | 100                                                  | M10X1.25<br>3/8-24UNF | 60800                    | 45000         | 2.66         |
| ER215-44T<br>215-45T<br>215-46T<br>215-47T<br>215T                       | 2-3/4<br>2-13/16<br>2-7/8<br>2-15/16                 | 75        | 130<br>5.1181        | 77.8<br>3.0630 | 38.1<br>1.5000 | 33.3<br>1.3110 | 3.96<br>0.1559 | 2.77<br>0.1091 | 139.7<br>5.5000 | 14.2<br>0.5591 | 9.5<br>0.3740 | 100.0<br>106.4<br>106.4<br>106.4<br>106.4            | M10X1.25<br>3/8-24UNF | 66000                    | 49500         | 3.10         |



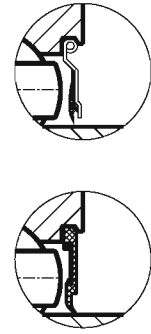
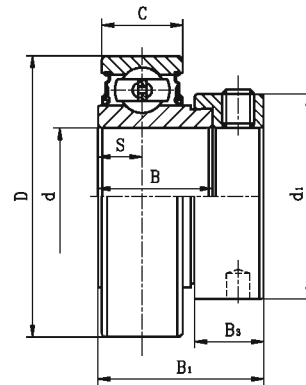
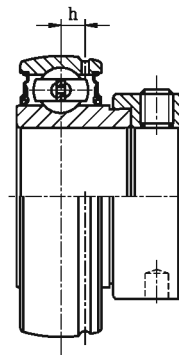
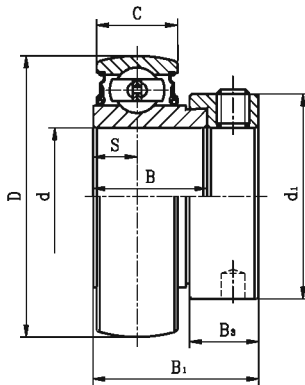
Dual seals



F seal  
(+Suffix-F)

## SER2 Setscrew type

| Unit No.                                                           | Shaft Dia.                         |                      | Dimensions(mm)/(in.) |                |                |                |                |                |                 |                |               |                        | Basic load rating<br>(N) |               | Mass<br>(kg)                                                 |
|--------------------------------------------------------------------|------------------------------------|----------------------|----------------------|----------------|----------------|----------------|----------------|----------------|-----------------|----------------|---------------|------------------------|--------------------------|---------------|--------------------------------------------------------------|
|                                                                    | d                                  |                      | D                    | B              | C              | S              | a              | b              | p               | G              | h             | ds                     | Dynamic<br>Cr            | Static<br>Cor |                                                              |
|                                                                    | (in.)                              | (mm)                 |                      |                |                |                |                |                |                 |                |               |                        |                          |               |                                                              |
| SER201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 47<br>1.8504         | 31<br>1.2205   | 15.9<br>0.6260 | 10.3<br>0.4055 | 2.38<br>0.0937 | 1.07<br>0.0421 | 52.7<br>2.0748  | 4.7<br>0.1850  | 4.4<br>0.1732 | M6X1<br>1/4-28UNF      | 12800                    | 6650          | 0.22<br>0.21<br>0.20<br>0.20<br>0.19<br>0.19<br>0.18<br>0.17 |
| SER205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 52<br>2.0472         | 34.9<br>1.3740 | 19<br>0.7480   | 13.1<br>0.5157 | 2.38<br>0.0937 | 1.07<br>0.0421 | 57.9<br>2.2795  | 5.5<br>0.2165  | 4.5<br>0.1772 | M6X1<br>1/4-28UNF      | 14000                    | 7880          | 0.25<br>0.23<br>0.22<br>0.21                                 |
| SER206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 62<br>2.4409         | 38.1<br>1.5000 | 22.2<br>0.8740 | 15.9<br>0.6260 | 3.18<br>0.1252 | 1.65<br>0.0650 | 67.7<br>2.6654  | 5.5<br>0.2165  | 5.3<br>0.2087 | M6X1<br>1/4-28UNF      | 19500                    | 11200         | 0.37<br>0.35<br>0.35<br>0.33                                 |
| SER207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 72<br>2.8346         | 42.9<br>1.6890 | 23.8<br>0.9370 | 17.5<br>0.6890 | 3.18<br>0.1252 | 1.65<br>0.0650 | 78.6<br>3.0945  | 6.5<br>0.2559  | 5.8<br>0.2283 | M8X1<br>5/16-24UNF     | 25700                    | 15200         | 0.58<br>0.55<br>0.53<br>0.53<br>0.50                         |
| SER208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 80<br>3.1496         | 49.2<br>1.9370 | 27.8<br>1.0945 | 19<br>0.7480   | 3.18<br>0.1252 | 1.65<br>0.0650 | 86.6<br>3.4094  | 8<br>0.3150    | 6.3<br>0.2480 | M8X1<br>5/16-24UNF     | 29600                    | 18200         | 0.78<br>0.75<br>0.73                                         |
| SER209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 85<br>3.3465         | 49.2<br>1.9370 | 27.8<br>1.0945 | 19<br>0.7480   | 3.18<br>0.1252 | 1.65<br>0.0650 | 91.6<br>3.6063  | 8<br>0.3150    | 7.5<br>0.2953 | M8X1<br>5/16-24UNF     | 31850                    | 20800         | 0.86<br>0.83<br>0.78<br>0.77                                 |
| SER210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 90<br>3.5433         | 51.6<br>2.0315 | 28.6<br>1.1260 | 19<br>0.7480   | 3.18<br>0.1252 | 2.41<br>0.0949 | 96.5<br>3.7992  | 9<br>0.3543    | 6.8<br>0.2677 | M10X1.25<br>3/8-24UNF  | 35100                    | 23200         | 0.91<br>0.88<br>0.84                                         |
| SER211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 100<br>3.9370        | 55.6<br>2.1890 | 30.2<br>1.1890 | 22.2<br>0.8740 | 3.18<br>0.1252 | 2.41<br>0.0949 | 106.5<br>4.1929 | 9<br>0.3543    | 7.6<br>0.2992 | M10X1.25<br>3/8-24UNF  | 43550                    | 29200         | 1.31<br>1.20<br>1.16<br>1.14                                 |
| SER212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 110<br>4.3307        | 65.1<br>2.5630 | 31.8<br>1.2520 | 25.4<br>1.0000 | 3.18<br>0.1252 | 2.41<br>0.0949 | 116.6<br>4.5906 | 10.5<br>0.4134 | 8.4<br>0.3307 | M10X1.25<br>3/8-24UNF  | 47800                    | 32800         | 1.67<br>1.54<br>1.52<br>1.45                                 |
| SER214-40<br>214-43<br>214                                         | 2-1/2<br>2-11/16                   | 70                   | 125<br>4.9213        | 74.6<br>2.9370 | 34.9<br>1.3740 | 30.2<br>1.1890 | 3.96<br>0.1559 | 2.77<br>0.1091 | 134.7<br>5.3031 | 12<br>0.4724   | 9<br>0.3543   | M12X1.25<br>7/16-20UNF | 60800                    | 45000         | 2.57<br>2.28<br>2.17                                         |
| SER215-46<br>215-47<br>215                                         | 2-7/8<br>2-15/16                   | 75                   | 130<br>5.1181        | 77.8<br>3.0630 | 38.1<br>1.5000 | 33.3<br>1.3110 | 3.96<br>0.1559 | 2.77<br>0.1091 | 139.7<br>5.5000 | 12<br>0.4724   | 9.5<br>0.3740 | M12X1.25<br>7/16-20UNF | 66000                    | 49500         | 2.59<br>2.47<br>2.45                                         |



RS Seal  
(+Suffix-2RS)

## SA2

Eccentric locking collar type

## SA2G

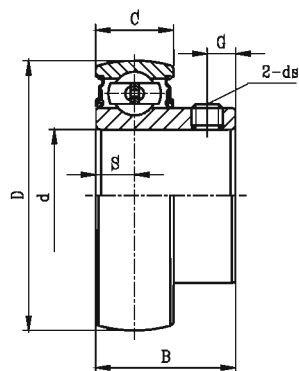
Relubricatable type

## CSA2

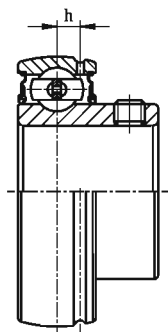
Cylindrical O.D. type

| Unit No.                                         | Shaft Dia.                         |                | Dimensions(mm)/(in.) |              |                |                |               |               |                |                | Basic load rating(N) |               | Mass (kg)                                    |
|--------------------------------------------------|------------------------------------|----------------|----------------------|--------------|----------------|----------------|---------------|---------------|----------------|----------------|----------------------|---------------|----------------------------------------------|
|                                                  | d<br>(in.)                         | d<br>(mm)      | D                    | C            | B              | B <sub>1</sub> | S             | h             | B <sub>3</sub> | d <sub>1</sub> | Dynamic<br>Cr        | Static<br>Cor |                                              |
| SA201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 40<br>1.5748         | 12<br>0.4724 | 19.1<br>0.7520 | 28.6<br>1.1260 | 6.5<br>0.2559 | 3.6<br>0.1417 | 13.5<br>0.5315 | 27.2<br>1.0709 | 9550                 | 4780          | 0.13<br>0.13<br>0.12<br>0.11<br>0.10<br>0.10 |
| SA204-12<br>204                                  | 3/4                                | 20             | 47<br>1.8504         | 14<br>0.5512 | 21.4<br>0.8425 | 30.9<br>1.2165 | 7.5<br>0.2953 | 4<br>0.1575   | 13.5<br>0.5315 | 32.4<br>1.2756 | 12800                | 6650          | 0.17<br>0.16                                 |
| SA205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 52<br>2.0472         | 15<br>0.5906 | 21.4<br>0.8425 | 30.9<br>1.2165 | 7.5<br>0.2953 | 4.3<br>0.1693 | 13.5<br>0.5315 | 37.4<br>1.4724 | 14000                | 7880          | 0.21<br>0.20<br>0.19<br>0.19                 |
| SA206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 62<br>2.4409         | 16<br>0.6299 | 23.8<br>0.9370 | 35.7<br>1.4055 | 9<br>0.3543   | 5<br>0.1969   | 15.9<br>0.6260 | 44.1<br>1.7362 | 19500                | 11200         | 0.32<br>0.30<br>0.39<br>0.28                 |
| SA207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 72<br>2.8346         | 17<br>0.6693 | 25.4<br>1.0000 | 38.9<br>1.5315 | 9.5<br>0.3740 | 5.7<br>0.2244 | 17.5<br>0.6890 | 51.1<br>2.0118 | 25700                | 15200         | 0.51<br>0.48<br>0.45<br>0.45<br>0.43         |
| SA208-24<br>208-25<br>208                        | 1-1/2<br>1-9/16                    | 40             | 80<br>3.1496         | 18<br>0.7087 | 30.2<br>1.1890 | 43.7<br>1.7205 | 11<br>0.4331  | 6.2<br>0.2441 | 18.3<br>0.7205 | 58<br>2.2835   | 29600                | 18200         | 0.65<br>0.62<br>0.61                         |
| SA209-26<br>209-27<br>209-28<br>209              | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 85<br>3.3465         | 19<br>0.7480 | 30.2<br>1.1890 | 43.7<br>1.7205 | 11<br>0.4331  | 6.5<br>0.2559 | 18.3<br>0.7205 | 63.5<br>2.5000 | 31850                | 20800         | 0.75<br>0.71<br>0.67<br>0.66                 |
| SA210-30<br>210-31<br>210                        | 1-7/8<br>1-15/16                   | 50             | 90<br>3.5433         | 20<br>0.7874 | 30.2<br>1.1890 | 43.7<br>1.7205 | 11<br>0.4331  | 6.5<br>0.2559 | 18.3<br>0.7205 | 67.2<br>2.6457 | 35100                | 23200         | 0.76<br>0.72<br>0.70                         |
| SA211-32<br>211-34<br>211<br>211-35              | 2<br>2-1/8<br>2-3/16               | 55             | 100<br>3.9370        | 24<br>0.9449 | 32.5<br>1.2756 | 48.4<br>1.9055 | 12<br>0.4724  | 7.2<br>0.2835 | 20.7<br>0.8150 | 74.5<br>2.9331 | 43550                | 29200         | 1.17<br>1.07<br>1.04<br>1.02                 |
| SA212-36<br>212<br>212-38<br>212-39              | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 110<br>4.3307        | 24<br>0.9449 | 33.4<br>1.3150 | 49.3<br>1.9409 | 12<br>0.4724  | 8<br>0.3150   | 22.3<br>0.8780 | 82<br>3.2283   | 47800                | 32800         | 1.36<br>1.26<br>1.25<br>1.19                 |

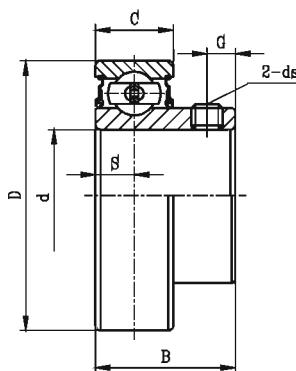
Note: Suffix "G"-Relub; Prefix "C"-Cylindrical O. D..



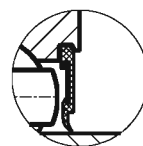
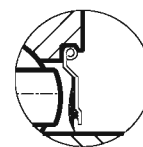
**SB2**  
Setscrew type



**SB2G**  
Relubricatable type



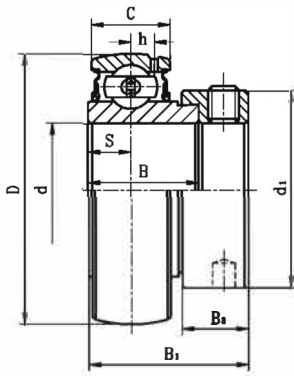
**CSB2**  
Cylindrical O.D. type



RS Seal  
(+Suffix-2RS)

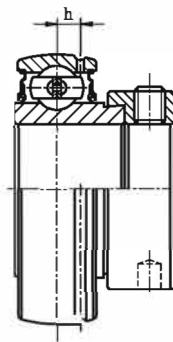
| Unit No.                                         | Shaft Dia.                         |                | Dimensions(mm)/(in.) |                |              |                |               |               |                       | Basic load rating(N) |            | Mass (kg)                                    |
|--------------------------------------------------|------------------------------------|----------------|----------------------|----------------|--------------|----------------|---------------|---------------|-----------------------|----------------------|------------|----------------------------------------------|
|                                                  | d                                  |                | D                    | B              | C            | S              | h             | G             | ds                    | Dynamic Cr           | Static Cor |                                              |
|                                                  | (in.)                              | (mm)           |                      |                |              |                |               |               |                       |                      |            |                                              |
| SB201<br>201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 40<br>1.5748         | 22<br>0.8661   | 12<br>0.4724 | 6<br>0.2362    | 3.6<br>0.1417 | 4<br>0.1575   | M5X0.8<br>10#-32UNF   | 9550                 | 4780       | 0.11<br>0.11<br>0.10<br>0.10<br>0.09<br>0.09 |
| SB204-12<br>204                                  | 3/4                                | 20             | 47<br>1.8504         | 25<br>0.9843   | 14<br>0.5512 | 7<br>0.2756    | 4<br>0.1575   | 5<br>0.1969   | M6X1<br>1/4-28UNF     | 12800                | 6650       | 0.14<br>0.13                                 |
| SB205-14<br>205-15<br>205<br>205-16              | 7/8<br>15/16<br>1                  | 25             | 52<br>2.0472         | 27<br>1.0630   | 15<br>0.5906 | 7.5<br>0.2953  | 4.3<br>0.1693 | 5.5<br>0.2165 | M6X1<br>1/4-28UNF     | 14000                | 7880       | 0.19<br>0.18<br>0.17<br>0.16                 |
| SB206-18<br>206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 62<br>2.4409         | 30<br>1.1811   | 16<br>0.6299 | 8<br>0.3150    | 5<br>0.1969   | 6<br>0.2362   | M6X1<br>1/4-28UNF     | 19500                | 11200      | 0.27<br>0.25<br>0.25<br>0.23                 |
| SB207-20<br>207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 72<br>2.8346         | 32<br>1.2598   | 17<br>0.6693 | 8.5<br>0.3346  | 5.7<br>0.2244 | 6.5<br>0.2559 | M6X1<br>1/4-28UNF     | 25700                | 15200      | 0.43<br>0.41<br>0.39<br>0.39<br>0.37         |
| SB208-24<br>208-25<br>208                        | 1-1/2<br>1-9/16                    | 40             | 80<br>3.1496         | 34<br>1.3386   | 18<br>0.7087 | 9<br>0.3543    | 6.2<br>0.2441 | 7<br>0.2756   | M8X1<br>5/16-24UNF    | 29600                | 18200      | 0.51<br>0.49<br>0.48                         |
| SB209-26<br>209-27<br>209-28<br>209              | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 85<br>3.3465         | 41.2<br>1.6220 | 19<br>0.7480 | 10.2<br>0.4016 | 6.5<br>0.2559 | 8.2<br>0.3228 | M8X1<br>5/16-24UNF    | 31850                | 20800      | 0.64<br>0.61<br>0.57<br>0.56                 |
| SB210-30<br>210-31<br>210                        | 1-7/8<br>1-15/16                   | 50             | 90<br>3.5433         | 43.5<br>1.7126 | 20<br>0.7874 | 10.9<br>0.4291 | 6.5<br>0.2559 | 9.2<br>0.3622 | M8X1<br>5/16-24UNF    | 35100                | 23200      | 0.69<br>0.65<br>0.63                         |
| SB211-32<br>211-34<br>211<br>211-35              | 2<br>2-1/8<br>2-3/16               | 55             | 100<br>3.9370        | 45.3<br>1.7835 | 23<br>0.9055 | 11.8<br>0.4646 | 7.2<br>0.2835 | 9.8<br>0.3858 | M8X1<br>5/16-24UNF    | 43550                | 29200      | 1.04<br>0.95<br>0.92<br>0.90                 |
| SB212-36<br>212<br>212-38<br>212-39              | 2-1/4<br>2-7/16                    | 60             | 110<br>4.3307        | 53.7<br>2.1142 | 24<br>0.9449 | 14.9<br>0.5866 | 8<br>0.3150   | 9.8<br>0.3858 | M10X1.25<br>3/8-24UNF | 47800                | 32800      | 1.28<br>1.17<br>1.17<br>1.16<br>1.09         |

Note: Suffix "G" - Relub; Prefix "C" - Cylindrical O. D..



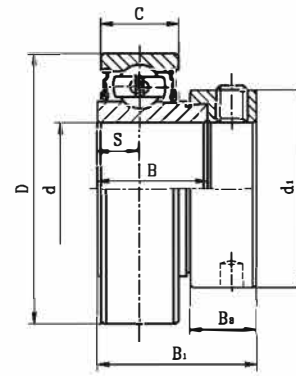
**GRA2**

Eccentric locking collar type



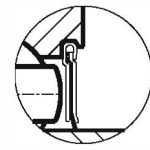
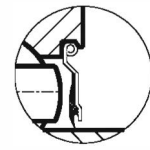
**GRA2G**

Relubricatable type



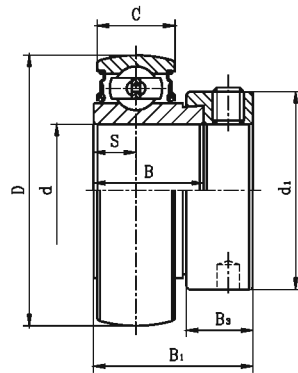
**RA2**

Cylindrical O.D. type

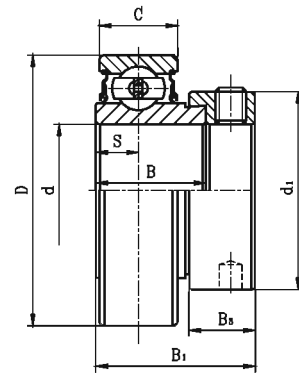


F Seal  
(+Suffix-F)

| Unit No.                                            | Shaft Dia.                         |                | Dimensions(mm)/(in.) |              |               |                |                |                |                |                | Basic load rating(N) |            | Mass (kg)                                    |
|-----------------------------------------------------|------------------------------------|----------------|----------------------|--------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------------|------------|----------------------------------------------|
|                                                     | d                                  |                | D                    | C            | h             | S              | B1             | B              | B3             | d1             | Dynamic Cr           | Static Cor |                                              |
|                                                     | (in.)                              | (mm)           |                      |              |               |                |                |                |                |                |                      |            |                                              |
| GRA201<br>RA201-8<br>202<br>202-10<br>203<br>203-11 | 1/2<br>5/8<br>11/16                | 12<br>15<br>17 | 40<br>1.5748         | 12<br>0.4724 | 3.6<br>0.1417 | 6.5<br>0.2559  | 28.6<br>1.1260 | 19.1<br>0.7520 | 13.5<br>0.5315 | 27.2<br>1.0709 | 9550                 | 4780       | 0.13<br>0.13<br>0.12<br>0.11<br>0.10<br>0.10 |
| GRA204-12<br>RA204                                  | 3/4                                | 20             | 47<br>1.8504         | 14<br>0.5511 | 4<br>0.1575   | 7.5<br>0.2953  | 30.9<br>1.2165 | 21.4<br>0.8425 | 13.5<br>0.5315 | 32.4<br>1.2756 | 12800                | 6650       | 0.17<br>0.16                                 |
| GRA205-14<br>205-15<br>205<br>205-16                | 7/8<br>15/16<br>1                  | 25             | 52<br>2.0472         | 15<br>0.5906 | 4.3<br>0.1693 | 7.5<br>0.2953  | 30.9<br>1.2165 | 21.4<br>0.8425 | 13.5<br>0.5315 | 37.4<br>1.4724 | 14000                | 7880       | 0.21<br>0.20<br>0.19<br>0.19                 |
| GRA206-18<br>RA206<br>206-19<br>206-20              | 1-1/8<br>1-3/16<br>1-1/4           | 30             | 62<br>2.4409         | 18<br>0.7087 | 5<br>0.1969   | 9<br>0.3543    | 35.7<br>1.4055 | 23.8<br>0.9370 | 15.9<br>0.6260 | 44.1<br>1.7362 | 19500                | 11200      | 0.33<br>0.31<br>0.31<br>0.29                 |
| GRA207-20<br>RA207-21<br>207-22<br>207<br>207-23    | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35             | 72<br>2.8346         | 19<br>0.7480 | 5.7<br>0.2244 | 9.5<br>0.3740  | 38.9<br>1.5315 | 25.4<br>1.0000 | 17.5<br>0.6890 | 51.1<br>2.0118 | 25700                | 15200      | 0.52<br>0.49<br>0.46<br>0.46<br>0.44         |
| GRA208-24<br>RA208-25<br>208                        | 1-1/2<br>1-9/16                    | 40             | 80<br>3.1496         | 21<br>0.8268 | 6.3<br>0.2480 | 11<br>0.4331   | 43.7<br>1.7205 | 30.2<br>1.1890 | 18.3<br>0.7205 | 58<br>2.2835   | 29600                | 18200      | 0.67<br>0.64<br>0.63                         |
| GRA209-26<br>RA209-27<br>209-28<br>209              | 1-5/8<br>1-11/16<br>1-3/4          | 45             | 85<br>3.3465         | 22<br>0.8661 | 6.8<br>0.2677 | 11<br>0.4331   | 43.7<br>1.7205 | 30.2<br>1.1890 | 18.3<br>0.7205 | 63.5<br>2.5000 | 31850                | 20800      | 0.77<br>0.73<br>0.69<br>0.68                 |
| GRA210-30<br>RA210-31<br>210                        | 1-7/8<br>1-15/16                   | 50             | 90<br>3.5433         | 22<br>0.8661 | 6.5<br>0.2559 | 11<br>0.4331   | 43.7<br>1.7205 | 30.2<br>1.1890 | 18.3<br>0.7205 | 67.2<br>2.6457 | 35100                | 23200      | 0.77<br>0.73<br>0.71                         |
| GRA211-32<br>RA211-34<br>211<br>211-35              | 2<br>2-1/8<br>2-3/16               | 55             | 100<br>3.9370        | 24<br>0.9449 | 7.2<br>0.2835 | 12<br>0.4724   | 48.4<br>1.9055 | 32.5<br>1.2795 | 20.7<br>0.8150 | 74.5<br>2.9331 | 43550                | 29200      | 1.17<br>1.07<br>1.04<br>1.02                 |
| GRA212-36<br>RA212<br>212-38<br>212-39              | 2-1/4<br>2-3/8<br>2-7/16           | 60             | 110<br>4.3307        | 24<br>0.9449 | 8<br>0.3150   | 13.5<br>0.5315 | 53.1<br>2.0906 | 37.2<br>1.4646 | 22.3<br>0.8780 | 82<br>3.2283   | 47800                | 32800      | 1.41<br>1.31<br>1.30<br>1.24                 |



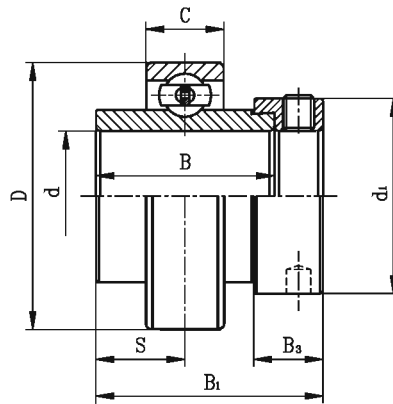
**SA0**  
Eccentric locking collar type



**CSA0**  
Cylindrical O.D. type

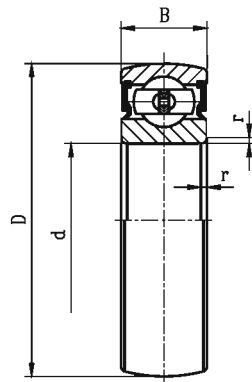
| Unit No.                             | Shaft Dia.               |      | Dimensions(mm)/(in.) |              |                |                |               |                |                | Basic load rating(N) |            | Mass (kg) |
|--------------------------------------|--------------------------|------|----------------------|--------------|----------------|----------------|---------------|----------------|----------------|----------------------|------------|-----------|
|                                      | d                        |      | D                    | C            | B              | B1             | S             | B3             | d1             | Dynamic Cr           | Static Cor |           |
|                                      | (in.)                    | (mm) |                      |              |                |                |               |                |                |                      |            |           |
| SA 004-12<br>004                     | 3/4                      | 20   | 42<br>1.6535         | 12<br>0.4724 | 16.7<br>0.6563 | 24.6<br>0.9688 | 6<br>0.2362   | 11.1<br>0.4375 | 29.8<br>1.1719 | 9380                 | 5020       | 0.09      |
| SA 005-14<br>005-15<br>005<br>005-16 | 7/8<br>15/16<br>1        | 25   | 47<br>1.8504         | 12<br>0.4724 | 17.5<br>0.6875 | 25.4<br>1.0000 | 6<br>0.2362   | 11.9<br>0.4688 | 36.1<br>1.4219 | 10000                | 5850       | 0.12      |
| SA 006-18<br>006<br>006-19<br>006-20 | 1-1/8<br>1-3/16<br>1-1/4 | 30   | 55<br>2.1654         | 13<br>0.5118 | 18.5<br>0.7283 | 26.5<br>1.0433 | 6.5<br>0.2559 | 11.9<br>0.4688 | 42.5<br>1.6719 | 13200                | 8300       | 0.17      |

Note: Prefix "C" -Cylindrical O. D.



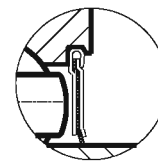
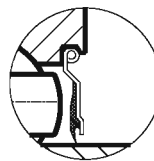
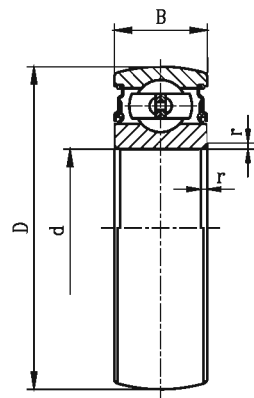
**NAA3**  
Cylindrical O.D., Eccentric locking collar type

| Unit No.                   | Shaft Dia.       |      | Dimensions(mm)/(in.) |                |              |                |                |                |                | Eccentric collar         | Basic load rating(N) |            | Mass (kg)            |
|----------------------------|------------------|------|----------------------|----------------|--------------|----------------|----------------|----------------|----------------|--------------------------|----------------------|------------|----------------------|
|                            | d                |      | D                    | B              | C            | S              | B1             | B3             | d1             |                          | Dynamic Cr           | Static Cor |                      |
|                            | (in.)            | (mm) |                      |                |              |                |                |                |                |                          |                      |            |                      |
| NAA306-18<br>306<br>306-19 | 1-1/8<br>1-3/16  | 30   | 72<br>2.8346         | 36.5<br>1.4370 | 19<br>0.7480 | 17.5<br>0.6890 | 50<br>1.9685   | 17.5<br>0.6890 | 50<br>1.9685   | A306-18<br>306<br>306-19 | 27000                | 15200      | 0.71<br>0.68<br>0.68 |
| NAA310-30<br>310-31<br>310 | 1-7/8<br>1-15/16 | 50   | 110<br>4.3307        | 49.2<br>1.9370 | 27<br>1.0630 | 24.6<br>0.9685 | 66.6<br>2.6220 | 22.2<br>0.8740 | 76.2<br>3.0000 | A310-30<br>310-31<br>310 | 61750                | 37800      | 1.93<br>1.87<br>1.84 |



## CS2 Series

| Unit No. | Dimensions(mm)/(in). |    |    |        | Basic load rating(N) |            | Mass (kg) |
|----------|----------------------|----|----|--------|----------------------|------------|-----------|
|          | d                    | D  | B  | r(min) | Dynamic Cr           | Static Cor |           |
| CS203    | 17                   | 40 | 12 | 0.6    | 9580                 | 4780       | 0.050     |
| CS204    | 20                   | 47 | 14 | 1      | 12800                | 6650       | 0.095     |
| CS205    | 25                   | 52 | 15 | 1      | 14000                | 7880       | 0.11      |
| CS206    | 30                   | 62 | 16 | 1      | 19500                | 11500      | 0.18      |
| CS207    | 35                   | 72 | 17 | 1.1    | 25500                | 15200      | 0.25      |
| CS208    | 40                   | 80 | 18 | 1.1    | 29500                | 18000      | 0.32      |
| CS209    | 45                   | 85 | 19 | 1.1    | 31500                | 20800      | 0.37      |
| CS210    | 50                   | 90 | 20 | 1.1    | 35000                | 23200      | 0.41      |

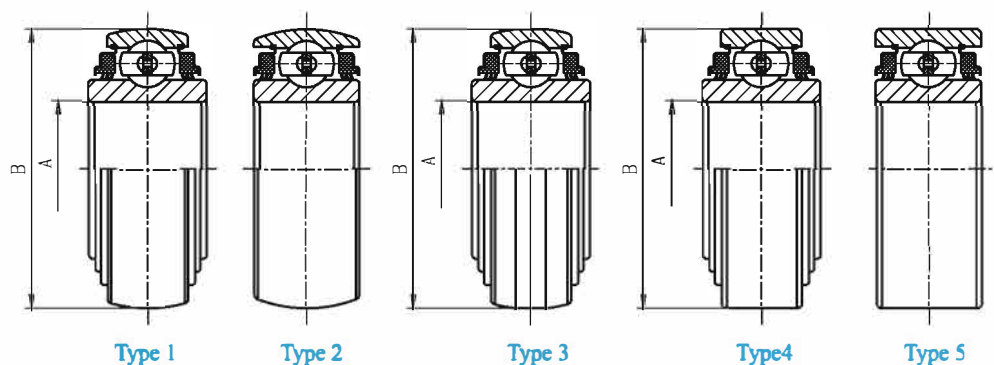


F seal  
(+suffix-F)

## ORAE Series

| Unit No. | Dimensions(mm)/(in). |    |    |        | Basic load rating(N) |            | Mass (kg) |
|----------|----------------------|----|----|--------|----------------------|------------|-----------|
|          | d                    | D  | B  | r(min) | Dynamic Cr           | Static Cor |           |
| ORAE203  | 17                   | 40 | 12 | 0.6    | 9580                 | 4780       | 0.05      |
| ORAE204  | 20                   | 47 | 14 | 0.6    | 12800                | 6650       | 0.095     |
| ORAE205  | 25                   | 52 | 15 | 0.6    | 14000                | 7880       | 0.11      |
| ORAE206  | 30                   | 62 | 18 | 0.6    | 19500                | 11500      | 0.21      |
| ORAE207  | 35                   | 72 | 19 | 1.1    | 25700                | 15200      | 0.29      |
| ORAE208  | 40                   | 80 | 22 | 1.1    | 29500                | 18200      | 0.38      |
| ORAE209  | 45                   | 85 | 22 | 1.1    | 31850                | 20800      | 0.44      |

## Tri-Ply Seal Series Non-Relubricatable type



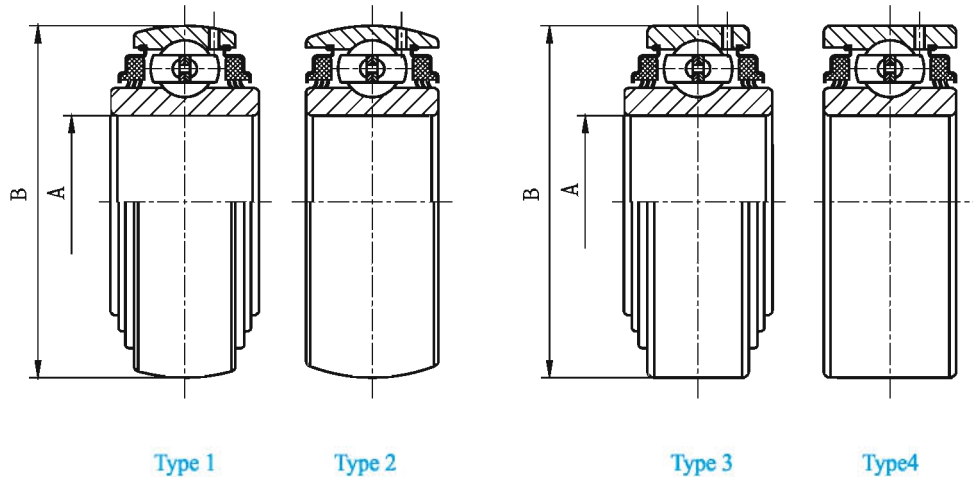
### ROUND BORE

| Unit No.  | Type | Bearing Bore Size |        | Outside Dia. |      | Ring Width |       |            |       |
|-----------|------|-------------------|--------|--------------|------|------------|-------|------------|-------|
|           |      | A                 |        | B            |      | Inner Ring |       | Outer Ring |       |
|           |      | (in.)             | (mm)   | (in.)        | (mm) | (in.)      | (mm)  | (in.)      | (mm)  |
| 205PPB7   | 1    | 0.9375            | 23.813 | 2.0472       | 52   | 1.3748     | 34.92 | 0.591      | 15    |
| W208PPB7  | 1    | 1.1880            | 30.175 | 3.1496       | 80   | 1.189      | 30.2  | 0.709      | 18    |
| W208PP10  | 4    | 1.5005            | 38.113 | 3.1496       | 80   | 1.691      | 42.96 | 0.827      | 21    |
| W208PPB23 | 1    | 1.5005            | 38.113 | 3.1496       | 80   | 1.691      | 42.96 | 1.189      | 30.2  |
| W209PPB2  | 2    | 1.7717            | 45     | 3.3460       | 85   | 1.189      | 30.2  | 1.189      | 30.2  |
| W209PPB4  | 2    | 1.5350            | 39     | 3.3460       | 85   | 1.189      | 30.2  | 1.189      | 30.2  |
| W210PP2   | 5    | 1.9380            | 49.225 | 3.5433       | 90   | 1.189      | 30.2  | 1.189      | 30.2  |
| W210PPB2  | 2    | 1.9380            | 49.225 | 3.5433       | 90   | 1.189      | 30.2  | 1.189      | 30.2  |
| W211PP2   | 5    | 2.1880            | 55.575 | 3.9370       | 100  | 1.313      | 33.34 | 1.313      | 33.34 |
| W211PPB2  | 2    | 2.1880            | 55.575 | 3.9370       | 100  | 1.313      | 33.34 | 1.313      | 33.34 |

### SQUARE BORE

| Bearing No. | Type | Square Shaft Size | Square Bore Size | Outside Dia. |        | Ring Width |       |            |       |
|-------------|------|-------------------|------------------|--------------|--------|------------|-------|------------|-------|
|             |      |                   |                  | B            |        | Inner Ring |       | Outer Ring |       |
|             |      |                   |                  | (in.)        | (mm)   | (in.)      | (mm)  | (in.)      | (mm)  |
| W208PPB13   | 1    | 7/8               | 23.117           | 3.1496       | 80     | 1.437      | 36.5  | 0.709      | 18    |
| W208PPB6    | 1    | 1                 | 26.162           | 3.1496       | 80     | 1.437      | 36.5  | 0.709      | 18    |
| W208PP5     | 4    | 1-1/8             | 29.972           | 3.1496       | 80     | 1.437      | 36.5  | 0.709      | 18    |
| W208PPB5    | 1    | 1-1/8             | 29.972           | 3.1496       | 80     | 1.437      | 36.5  | 0.709      | 18    |
| W208PP8     | 4    | 1-1/8             | 29.972           | 3.1496       | 80     | 1.437      | 36.5  | 1.189      | 30.2  |
| W208PPB8    | 1    | 1-1/8             | 29.972           | 3.1496       | 80     | 1.437      | 36.5  | 1.189      | 30.2  |
| W208PPB11   | 3    | 7/8               | 23.117           | 3.3760       | 85.75  | 1.437      | 36.5  | 1.189      | 30.2  |
| W208PPB12   | 3    | 1-1/8             | 29.972           | 3.3760       | 85.75  | 1.437      | 36.5  | 1.189      | 30.2  |
| W209PPB5    | 1    | 1-1/4             | 32.766           | 3.3460       | 85     | 1.437      | 36.5  | 1.189      | 30.2  |
| W210PP4     | 5    | 1-1/8             | 29.972           | 3.5433       | 90     | 1.189      | 30.2  | 1.189      | 30.2  |
| W210PPB4    | 2    | 1-1/8             | 29.972           | 3.5433       | 90     | 1.189      | 30.2  | 1.189      | 30.2  |
| W211PP3     | 5    | 1-1/2             | 38.89            | 3.9370       | 100    | 1.313      | 33.34 | 1.313      | 33.34 |
| W211PPB3    | 2    | 1-1/2             | 38.89            | 3.9370       | 100    | 1.313      | 33.34 | 1.313      | 33.34 |
| W211PP5     | 4    | 1-1/2             | 38.89            | 4.0000       | 101.6  | 1.750      | 44.45 | 1.438      | 36.52 |
| W211PPB6    | 3    | 1-1/2             | 38.89            | 4.0772       | 103.56 | 1.750      | 44.45 | 1.438      | 36.52 |

## Tri-Ply Seal Series Relubricatable type

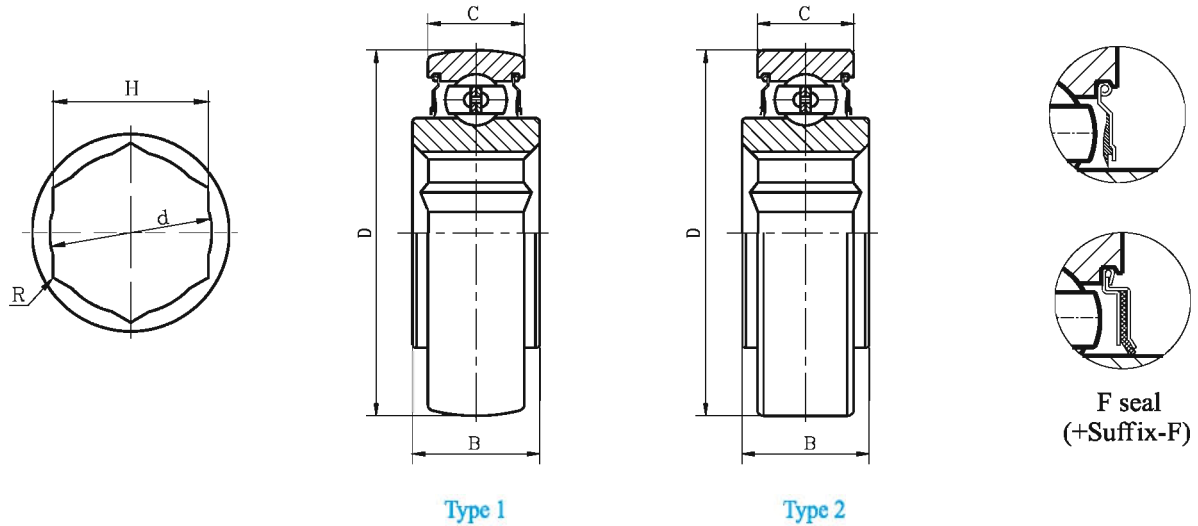


### ROUND BORE

| Unit No.   | Type | Bearing Bore Size |        | Outside Dia. |      | Ring Width |       |            |       |
|------------|------|-------------------|--------|--------------|------|------------|-------|------------|-------|
|            |      | A                 |        | B            |      | Inner Ring |       | Outer Ring |       |
|            |      | (in.)             | (mm)   | (in.)        | (mm) | (in.)      | (mm)  | (in.)      | (mm)  |
| 205PPB7G   | 1    | 0.9375            | 23.813 | 2.0472       | 52   | 1.375      | 34.92 | 0.591      | 15    |
| GW209PPB4  | 2    | 1.5350            | 39     | 3.3465       | 85   | 1.189      | 30.2  | 1.189      | 30.2  |
| GW209PPB2  | 2    | 1.7717            | 45     | 3.3465       | 85   | 1.189      | 30.2  | 1.189      | 30.2  |
| GW209PPB11 | 1    | 1.7810            | 45.24  | 3.3465       | 85   | 1.437      | 36.5  | 0.866      | 22    |
| GW210PPB2  | 2    | 1.9380            | 49.225 | 3.5433       | 90   | 1.189      | 30.2  | 1.189      | 30.2  |
| GW211PPB2  | 2    | 2.1880            | 55.575 | 3.9370       | 100  | 1.313      | 33.34 | 1.313      | 33.34 |

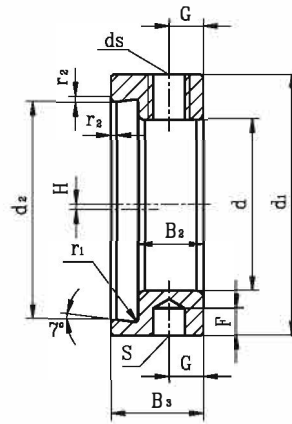
### SQUARE BORE

| Unit No.   | Type | Square Shaft Size | Square Bore Size | Outside Dia. |        | Ring Width |       |            |       |
|------------|------|-------------------|------------------|--------------|--------|------------|-------|------------|-------|
|            |      |                   |                  | B            |        | Inner Ring |       | Outer Ring |       |
|            |      | (in.)             | (mm)             | (in.)        | (mm)   | (in.)      | (mm)  | (in.)      | (mm)  |
| GW208PPB5  | 1    | 1-1/8             | 29.972           | 3.1496       | 80     | 1.437      | 36.5  | 0.827      | 21    |
| GW208PPB8  | 1    | 1-1/8             | 29.972           | 3.1496       | 80     | 1.437      | 36.5  | 1.189      | 30.2  |
| GW208PPB17 | 1    | 1-1/8             | 29.972           | 3.3755       | 85.738 | 1.437      | 36.5  | 1.189      | 30.2  |
| GW209PPB5  | 1    | 1-1/4             | 32.766           | 3.3465       | 85     | 1.437      | 36.5  | 1.189      | 30.2  |
| GW209PPB8  | 1    | 1-1/4             | 32.766           | 3.3465       | 85     | 1.437      | 36.5  | 0.866      | 22    |
| GW210PP4   | 4    | 1-1/8             | 29.972           | 3.5433       | 90     | 1.189      | 30.2  | 1.189      | 30.2  |
| GW210PPB4  | 2    | 1-1/8             | 29.972           | 3.5433       | 90     | 1.189      | 30.2  | 1.189      | 30.2  |
| GW211PP3   | 4    | 1-1/2             | 38.89            | 3.9370       | 100    | 1.313      | 33.34 | 1.313      | 33.34 |
| GW211PPB3  | 2    | 1-1/2             | 38.89            | 3.9370       | 100    | 1.313      | 33.34 | 1.313      | 33.34 |
| GW211PP17  | 3    | 1-1/2             | 38.89            | 3.9370       | 100    | 1.750      | 44.45 | 1.313      | 33.34 |



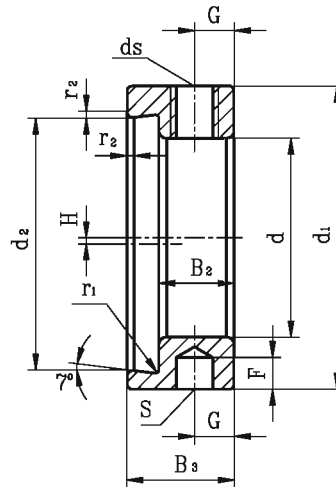
## Hex-bore

| Unit No.     | Type | Dimensions(mm)/(in). |                |               |              |                |              | Basic load rating (N) |            | Mass (kg) |
|--------------|------|----------------------|----------------|---------------|--------------|----------------|--------------|-----------------------|------------|-----------|
|              |      | H                    | d              | R             | D            | B              | C            | Dynamic Cr            | Static Cor |           |
| 205NPPB AH02 | 1    | 22.25<br>0.8760      | 22.7<br>0.8937 | 0.2<br>0.0079 | 52<br>2.0472 | 25.4<br>1.0000 | 15<br>0.5906 | 14000                 | 7880       | 0.20      |
| 206NPPB AH02 | 1    | 22.25<br>0.8760      | 22.7<br>0.8937 | 0.2<br>0.0079 | 62<br>2.4409 | 24<br>0.9449   | 18<br>0.7087 | 19500                 | 11200      | 0.37      |
| 206NPPB AH04 | 1    | 25.43<br>1.0012      | 26<br>1.0236   | 0.2<br>0.0079 | 62<br>2.4409 | 24<br>0.9449   | 18<br>0.7087 | 19500                 | 11200      | 0.35      |
| 207NPPB AH09 | 1    | 28.6<br>1.1260       | 29.4<br>1.1575 | 0.2<br>0.0079 | 72<br>2.8346 | 37.7<br>1.4843 | 17<br>0.6693 | 25700                 | 15200      | 0.48      |
| 207KPP3      | 2    | 31.77<br>1.2508      | 32.5<br>1.2795 | 0.2<br>0.0079 | 72<br>2.8346 | 37.7<br>1.4843 | 17<br>0.6693 | 25700                 | 15200      | 0.45      |
| 207KPP17     | 2    | 28.6<br>1.1260       | 29.4<br>1.1575 | 0.2<br>0.0079 | 72<br>2.8346 | 25<br>0.9843   | 17<br>0.6693 | 25700                 | 15200      | 0.42      |
| 207KPPB3     | 1    | 31.77<br>1.2508      | 32.5<br>1.2795 | 0.2<br>0.0079 | 72<br>2.8346 | 25<br>0.9843   | 17<br>0.6693 | 25700                 | 15200      | 0.40      |



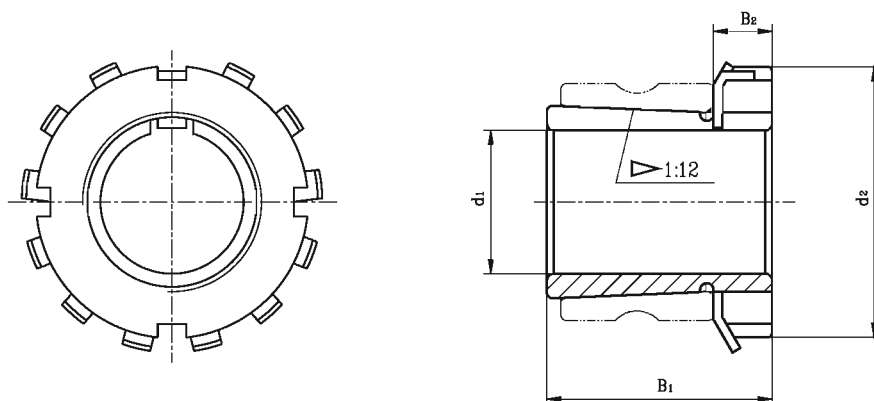
A200

| Unit No.                                                         | Bore Dia of Collar                 |                      | Dimensions(mm)/(in.) |                 |                |                |               |               |               |                |               |                |                         |
|------------------------------------------------------------------|------------------------------------|----------------------|----------------------|-----------------|----------------|----------------|---------------|---------------|---------------|----------------|---------------|----------------|-------------------------|
|                                                                  | d                                  |                      | d1                   | d2              | B2             | B3             | H             | r1            | r2            | G              | F             | S              | ds                      |
|                                                                  | (in.)                              | (mm)                 |                      |                 |                |                |               |               |               |                |               |                |                         |
| A201S<br>201-8S<br>202S<br>202-10S<br>203S<br>203-11S            | 1/2<br>5/8<br>11/16                | 12<br>15<br>17       | 27.2<br>1.0709       | 21.6<br>0.8504  | 9.5<br>0.3740  | 13.5<br>0.5315 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 5<br>0.1969    | 3.5<br>0.1378 | 5<br>0.1969    | M6x1<br>1/4-28UNF       |
| A201<br>201-8<br>202<br>202-10<br>203<br>203-11<br>204-12<br>204 | 1/2<br>5/8<br>11/16<br>3/4         | 12<br>15<br>17<br>20 | 32.4<br>1.2756       | 26.6<br>1.0472  | 9.5<br>0.3740  | 13.5<br>0.5315 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 5<br>0.1969    | 4<br>0.1575   | 5<br>0.1969    | M6x1<br>1/4-28UNF       |
| A205-14<br>205-15<br>205<br>205-16                               | 7/8<br>15/16<br>1                  | 25                   | 37.4<br>1.4724       | 31.6<br>1.2441  | 9.5<br>0.3740  | 13.5<br>0.5315 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 5<br>0.1969    | 4<br>0.1575   | 5<br>0.1969    | M6x1<br>1/4-28 UNF      |
| A206-18<br>206<br>206-19<br>206-20                               | 1-1/8<br>1-3/16<br>1-1/4           | 30                   | 44.1<br>1.7362       | 37.9<br>1.4921  | 11.9<br>0.4685 | 15.9<br>0.6260 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 6<br>0.2362    | 4<br>0.1575   | 7<br>0.2756    | M8x1<br>5/16-24 UNF     |
| A207-20<br>207-21<br>207-22<br>207<br>207-23                     | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35                   | 51.1<br>2.0118       | 44.7<br>1.7598  | 13.5<br>0.5315 | 17.5<br>0.6890 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 6.5<br>0.2559  | 5<br>0.1969   | 7<br>0.2756    | M8x1<br>5/16-24 UNF     |
| A208-24<br>208-25<br>208                                         | 1-1/2<br>1-9/16                    | 40                   | 58<br>2.2835         | 49.4<br>1.9449  | 13.5<br>0.5315 | 18.3<br>0.7205 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 6.5<br>0.2559  | 5<br>0.1969   | 7<br>0.2756    | M8x1<br>5/16-24UNF      |
| A209-26<br>209-27<br>209-28<br>209                               | 1-5/8<br>1-11/16<br>1-3/4          | 45                   | 63.5<br>2.5000       | 54.4<br>2.1417  | 13.5<br>0.5315 | 18.3<br>0.7205 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 6.5<br>0.2559  | 5<br>0.1969   | 7<br>0.2756    | M8x1<br>5/16-24 UNF     |
| A210-30<br>210-31<br>210                                         | 1-7/8<br>1-15/16                   | 50                   | 67.2<br>2.6457       | 59<br>2.3228    | 13.5<br>0.5315 | 18.3<br>0.7205 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 6.5<br>0.2559  | 5<br>0.1969   | 7<br>0.2756    | M8x1<br>5/16-24UNF      |
| A211-32<br>211-34<br>211<br>211-35                               | 2<br>2-1/8<br>2-3/16               | 55                   | 74.5<br>2.9331       | 65.8<br>2.5906  | 15.9<br>0.6260 | 20.7<br>0.8150 | 1.6<br>0.0630 | 0.6<br>0.0236 | 1.2<br>0.0472 | 8<br>0.3150    | 6<br>0.2362   | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF   |
| A212-36<br>212<br>212-38<br>212-39                               | 2-1/4<br>2-3/8<br>2-7/16           | 60                   | 82<br>3.2283         | 71.7<br>2.8228  | 15.9<br>0.6260 | 22.3<br>0.8780 | 1.6<br>0.0630 | 0.6<br>0.0236 | 1.6<br>0.0630 | 8<br>0.3150    | 6<br>0.2362   | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF   |
| A213-40<br>213                                                   | 2-1/2                              | 65                   | 86<br>3.3858         | 79<br>3.1102    | 17.5<br>0.6890 | 23.5<br>0.9252 | 1.6<br>0.0630 | 0.6<br>0.0236 | 1.6<br>0.0630 | 8.5<br>0.3346  | 6<br>0.2362   | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF   |
| A214-44<br>214                                                   | 2-3/4                              | 70                   | 96.8<br>3.8110       | 83.3<br>3.2795  | 17.1<br>0.6732 | 23.5<br>0.9252 | 1.6<br>0.0630 | 0.6<br>0.0236 | 1.6<br>0.0630 | 8.5<br>0.3346  | 6<br>0.2362   | 8.8<br>0.3465  | M10x1.25<br>3/8-24UNF   |
| A215<br>215-48                                                   | 3                                  | 75                   | 102<br>4.0157        | 88<br>3.4646    | 17.5<br>0.6890 | 23.9<br>0.9409 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 8.5<br>0.3346  | 6<br>0.2362   | 8.8<br>0.3465  | M10x1.25<br>3/8-24UNF   |
| A216                                                             |                                    | 80                   | 110<br>4.3307        | 94.6<br>3.7244  | 20.6<br>0.8110 | 27<br>1.0630   | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 10.3<br>0.4055 | 7<br>0.2756   | 10.8<br>0.4252 | M12x1.25                |
| A217-52<br>217                                                   | 3-1/4                              | 85                   | 119<br>4.6850        | 101<br>3.9764   | 20<br>0.7874   | 27<br>1.0630   | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 10<br>0.3937   | 8<br>0.3150   | 10.8<br>0.4252 | M12x1.25<br>7/16-20 UNF |
| A218-56<br>218                                                   | 3-1/2                              | 90                   | 120<br>4.7244        | 105.5<br>4.1535 | 17.5<br>0.6890 | 24<br>0.9449   | 2.4<br>0.0945 | 0.4<br>0.0157 | 1.6<br>0.0630 | 9.5<br>0.3740  | 8<br>0.3150   | 10.8<br>0.4252 | M12x1.25<br>7/16-20 UNF |
| A220                                                             |                                    | 100                  | 139.7<br>5.5000      | 120.2<br>4.7323 | 25.4<br>1.0000 | 31.8<br>1.2519 | 2.4<br>0.0945 | 0.4<br>0.0157 | 2<br>0.0787   | 13<br>0.5118   | 10<br>0.3937  | 14.4<br>0.5669 | M16x1.5                 |



## A300

| Unit No.                                     | Bore Dia of Collar                 |      | Dimensions(mm)/(in). |                 |                |                |               |               |               |                |              |                |                        |
|----------------------------------------------|------------------------------------|------|----------------------|-----------------|----------------|----------------|---------------|---------------|---------------|----------------|--------------|----------------|------------------------|
|                                              | d                                  |      | $d_1$                | $d_2$           | $B_2$          | $B_3$          | $H$           | $r_1$         | $r_2$         | $G$            | $F$          | $S$            | $ds$                   |
|                                              | (in.)                              | (mm) |                      |                 |                |                |               |               |               |                |              |                |                        |
| A305-14<br>305-15<br>305<br>305-16           | 7/8<br>15/16<br>1                  | 25   | 42.8<br>1.6850       | 33.2<br>1.3071  | 11.9<br>0.4685 | 15.9<br>0.6260 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 6<br>0.2362    | 5<br>0.1969  | 7<br>0.2756    | M8x1<br>5/16-24UNF     |
| A306-18<br>306<br>306-19                     | 1-1/8<br>1-3/16                    | 30   | 50<br>1.9685         | 42.4<br>1.6693  | 13.5<br>0.5315 | 17.5<br>0.6890 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 6.7<br>0.2638  | 5<br>0.1969  | 7<br>0.2756    | M8x1<br>5/16-24UNF     |
| A307-20<br>307-21<br>307-22<br>307<br>307-23 | 1-1/4<br>1-5/16<br>1-3/8<br>1-7/16 | 35   | 55<br>2.1654         | 46.7<br>1.8386  | 13.5<br>0.5315 | 17.5<br>0.6890 | 0.8<br>0.0315 | 0.4<br>0.0157 | 0.8<br>0.0315 | 6.7<br>0.2638  | 5<br>0.1969  | 7<br>0.2756    | M8x1<br>5/16-24UNF     |
| A308-24<br>308-25<br>308                     | 1-1/2<br>1-9/16                    | 40   | 63.5<br>2.5000       | 52.7<br>2.0748  | 15.8<br>0.6220 | 20.6<br>0.8110 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 8<br>0.3150    | 6<br>0.2362  | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF  |
| A309-26<br>309-27<br>309-28<br>309           | 1-5/8<br>1-11/16<br>1-3/4          | 45   | 70<br>2.7559         | 58<br>2.2835    | 15.8<br>0.6220 | 20.6<br>0.8110 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 8<br>0.3150    | 6<br>0.2362  | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF  |
| A310-30<br>310-31<br>310                     | 1-7/8<br>1-15/16                   | 50   | 76.2<br>3.0000       | 64.9<br>2.5512  | 17.4<br>0.6850 | 22.2<br>0.8740 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 8.7<br>0.3425  | 6<br>0.2362  | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF  |
| A311-32<br>311-34<br>311<br>311-35           | 2<br>2-1/8<br>2-3/16               | 55   | 83<br>3.2677         | 71.7<br>2.8228  | 17.4<br>0.6850 | 22.2<br>0.8740 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.2<br>0.0472 | 9<br>0.3543    | 6<br>0.2362  | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF  |
| A312-36<br>312<br>312-38<br>312-39           | 2-1/4<br>2-3/8<br>2-7/16           | 60   | 89<br>3.5039         | 76.2<br>3.0000  | 17.5<br>0.6890 | 23.9<br>0.9409 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 9<br>0.3543    | 6<br>0.2362  | 8.4<br>0.3307  | M10x1.25<br>3/8-24UNF  |
| A313-40<br>313                               | 2-1/2                              | 65   | 97<br>3.8189         | 83.7<br>3.2953  | 20.6<br>0.8110 | 27<br>1.0630   | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 11.5<br>0.4528 | 8<br>0.3150  | 10.5<br>0.4134 | M12x1.25<br>7/16-20UNF |
| A314-44<br>314                               | 2-3/4                              | 70   | 102<br>4.0157        | 90.2<br>3.5512  | 23.8<br>0.9370 | 30.2<br>1.1890 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 12<br>0.4724   | 8<br>0.3150  | 10.5<br>0.4134 | M12x1.25<br>7/16-20UNF |
| A315<br>315-48                               | 3                                  | 75   | 113<br>4.4488        | 96.7<br>3.8071  | 25.4<br>1.0000 | 31.8<br>1.2520 | 1.6<br>0.0630 | 0.4<br>0.0157 | 1.6<br>0.0630 | 13<br>0.5118   | 10<br>0.3937 | 14.4<br>0.5669 | M16x1.5<br>5/8-18UNF   |
| A316                                         |                                    | 80   | 119<br>4.6850        | 102.5<br>4.0354 | 25.4<br>1.0000 | 31.8<br>1.2520 | 2.4<br>0.0945 | 0.4<br>0.0157 | 2<br>0.0787   | 13<br>0.5118   | 12<br>0.4724 | 14.4<br>0.5669 | M16x1.5<br>5/8-18UNF   |
| A317-52<br>317                               | 3-1/4                              | 85   | 127<br>5.0000        | 108.1<br>4.2559 | 25.4<br>1.0000 | 31.8<br>1.2520 | 2.4<br>0.0945 | 0.4<br>0.0157 | 2<br>0.0787   | 13<br>0.5118   | 12<br>0.4724 | 14.4<br>0.5669 | M16x1.5<br>5/8-18UNF   |
| A318-56<br>318                               | 3-1/2                              | 90   | 133<br>5.2362        | 114.6<br>4.5118 | 28.6<br>1.1260 | 36.5<br>1.4370 | 2.4<br>0.0945 | 0.4<br>0.0157 | 2<br>0.0787   | 14.5<br>0.5709 | 12<br>0.4724 | 18.4<br>0.7244 | M20x1.5<br>3/4-16UNF   |
| A319<br>319-60                               | 3-3/4                              | 95   | 140<br>5.5118        | 121.1<br>4.7677 | 28.6<br>1.1260 | 36.5<br>1.4370 | 2.4<br>0.0945 | 0.4<br>0.0157 | 2<br>0.0787   | 14.5<br>0.5709 | 12<br>0.4724 | 18.4<br>0.7244 | M20x1.5<br>3/4-16UNF   |
| A320<br>320-64                               | 4                                  | 100  | 146<br>5.7480        | 129.1<br>5.0827 | 28.6<br>1.1260 | 36.5<br>1.4370 | 2.4<br>0.0945 | 0.4<br>0.0157 | 2.5<br>0.0984 | 14.5<br>0.5709 | 12<br>0.4724 | 18.4<br>0.7244 | M20x1.5<br>3/4-16UNF   |



**H2300**

| Adapter<br>No.                      | Inside Dia.of Sleeve      |      | Dimensions(mm)/(in.) |     |    | Sleeve<br>No.                       | Lockunt<br>No. | Washer<br>No. | Mass<br>(kg) |
|-------------------------------------|---------------------------|------|----------------------|-----|----|-------------------------------------|----------------|---------------|--------------|
|                                     | d1                        |      | B1                   | d2  | B2 |                                     |                |               |              |
|                                     | (in.)                     | (mm) |                      |     |    |                                     |                |               |              |
| HE2305<br>H2305                     | 3/4                       | 20   | 35                   | 38  | 8  | AE2305<br>A2305                     | KM05           | MB05          | 0.09         |
| HS2306<br>HA2306<br>H2306<br>HE2306 | 7/8<br>15/16<br>1         | 25   | 38                   | 45  | 8  | AS2306<br>AA2306<br>A2306<br>AE2306 | KM06           | MB06          | 0.13         |
| HS2307<br>H2307<br>HA2307           | 1-1/8<br>1-3/16           | 30   | 43                   | 52  | 9  | AS2307<br>A2307<br>AA2307           | KM07           | MB07          | 0.17         |
| HE2308<br>HS2308<br>H2308           | 1-1/4<br>1-3/8            | 35   | 46                   | 58  | 10 | AE2308<br>AS2308<br>A2308           | KM08           | MB08          | 0.22         |
| HA2309<br>HE2309<br>H2309           | 1-7/16<br>1-1/2           | 40   | 50                   | 65  | 11 | AA2309<br>AE2309<br>A2309           | KM09           | MB09          | 0.28         |
| HS2310<br>HA2310<br>HE2310<br>H2310 | 1-5/8<br>1-11/16<br>1-3/4 | 45   | 55                   | 70  | 12 | AS2310<br>AA2310<br>AE2310<br>A2310 | KM10           | MB10          | 0.36         |
| HS2311<br>HA2311<br>H2311<br>HE2311 | 1-7/8<br>1-15/16<br>2     | 50   | 59                   | 75  | 12 | AS2311<br>AA2311<br>A2311<br>AE2311 | KM11           | MB11          | 0.42         |
| HS2312<br>H2312                     | 2-1/8                     | 55   | 62                   | 80  | 13 | AS2312<br>A2312                     | KM12           | MB12          | 0.48         |
| HA2313<br>HE2313<br>H2313<br>HS2313 | 2-3/16<br>2-1/4<br>2-3/8  | 60   | 65                   | 85  | 14 | AA2313<br>AE2313<br>A2313<br>AS2313 | KM13           | MB13          | 0.55         |
| HA2315<br>HE2315<br>H2315           | 2-7/16<br>2-1/2           | 65   | 73                   | 98  | 15 | AA2315<br>AE2315<br>A2315           | KM15           | MB15          | 1.05         |
| HA2316<br>HE2316<br>H2316           | 2-11/16<br>2-3/4          | 70   | 78                   | 105 | 17 | AA2316<br>AE2316<br>A2316           | KM16           | MB16          | 1.30         |
| HA2317<br>H2317<br>HE2317           | 2-15/16<br>3              | 75   | 82                   | 110 | 18 | AA2317<br>A2317<br>AE2317           | KM17           | MB17          | 1.45         |
| H2318                               |                           | 80   | 86                   | 120 | 18 | A2318                               | KM18           | MB18          | 1.70         |
| HE2319<br>H2319                     | 3-1/4                     | 85   | 90                   | 125 | 19 | AE2319<br>A2319                     | KM19           | MB19          | 1.90         |
| HE2320<br>H2320                     | 3-1/2                     | 90   | 97                   | 130 | 20 | AE2320<br>A2320                     | KM20           | MB20          | 2.15         |
| H2322                               |                           | 100  | 105                  | 145 | 21 | A2322                               | KM22           | MB22          | 2.75         |
| H2324                               |                           | 110  | 112                  | 155 | 22 | A2324                               | KM24           | MB24          | 3.20         |
| H2326                               |                           | 115  | 121                  | 165 | 23 | A2326                               | KM26           | MB26          | 4.60         |
| H2328                               |                           | 125  | 131                  | 180 | 24 | A2328                               | KM28           | MB28          | 5.55         |



## APPENDICES

### Conversion factors for British and S.I.Units

| Quantity | Conversions                                                                                 |
|----------|---------------------------------------------------------------------------------------------|
| Mass     | 1 lb = 0.4536kg<br>1 kg = 2.205lb                                                           |
| Force    | 1 lbf = 4.448N<br>1 N = 0.2248lbf                                                           |
| Torque   | 1 lbf.ft = 1.3558N.m<br>1 lbf.in = 0.1130N.m<br>1 N.m = 0.7376lbf.ft<br>1 N.m = 8.850lbf.in |

### Metric-inch conversion table

| mm | 0       | 10      | 20      | 30      | 40      | 50       | 60      | 70      | 80      | 90      |
|----|---------|---------|---------|---------|---------|----------|---------|---------|---------|---------|
| 0  | inches  | 0.39370 | 0.78740 | 1.18110 | 1.57480 | 1.96850  | 2.36220 | 2.75591 | 3.14961 | 3.54331 |
| 1  | 0.03937 | 0.43307 | 0.82677 | 1.22047 | 1.61417 | 2.00787  | 2.40157 | 2.79528 | 3.18898 | 3.58268 |
| 2  | 0.07874 | 0.47244 | 0.86614 | 1.25984 | 1.65354 | 2.04724  | 2.44094 | 2.83465 | 3.22835 | 3.62205 |
| 3  | 0.11811 | 0.51181 | 0.90551 | 1.29921 | 1.69291 | 2.08661  | 2.48031 | 2.87402 | 3.26772 | 3.66142 |
| 4  | 0.15748 | 0.55118 | 0.94488 | 1.33858 | 1.73228 | 2.12598  | 2.51969 | 2.91339 | 3.30709 | 3.70079 |
| 5  | 0.19685 | 0.59055 | 0.98425 | 1.37795 | 1.77165 | 2.16535  | 2.55906 | 2.95276 | 3.34646 | 3.74016 |
| 6  | 0.23622 | 0.62992 | 1.02362 | 1.41732 | 1.81102 | 2.20472  | 2.59843 | 2.99213 | 3.38583 | 3.77953 |
| 7  | 0.27559 | 0.66929 | 1.06299 | 1.45669 | 1.85039 | 2.24409  | 2.63780 | 3.03150 | 3.42520 | 3.81890 |
| 8  | 0.31496 | 0.70866 | 1.10236 | 1.49606 | 1.88976 | 2.28346  | 2.67717 | 3.07087 | 3.46457 | 3.85827 |
| 9  | 0.35433 | 0.74803 | 1.14173 | 1.53543 | 1.92913 | 2.32283  | 2.71653 | 3.11024 | 3.50394 | 3.89764 |
| mm | 0       | 100     | 200     | 300     |         |          |         |         |         |         |
| 0  | inches  | 3.93701 | 7.87402 | 11.8110 |         |          |         |         |         |         |
| 5  | 0.19685 | 4.13386 | 8.07087 | 12.0079 |         |          |         |         |         |         |
| 10 | 0.39370 | 4.33071 | 8.26772 | 12.2047 |         |          |         |         |         |         |
| 15 | 0.59055 | 4.52756 | 8.46457 | 12.4016 |         |          |         |         |         |         |
| 20 | 0.78740 | 4.72441 | 8.66142 | 12.5984 |         |          |         |         |         |         |
|    |         |         |         |         | mm      | inches   | mm      | inches  | mm      | inches  |
| 25 | 0.98425 | 4.92126 | 8.85827 | 12.7953 |         |          |         |         |         |         |
| 30 | 1.18110 | 5.11811 | 9.05512 | 12.9921 | 0.001   | 0.000039 | 0.01    | 0.00039 | 0.1     | 0.00394 |
| 35 | 1.37795 | 8.31496 | 9.25197 | 13.1890 | 0.002   | 0.000079 | 0.02    | 0.00079 | 0.2     | 0.00787 |
| 40 | 1.57480 | 5.51181 | 9.44882 | 13.3858 | 0.003   | 0.000118 | 0.03    | 0.00118 | 0.3     | 0.01181 |
| 45 | 1.77165 | 5.70866 | 9.64567 | 13.5827 | 0.004   | 0.000157 | 0.04    | 0.00157 | 0.4     | 0.01575 |
|    |         |         |         |         | 0.005   | 0.000197 | 0.05    | 0.00197 | 0.5     | 0.01969 |
| 50 | 1.96850 | 5.90551 | 9.84252 | 13.7795 |         |          |         |         |         |         |
| 55 | 2.16535 | 6.10236 | 10.0394 | 13.9764 | 0.006   | 0.000236 | 0.06    | 0.00236 | 0.6     | 0.02362 |
| 60 | 2.36220 | 6.29921 | 10.2362 | 14.1732 | 0.007   | 0.000276 | 0.07    | 0.00276 | 0.7     | 0.02756 |
| 65 | 2.55906 | 6.49606 | 10.4331 | 14.3701 | 0.008   | 0.000315 | 0.08    | 0.00315 | 0.8     | 0.03150 |
| 70 | 2.75591 | 6.69291 | 10.6299 | 14.5669 | 0.009   | 0.000354 | 0.09    | 0.00354 | 0.9     | 0.03543 |
| 75 | 2.95276 | 6.88976 | 10.8268 | 14.7638 |         |          |         |         |         |         |
| 80 | 3.14961 | 7.09661 | 11.0236 | 14.9606 |         |          |         |         |         |         |
| 85 | 3.34646 | 7.28346 | 11.2205 | 15.1575 |         |          |         |         |         |         |
| 90 | 3.54331 | 7.48031 | 11.4173 | 15.3543 |         |          |         |         |         |         |
| 95 | 3.74016 | 7.67716 | 11.6142 | 15.5512 |         |          |         |         |         |         |



# APPENDICES

inch-mm Conversion table

1" = 25.4mm

| inch     |          | 0      | 1      | 2      | 3       | 4       | 5       | 6       | 7       | 8       | 9       | 10      |
|----------|----------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|
| Fraction | Decimal  | mm     |        |        |         |         |         |         |         |         |         |         |
| 0        | 0.000000 | 0.000  | 25.400 | 50.800 | 76.200  | 101.600 | 127.000 | 152.400 | 177.800 | 203.200 | 228.600 | 254.000 |
| 1/64     | 0.015625 | 0.397  | 25.797 | 51.197 | 76.597  | 101.997 | 127.397 | 152.797 | 178.197 | 203.597 | 228.997 | 254.397 |
| 1/32     | 0.031250 | 0.794  | 26.194 | 51.594 | 76.994  | 102.394 | 127.794 | 153.194 | 178.594 | 203.994 | 229.394 | 254.794 |
| 3/64     | 0.046875 | 1.191  | 26.591 | 51.991 | 77.391  | 102.791 | 128.191 | 153.591 | 178.991 | 204.391 | 229.791 | 255.191 |
| 1/16     | 0.062500 | 1.588  | 26.988 | 52.388 | 77.788  | 103.188 | 128.588 | 153.988 | 179.388 | 204.788 | 230.188 | 255.588 |
| 5/64     | 0.078125 | 1.984  | 27.384 | 52.784 | 78.184  | 103.584 | 128.984 | 154.384 | 179.784 | 205.184 | 230.584 | 255.984 |
| 3/32     | 0.093750 | 2.381  | 27.781 | 53.181 | 78.581  | 103.981 | 129.381 | 154.781 | 180.181 | 205.581 | 230.981 | 256.381 |
| 7/64     | 0.109375 | 2.778  | 28.178 | 53.578 | 78.978  | 104.378 | 129.778 | 155.178 | 180.578 | 205.978 | 231.378 | 256.778 |
| 1/8      | 0.125000 | 3.175  | 28.575 | 53.975 | 79.375  | 104.775 | 130.175 | 155.575 | 180.975 | 206.375 | 231.775 | 257.175 |
| 9/64     | 0.140625 | 3.572  | 28.972 | 54.372 | 79.772  | 105.172 | 130.572 | 155.972 | 181.372 | 206.772 | 232.172 | 257.572 |
| 5/32     | 0.156250 | 3.969  | 29.369 | 54.769 | 80.169  | 105.569 | 130.969 | 156.369 | 181.769 | 207.169 | 232.569 | 257.969 |
| 11/64    | 0.171875 | 4.366  | 29.766 | 55.166 | 80.566  | 105.966 | 131.366 | 156.766 | 182.166 | 207.566 | 232.966 | 258.366 |
| 3/16     | 0.187500 | 4.762  | 30.163 | 55.563 | 80.963  | 106.363 | 131.763 | 157.163 | 182.563 | 207.963 | 233.363 | 258.763 |
| 13/64    | 0.203125 | 5.159  | 30.559 | 55.959 | 81.359  | 106.759 | 132.159 | 157.559 | 182.959 | 208.359 | 233.759 | 259.159 |
| 7/32     | 0.218750 | 5.556  | 30.956 | 56.356 | 81.756  | 107.156 | 132.556 | 157.956 | 183.356 | 208.756 | 234.156 | 259.556 |
| 15/64    | 0.234375 | 5.953  | 31.353 | 56.753 | 82.153  | 107.553 | 132.953 | 158.353 | 183.753 | 209.153 | 234.553 | 259.953 |
| 1/4      | 0.250000 | 6.350  | 31.750 | 57.150 | 82.550  | 107.950 | 133.350 | 158.750 | 184.150 | 209.550 | 234.950 | 260.350 |
| 17/64    | 0.265625 | 6.747  | 32.147 | 57.547 | 82.947  | 108.347 | 133.747 | 159.147 | 184.547 | 209.947 | 235.347 | 260.747 |
| 9/32     | 0.281250 | 7.144  | 32.544 | 57.944 | 83.344  | 108.744 | 134.144 | 159.544 | 184.944 | 210.344 | 235.744 | 261.144 |
| 19/64    | 0.296875 | 7.541  | 32.941 | 58.341 | 83.741  | 109.141 | 134.541 | 159.941 | 185.341 | 210.741 | 236.141 | 261.541 |
| 5/16     | 0.312500 | 7.938  | 33.338 | 58.738 | 84.138  | 109.538 | 134.938 | 160.338 | 185.738 | 211.138 | 236.538 | 261.938 |
| 21/64    | 0.328125 | 8.334  | 33.734 | 59.134 | 84.534  | 109.934 | 135.334 | 160.734 | 186.134 | 211.534 | 236.934 | 262.334 |
| 11/32    | 0.343750 | 8.731  | 34.131 | 59.531 | 84.931  | 110.331 | 135.731 | 161.131 | 186.531 | 211.931 | 237.331 | 262.731 |
| 23/64    | 0.359375 | 9.128  | 34.528 | 59.928 | 85.328  | 110.728 | 136.128 | 161.528 | 186.928 | 212.328 | 237.728 | 263.128 |
| 3/8      | 0.375000 | 9.525  | 34.925 | 60.325 | 85.725  | 111.125 | 136.525 | 161.925 | 187.325 | 212.725 | 238.125 | 263.525 |
| 25/64    | 0.390625 | 9.922  | 35.322 | 60.722 | 86.122  | 111.522 | 136.922 | 162.322 | 187.722 | 213.122 | 238.522 | 263.922 |
| 13/32    | 0.406250 | 10.319 | 35.719 | 61.119 | 86.519  | 111.919 | 137.319 | 162.719 | 188.119 | 213.519 | 238.919 | 264.319 |
| 27/64    | 0.421875 | 10.716 | 36.116 | 61.516 | 86.916  | 112.316 | 137.716 | 163.116 | 188.516 | 213.916 | 239.316 | 264.716 |
| 7/16     | 0.437500 | 11.113 | 36.513 | 61.913 | 87.313  | 112.713 | 138.113 | 163.513 | 188.913 | 214.313 | 239.713 | 265.113 |
| 29/64    | 0.453125 | 11.509 | 36.909 | 62.309 | 87.709  | 113.109 | 138.509 | 163.909 | 189.309 | 214.709 | 240.109 | 265.509 |
| 15/32    | 0.468750 | 11.906 | 37.306 | 62.706 | 88.106  | 113.506 | 138.906 | 164.306 | 189.706 | 215.106 | 240.506 | 265.906 |
| 31/64    | 0.484375 | 12.303 | 37.703 | 63.103 | 88.503  | 113.903 | 139.303 | 164.703 | 190.103 | 215.503 | 240.903 | 266.303 |
| 1/2      | 0.500000 | 12.700 | 38.100 | 63.500 | 88.900  | 114.300 | 139.700 | 165.100 | 190.500 | 215.900 | 241.300 | 266.700 |
| 33/64    | 0.515625 | 13.097 | 38.497 | 63.897 | 89.297  | 114.697 | 140.097 | 165.497 | 190.897 | 216.297 | 241.697 | 267.097 |
| 17/32    | 0.531250 | 13.494 | 38.894 | 64.294 | 89.694  | 115.094 | 140.494 | 165.894 | 191.294 | 216.694 | 242.094 | 267.494 |
| 35/64    | 0.546875 | 13.891 | 39.291 | 64.691 | 90.091  | 115.491 | 140.891 | 166.291 | 191.691 | 217.091 | 242.491 | 267.891 |
| 9/16     | 0.562500 | 14.288 | 39.688 | 65.088 | 90.488  | 115.888 | 141.288 | 166.688 | 192.088 | 217.488 | 242.888 | 268.288 |
| 37/64    | 0.578125 | 14.684 | 40.084 | 65.484 | 90.884  | 116.284 | 141.684 | 167.084 | 192.484 | 217.884 | 243.284 | 268.684 |
| 19/32    | 0.593750 | 15.081 | 40.481 | 65.881 | 91.281  | 116.681 | 142.081 | 167.481 | 192.881 | 218.281 | 243.681 | 269.081 |
| 39/64    | 0.609375 | 15.478 | 40.878 | 66.278 | 91.678  | 117.078 | 142.478 | 167.878 | 193.278 | 218.678 | 244.078 | 269.478 |
| 5/8      | 0.625000 | 15.875 | 41.275 | 66.675 | 92.075  | 117.475 | 142.875 | 168.275 | 193.675 | 219.075 | 244.475 | 269.875 |
| 41/64    | 0.640625 | 16.272 | 41.672 | 67.072 | 92.472  | 117.872 | 143.272 | 168.672 | 194.072 | 219.472 | 244.872 | 270.272 |
| 21/32    | 0.656250 | 16.669 | 42.069 | 67.469 | 92.869  | 118.269 | 143.669 | 169.069 | 194.469 | 219.869 | 245.269 | 270.669 |
| 43/64    | 0.671875 | 17.066 | 42.466 | 67.866 | 93.266  | 118.666 | 144.066 | 169.466 | 194.866 | 220.266 | 245.666 | 271.066 |
| 11/16    | 0.687500 | 17.463 | 42.863 | 68.263 | 93.663  | 119.063 | 144.463 | 169.863 | 195.263 | 220.663 | 246.063 | 271.463 |
| 45/64    | 0.703125 | 17.859 | 43.259 | 68.659 | 94.059  | 119.459 | 144.859 | 170.259 | 195.659 | 221.059 | 246.459 | 271.859 |
| 23/32    | 0.718750 | 18.256 | 43.656 | 69.056 | 94.456  | 119.856 | 145.256 | 170.656 | 196.056 | 221.456 | 246.856 | 272.256 |
| 47/64    | 0.734375 | 18.653 | 44.053 | 69.453 | 94.853  | 120.253 | 145.653 | 171.053 | 196.453 | 221.853 | 247.253 | 272.653 |
| 3/4      | 0.750000 | 19.050 | 44.450 | 69.850 | 95.250  | 120.650 | 146.050 | 171.450 | 196.850 | 222.250 | 247.650 | 273.050 |
| 49/64    | 0.765625 | 19.447 | 44.847 | 70.247 | 95.647  | 121.047 | 146.447 | 171.847 | 197.247 | 222.647 | 248.047 | 273.447 |
| 25/32    | 0.781250 | 19.844 | 45.244 | 70.644 | 96.044  | 121.444 | 146.844 | 172.244 | 197.644 | 223.044 | 248.444 | 273.844 |
| 51/64    | 0.796875 | 20.241 | 45.641 | 71.041 | 96.441  | 121.841 | 147.241 | 172.641 | 198.041 | 223.441 | 248.841 | 274.241 |
| 13/16    | 0.812500 | 20.638 | 46.038 | 71.438 | 96.838  | 122.238 | 147.638 | 173.038 | 198.438 | 223.838 | 249.238 | 274.638 |
| 53/64    | 0.828125 | 21.034 | 46.434 | 71.834 | 97.234  | 122.634 | 148.034 | 173.434 | 198.834 | 224.234 | 249.634 | 275.034 |
| 27/32    | 0.843750 | 21.431 | 46.831 | 72.231 | 97.631  | 123.031 | 148.431 | 173.831 | 199.231 | 224.631 | 250.031 | 275.431 |
| 55/64    | 0.859375 | 21.828 | 47.228 | 72.628 | 98.028  | 123.428 | 148.828 | 174.228 | 199.628 | 225.028 | 250.428 | 275.828 |
| 7/8      | 0.875000 | 22.225 | 47.625 | 73.025 | 98.425  | 123.825 | 149.225 | 174.625 | 200.025 | 225.425 | 250.825 | 276.225 |
| 57/64    | 0.890625 | 22.622 | 48.022 | 73.422 | 98.822  | 124.222 | 149.622 | 175.022 | 200.422 | 225.822 | 251.222 | 276.622 |
| 29/32    | 0.906250 | 23.019 | 48.419 | 73.819 | 99.219  | 124.619 | 150.019 | 175.419 | 200.819 | 226.219 | 251.619 | 277.019 |
| 59/64    | 0.921875 | 23.416 | 48.816 | 74.216 | 99.616  | 125.016 | 150.416 | 175.816 | 201.216 | 226.616 | 252.016 | 277.416 |
| 15/16    | 0.937500 | 23.813 | 49.213 | 74.613 | 100.013 | 125.413 | 150.813 | 176.213 | 201.613 | 227.013 | 252.413 | 277.813 |
| 61/64    | 0.953125 | 24.209 | 49.609 | 75.009 | 100.409 | 125.809 | 151.209 | 176.609 | 202.009 | 227.409 | 252.809 | 278.209 |
| 31/32    | 0.968750 | 24.606 | 50.006 | 75.406 | 100.806 | 126.206 | 151.606 | 177.006 | 202.406 | 227.806 | 253.206 | 278.606 |
| 63/64    | 0.984375 | 25.003 | 50.403 | 75.803 | 101.203 | 126.603 | 152.003 | 177.403 | 202.803 | 228.203 | 253.603 | 279.003 |

Temperature conversion table

$$C = \frac{5}{9}(F-32)$$

$$F = 32 + \frac{9}{5}C$$

| °C     |       | °F      | °C   |    | °F    | °C   |     | °F    | °C    |       | °F   |
|--------|-------|---------|------|----|-------|------|-----|-------|-------|-------|------|
| - 73.3 | - 100 | - 148.0 | 0.0  | 32 | 89.6  | 21.7 | 71  | 159.8 | 43.3  | 110   | 230  |
| - 62.2 | - 80  | - 112.0 | 0.6  | 33 | 91.4  | 22.2 | 72  | 161.6 | 46.1  | 115   | 239  |
| - 51.1 | - 60  | - 76.0  | 1.1  | 34 | 93.2  | 22.8 | 73  | 163.4 | 48.9  | 120   | 248  |
| - 40.0 | - 40  | - 40.0  | 1.7  | 35 | 95.0  | 23.3 | 74  | 165.2 | 51.7  | 125   | 257  |
| - 34.4 | - 30  | - 22.0  | 2.2  | 36 | 96.8  | 23.9 | 75  | 167.0 | 54.4  | 130   | 266  |
| - 28.9 | - 20  | - 4.0   | 2.8  | 37 | 98.6  | 24.4 | 76  | 168.8 | 57.2  | 135   | 275  |
| - 23.3 | - 10  | 14.0    | 3.3  | 38 | 100.4 | 25.0 | 77  | 170.6 | 60.0  | 140   | 284  |
| - 17.8 | 0     | 32.0    | 3.9  | 39 | 102.2 | 25.6 | 78  | 172.4 | 65.6  | 150   | 302  |
| - 17.2 | 1     | 33.8    | 4.4  | 40 | 104.0 | 26.1 | 79  | 174.2 | 71.1  | 160   | 320  |
| - 16.7 | 2     | 35.6    | 5.0  | 41 | 105.8 | 26.7 | 80  | 176.0 | 76.7  | 170   | 338  |
| - 16.1 | 3     | 37.4    | 5.6  | 42 | 107.6 | 27.2 | 81  | 177.8 | 82.2  | 180   | 356  |
| - 15.6 | 4     | 39.2    | 6.1  | 43 | 109.4 | 27.8 | 82  | 179.6 | 87.8  | 190   | 374  |
| - 15.0 | 5     | 41.0    | 6.7  | 44 | 111.2 | 28.3 | 83  | 181.4 | 93.3  | 200   | 392  |
| - 14.4 | 6     | 42.8    | 7.2  | 45 | 113.0 | 28.9 | 84  | 183.2 | 98.9  | 210   | 410  |
| - 13.9 | 7     | 44.6    | 7.8  | 46 | 114.8 | 29.4 | 85  | 185.0 | 104.4 | 220   | 428  |
| - 13.3 | 8     | 46.4    | 8.3  | 47 | 116.6 | 30.0 | 86  | 186.8 | 110.0 | 230   | 446  |
| - 12.8 | 9     | 48.2    | 8.9  | 48 | 118.4 | 30.6 | 87  | 188.6 | 115.6 | 240   | 464  |
| - 12.2 | 10    | 50.0    | 9.4  | 49 | 120.2 | 31.1 | 88  | 190.4 | 121.1 | 250   | 482  |
| - 11.7 | 11    | 51.8    | 10.0 | 50 | 122.0 | 31.7 | 89  | 192.2 | 148.9 | 300   | 572  |
| - 11.1 | 12    | 53.6    | 10.6 | 51 | 123.8 | 32.2 | 90  | 194.0 | 176.7 | 350   | 662  |
| - 10.6 | 13    | 55.4    | 11.1 | 52 | 125.6 | 32.8 | 91  | 195.8 | 204   | 400   | 752  |
| - 10.0 | 14    | 57.2    | 11.7 | 53 | 127.4 | 33.3 | 92  | 197.6 | 232   | 450   | 842  |
| - 9.4  | 15    | 59.0    | 12.2 | 54 | 129.2 | 33.9 | 93  | 199.4 | 260   | 500   | 932  |
| - 8.9  | 16    | 60.8    | 12.8 | 55 | 131.0 | 34.4 | 94  | 201.2 | 288   | 550   | 1022 |
| - 8.3  | 17    | 62.6    | 13.3 | 56 | 132.8 | 35.0 | 95  | 203.0 | 316   | 600   | 1112 |
| - 7.8  | 18    | 64.4    | 13.9 | 57 | 134.6 | 35.6 | 96  | 204.8 | 343   | 650   | 1202 |
| - 7.2  | 19    | 66.2    | 14.4 | 58 | 136.4 | 36.1 | 97  | 206.6 | 371   | 700   | 1292 |
| - 6.7  | 20    | 68.0    | 15.0 | 59 | 138.2 | 36.7 | 98  | 208.4 | 399   | 750   | 1382 |
| - 6.1  | 21    | 69.8    | 15.6 | 60 | 140.0 | 37.2 | 99  | 210.2 | 427   | 800   | 1472 |
| - 5.6  | 22    | 71.6    | 16.1 | 61 | 141.8 | 37.8 | 100 | 212.0 | 454   | 850   | 1562 |
| - 5.0  | 23    | 73.4    | 16.7 | 62 | 143.6 | 38.3 | 101 | 213.8 | 482   | 900   | 1652 |
| - 4.4  | 24    | 75.2    | 17.2 | 63 | 145.4 | 38.9 | 102 | 215.6 | 510   | 950   | 1742 |
| - 3.9  | 25    | 77.0    | 17.8 | 64 | 147.2 | 39.4 | 103 | 217.4 | 538   | 1 000 | 1832 |
| - 3.3  | 26    | 78.8    | 18.3 | 65 | 149.0 | 40.0 | 104 | 219.2 | 593   | 1 100 | 2012 |
| - 2.8  | 27    | 80.6    | 18.9 | 66 | 150.8 | 40.6 | 105 | 221.0 | 649   | 1 200 | 2192 |
| - 2.2  | 28    | 82.4    | 19.4 | 67 | 152.6 | 41.1 | 106 | 222.8 | 704   | 1 300 | 2372 |
| - 1.7  | 29    | 84.2    | 20.0 | 68 | 154.4 | 41.7 | 107 | 224.6 | 760   | 1 400 | 2552 |
| - 1.1  | 30    | 86.0    | 20.6 | 69 | 156.2 | 42.2 | 108 | 226.4 | 816   | 1 500 | 2732 |
| - 0.6  | 31    | 87.8    | 21.1 | 70 | 158.0 | 42.8 | 109 | 228.2 | 871   | 1 600 | 2912 |

(Method of using this table) for example, to convert 38° C into °F, read the figure in the right °F column adjacent to the 38 in the center column in the 2nd block. This means that 38° is 100.4 °F. To convert 38 °F into °C, read the figure in the left °C column of the same row, which indicates that the answer is 3.3 °C.

## Kgf-N Conversion table

1 kgf = 9.80665 N  
1 N = 0.101972 kgf

| kgf    |    | N      | kgf    |    | N      | kgf     |    | N      |
|--------|----|--------|--------|----|--------|---------|----|--------|
| 0.1020 | 1  | 9.8066 | 3.4670 | 34 | 333.43 | 6.8321  | 67 | 657.04 |
| 0.2039 | 2  | 19.613 | 3.5690 | 35 | 343.23 | 6.9341  | 68 | 666.85 |
| 0.3059 | 3  | 29.420 | 3.6710 | 36 | 353.04 | 7.0361  | 69 | 676.66 |
| 0.4079 | 4  | 39.227 | 3.7730 | 37 | 362.85 | 7.1380  | 70 | 686.46 |
| 0.5099 | 5  | 49.033 | 3.8749 | 38 | 372.65 | 7.2400  | 71 | 696.27 |
| 0.6118 | 6  | 58.840 | 3.9769 | 39 | 382.46 | 7.3420  | 72 | 706.08 |
| 0.7138 | 7  | 68.646 | 4.0789 | 40 | 392.27 | 7.4440  | 73 | 715.88 |
| 0.8158 | 8  | 78.453 | 4.1808 | 41 | 402.07 | 7.5459  | 74 | 725.69 |
| 0.9177 | 9  | 88.260 | 4.2828 | 42 | 411.88 | 7.6479  | 75 | 735.50 |
| 1.0197 | 10 | 98.066 | 4.3848 | 43 | 421.68 | 7.7499  | 76 | 745.30 |
| 1.1217 | 11 | 107.87 | 4.4868 | 44 | 431.49 | 7.8518  | 77 | 755.11 |
| 1.2237 | 12 | 117.68 | 4.5887 | 45 | 441.30 | 7.9538  | 78 | 764.92 |
| 1.3256 | 13 | 127.49 | 4.6907 | 46 | 451.10 | 8.0558  | 79 | 774.72 |
| 1.4276 | 14 | 137.29 | 4.7927 | 47 | 460.91 | 8.1578  | 80 | 784.53 |
| 1.5296 | 15 | 147.10 | 4.8946 | 48 | 470.72 | 8.2597  | 81 | 794.34 |
| 1.6316 | 16 | 156.91 | 4.9966 | 49 | 480.52 | 8.3617  | 82 | 804.14 |
| 1.7335 | 17 | 166.71 | 5.0986 | 50 | 490.33 | 8.4637  | 83 | 813.95 |
| 1.8355 | 18 | 176.52 | 5.2006 | 51 | 500.14 | 8.5656  | 84 | 823.76 |
| 1.9375 | 19 | 186.33 | 5.3025 | 52 | 509.94 | 8.6676  | 85 | 833.56 |
| 2.0394 | 20 | 196.13 | 5.4045 | 53 | 519.75 | 8.7696  | 86 | 843.37 |
| 2.1414 | 21 | 205.94 | 5.5065 | 54 | 529.56 | 8.8716  | 87 | 853.18 |
| 2.2434 | 22 | 215.75 | 5.6085 | 55 | 539.36 | 8.9735  | 88 | 862.98 |
| 2.3454 | 23 | 225.55 | 5.7104 | 56 | 549.17 | 9.0755  | 89 | 872.79 |
| 2.4473 | 24 | 235.36 | 5.8124 | 57 | 558.98 | 9.1775  | 90 | 882.60 |
| 2.5493 | 25 | 245.17 | 5.9144 | 58 | 568.78 | 9.2794  | 91 | 892.40 |
| 2.6513 | 26 | 254.97 | 6.0163 | 59 | 578.59 | 9.3814  | 92 | 902.21 |
| 2.7532 | 27 | 264.78 | 6.1183 | 60 | 588.40 | 9.4834  | 93 | 912.02 |
| 2.8552 | 28 | 274.59 | 6.2203 | 61 | 598.20 | 9.5854  | 94 | 921.82 |
| 2.9572 | 29 | 284.39 | 6.3223 | 62 | 608.01 | 9.6873  | 95 | 931.63 |
| 3.0592 | 30 | 294.20 | 6.4242 | 63 | 617.82 | 9.7893  | 96 | 941.44 |
| 3.1611 | 31 | 304.01 | 6.5262 | 64 | 627.62 | 9.8913  | 97 | 951.24 |
| 3.2631 | 32 | 313.81 | 6.6282 | 65 | 637.43 | 9.9932  | 98 | 961.05 |
| 3.3651 | 33 | 323.62 | 6.7302 | 66 | 647.24 | 10.0952 | 99 | 970.86 |

(Method of using this table) for example, If you wish to convert 10 kgf to N's, locate unit 10 in the center column. Opposite in the N column is the answer, 10kgf equals ,98.066 N. To convert 10 N to kgfs follow the same procedure, 10 N equals 1. 0197kgf.

## Kg-lb Conversion table

1 kg = 2.2046226 lb  
1 lb = 0.45359237 kg

| kg     |    | lb     | kg     |    | lb     | kg     |    | lb     |
|--------|----|--------|--------|----|--------|--------|----|--------|
| 0.454  | 1  | 2.205  | 15.422 | 34 | 74.957 | 30.391 | 67 | 147.71 |
| 0.907  | 2  | 4.409  | 15.876 | 35 | 77.162 | 30.844 | 68 | 149.91 |
| 1.361  | 3  | 6.614  | 16.329 | 36 | 79.366 | 31.298 | 69 | 152.12 |
| 1.814  | 4  | 8.818  | 16.783 | 37 | 81.571 | 31.751 | 70 | 154.32 |
| 2.268  | 5  | 11.203 | 17.237 | 38 | 83.776 | 32.205 | 71 | 156.53 |
| 2.722  | 6  | 13.228 | 17.690 | 39 | 85.980 | 32.659 | 72 | 158.73 |
| 3.175  | 7  | 15.432 | 18.144 | 40 | 88.185 | 33.112 | 73 | 160.94 |
| 3.629  | 8  | 17.637 | 18.597 | 41 | 90.390 | 33.566 | 74 | 163.14 |
| 4.082  | 9  | 19.842 | 19.051 | 42 | 92.594 | 34.019 | 75 | 165.35 |
| 4.536  | 10 | 22.046 | 19.504 | 43 | 94.799 | 34.473 | 76 | 167.55 |
| 4.990  | 11 | 24.251 | 19.958 | 44 | 97.003 | 34.927 | 77 | 169.76 |
| 5.443  | 12 | 26.455 | 20.412 | 45 | 99.208 | 35.380 | 78 | 171.96 |
| 5.897  | 13 | 28.660 | 20.865 | 46 | 101.41 | 35.834 | 79 | 174.17 |
| 6.350  | 14 | 30.865 | 21.319 | 47 | 103.62 | 36.287 | 80 | 176.37 |
| 6.804  | 15 | 33.069 | 21.772 | 48 | 105.82 | 36.741 | 81 | 178.57 |
| 7.257  | 16 | 35.274 | 22.226 | 49 | 108.03 | 37.195 | 82 | 180.78 |
| 7.711  | 17 | 37.479 | 22.680 | 50 | 110.23 | 37.648 | 83 | 182.98 |
| 8.165  | 18 | 39.683 | 23.133 | 51 | 112.44 | 38.102 | 84 | 185.19 |
| 8.618  | 19 | 41.888 | 23.587 | 52 | 114.64 | 38.555 | 85 | 187.39 |
| 9.072  | 20 | 44.092 | 24.040 | 53 | 116.84 | 39.009 | 86 | 189.60 |
| 9.525  | 21 | 46.297 | 24.494 | 54 | 119.05 | 39.463 | 87 | 191.80 |
| 9.979  | 22 | 48.502 | 24.948 | 55 | 121.25 | 39.916 | 88 | 194.01 |
| 10.433 | 23 | 50.706 | 25.401 | 56 | 123.46 | 40.370 | 89 | 196.21 |
| 10.886 | 24 | 52.911 | 25.855 | 57 | 125.66 | 40.823 | 90 | 198.42 |
| 11.340 | 25 | 55.116 | 26.308 | 58 | 127.87 | 41.277 | 91 | 200.62 |
| 11.793 | 26 | 57.320 | 26.762 | 59 | 130.07 | 41.730 | 92 | 202.83 |
| 12.247 | 27 | 59.525 | 27.216 | 60 | 132.28 | 42.184 | 93 | 205.03 |
| 12.701 | 28 | 61.729 | 27.669 | 61 | 134.48 | 42.638 | 94 | 207.23 |
| 13.154 | 29 | 63.934 | 28.123 | 62 | 136.69 | 43.091 | 95 | 209.44 |
| 13.608 | 30 | 66.139 | 28.576 | 63 | 138.89 | 43.545 | 96 | 211.64 |
| 14.061 | 31 | 68.343 | 29.030 | 64 | 141.10 | 43.998 | 97 | 213.85 |
| 14.515 | 32 | 70.548 | 29.484 | 65 | 143.30 | 44.452 | 98 | 216.05 |
| 14.969 | 33 | 72.753 | 29.937 | 66 | 145.51 | 44.906 | 99 | 218.26 |

(Method of using this table) For example, to convert 10kg into lb, read the figure in the right lb column adjacent to the 10 in the center column in the 1st block. This means that 10kg is 22.046 lb. To convert 10lb into kg, read the figure in the left kg column of the same row, which indicates that the answer is 4.536kg.

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|                                                                                     |         |       |  |  |  |  |  |          |
|-------------------------------------------------------------------------------------|---------|-------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|----------|
|                                                                                     |         |       | TR                                                                                | UC                                                                                | NA                                                                                 | UK                                                                                  | SA                                                                                  | SB       |
|                                                                                     |         |       | GB                                                                                | UC                                                                                | UEL                                                                                | UK                                                                                  | UE                                                                                  | UB       |
|                                                                                     |         |       | NTN                                                                               | UC..D1                                                                            | UEL..D1W3                                                                          | UK..D1                                                                              | AEL..W3                                                                             | AS       |
|                                                                                     |         |       | FYH                                                                               | UC                                                                                | NA                                                                                 | UK                                                                                  | SA                                                                                  | SB       |
|                                                                                     |         |       | NSK                                                                               | UC                                                                                | EW                                                                                 | UK                                                                                  | EN                                                                                  | UB       |
|                                                                                     |         |       | ASAHI                                                                             | UC                                                                                | UG..+ER                                                                            | UK                                                                                  | KH..+ER                                                                             | B        |
|                                                                                     |         |       | INA                                                                               | G(N)YE..KRRB                                                                      | G(N)E..KRRB                                                                        |                                                                                     | RAE..NPPB                                                                           | AY..NPPB |
|                                                                                     |         |       | SKF                                                                               | YAR..2F                                                                           | YEL..2F                                                                            |                                                                                     | YET                                                                                 |          |
|                                                                                     |         |       | RHP                                                                               | 10..G                                                                             | 10..DECG                                                                           | 10..KG                                                                              | 12..EC                                                                              | 12       |
|                                                                                     |         |       | PEER                                                                              | UC                                                                                | HC                                                                                 |                                                                                     | FH                                                                                  | FHS      |
|   | P2      | TR    | UCP2                                                                              | NAP2                                                                              | UKP2+H                                                                             | SAP2                                                                                | SBP2                                                                                |          |
|                                                                                     | P2      | GB    | UCP2                                                                              | UELP2                                                                             | UKP2+H                                                                             |                                                                                     |                                                                                     |          |
|                                                                                     | P2..D1  | NTN   | UCP2..D1                                                                          | UELP2..D1W3                                                                       | UKP2..D1;H                                                                         |                                                                                     |                                                                                     |          |
|                                                                                     | P2      | FYH   | UCP2                                                                              | NAP2                                                                              | UKP2                                                                               |                                                                                     |                                                                                     |          |
|                                                                                     | P2      | NSK   | UCP2                                                                              | EWP2                                                                              | UKP2+H                                                                             |                                                                                     | UBP2..JG00                                                                          |          |
|                                                                                     | P2      | ASAHI | UCP2                                                                              |                                                                                   | UKP2+H                                                                             |                                                                                     | BP2                                                                                 |          |
|                                                                                     | ASE     | INA   | RASEY                                                                             | RASE                                                                              |                                                                                    | PASE                                                                                | PASEY                                                                               |          |
|                                                                                     | SY      | SKF   | SY..TF                                                                            | SY..WF                                                                            |                                                                                    | SY..FM                                                                              |                                                                                     |          |
|                                                                                     | NP      | RHP   | NP                                                                                | NP..DEC                                                                           | NP10..K                                                                            | NP..EC                                                                              | NP..A                                                                               |          |
|                                                                                     | P2      | PEER  | UCP2                                                                              | HCP2                                                                              | UKP2+H                                                                             | FHP2                                                                                | FHSP2                                                                               |          |
|  | PX      | TR    | UCPX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | PX..D1  | NTN   | UCPX..D1                                                                          |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | PX      | FYH   | UCPX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | PX      | ASAHI | UCPX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | MP      | RHP   | MP                                                                                |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | PX      | PEER  | UCPX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|  | P3      | TR    | UCP3                                                                              | NAP3                                                                              | UKP3+H                                                                             |                                                                                     |                                                                                     |          |
|                                                                                     | P3      | GB    | UCP3                                                                              | UELP3                                                                             | UKP3+H                                                                             |                                                                                     |                                                                                     |          |
|                                                                                     | P3..D1  | NTN   | UCP3..D1                                                                          | UELP3..D1W3                                                                       | UKP3..D1;H                                                                         |                                                                                     |                                                                                     |          |
|                                                                                     | P3      | FYH   | UCP3                                                                              |                                                                                   | UKP3                                                                               |                                                                                     |                                                                                     |          |
|                                                                                     | P3      | NSK   | UCP3                                                                              | EWP3                                                                              | UKP3+H                                                                             |                                                                                     |                                                                                     |          |
|                                                                                     | P3      | ASAHI | UCP3                                                                              |                                                                                   | UKP3+H                                                                             |                                                                                     |                                                                                     |          |
|                                                                                     | SAO     | INA   | RSAOY                                                                             | RSAO                                                                              |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     |         |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|  | PK2     | TR    | UCPK2                                                                             | NAPK2                                                                             |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | PL2..D1 | NTN   | UCPL2..D1                                                                         | UELPL2..D1W3                                                                      |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | SL      | FYH   | SL2                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | PK2     | NSK   | UCPK2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | LP2     | ASAHI | UCLP2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | SL      | RHP   | SL                                                                                | SL..DEC                                                                           |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     | LP2     | PEER  | UCLP2                                                                             | HCLP2                                                                             |                                                                                    |                                                                                     |                                                                                     |          |
|                                                                                     |         |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |          |

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|    | LP2      | TR    |                                                                                   |                                                                                   |                                                                                    | SALP2                                                                               | SBLP2                                                                               |
|                                                                                     | LP2      | FYH   |                                                                                   |                                                                                   |                                                                                    | ALP2                                                                                | BLP2                                                                                |
|                                                                                     | LP2      | NSK   |                                                                                   |                                                                                   |                                                                                    | ENLP2                                                                               | UBLP2                                                                               |
|                                                                                     | LLP2     | ASAHI |                                                                                   |                                                                                   |                                                                                    |                                                                                     | BLLP2                                                                               |
|                                                                                     | PWC2     | PEER  |                                                                                   |                                                                                   |                                                                                    | FHPWC2                                                                              | FHSPWC2                                                                             |
|    | PH2      | TR    | UCPH2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PH2      | GB    | UCPH2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | HP2..D1  | NTN   | UCHP2..D1                                                                         |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PH2      | FYH   | UCPH2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PH2      | NSK   | UCPH2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|   | PH2      | ASAHI | UCPH2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PA2      | TR    | UCPA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PA2      | GB    | UCPA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | UP2..D1  | NTN   | UCUP2..D1                                                                         |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PA2      | FYH   | UCPA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | PA2      | NSK   | UCPA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PA2      | ASAHI | UCPA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PA2      | PEER  | UCPA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PA2..A   | TR    | UCPA2..A                                                                          |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | SHE      | INA   | RSHEY                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | SYF      | SKF   | SYF..TF                                                                           |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | SNP      | RHP   | SNP                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PAS2     | PEER  | UCPAS2                                                                            |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | PP2      | TR    |                                                                                   |                                                                                   |                                                                                    | SAPP2                                                                               | SBPP2                                                                               |
|                                                                                     | PP2      | GB    |                                                                                   |                                                                                   |                                                                                    | UEPP2                                                                               | UBPP2                                                                               |
|  | PP2      | NTN   |                                                                                   |                                                                                   |                                                                                    | AELPP2..W3                                                                          | ASPP2                                                                               |
|                                                                                     | PP2..F   | FYH   |                                                                                   |                                                                                   |                                                                                    | SAPP2..F                                                                            | SBPP2..F                                                                            |
|                                                                                     | PP2      | NSK   |                                                                                   |                                                                                   |                                                                                    | ENPP2                                                                               | UBPP2                                                                               |
|                                                                                     | PP2      | ASAHI |                                                                                   |                                                                                   |                                                                                    |                                                                                     | BPP2                                                                                |
|                                                                                     | GEH..BT  | INA   |                                                                                   |                                                                                   |                                                                                    | PB                                                                                  | PBY                                                                                 |
|  | P        | SKF   |                                                                                   |                                                                                   |                                                                                    | P..FM                                                                               |                                                                                     |
|                                                                                     | LPB      | RHP   |                                                                                   |                                                                                   |                                                                                    | LPB..EC                                                                             | LPB..A                                                                              |
|                                                                                     | PP..Z-IL |       |                                                                                   |                                                                                   |                                                                                    | FHPPZ..IL                                                                           | FHSPPZ..IL                                                                          |
|                                                                                     | F2       | TR    | UCF2                                                                              | NAF2                                                                              | UKF2+H                                                                             | SAF2..G                                                                             | SBF2                                                                                |
|                                                                                     | F2..D1   | NTN   | UCF2..D1                                                                          | UELF2..D1W3                                                                       | UKF2..D1;H                                                                         |                                                                                     |                                                                                     |
|  | F2       | FYH   | UCF2                                                                              |                                                                                   | UKF2                                                                               |                                                                                     |                                                                                     |
|                                                                                     | F2       | NSK   | UCF2                                                                              | EWf2                                                                              | UKF2+H                                                                             |                                                                                     | UBF2..JG00                                                                          |
|                                                                                     | F2       | ASAHI | UCF2                                                                              |                                                                                   | UKF2+H                                                                             |                                                                                     | BF2                                                                                 |
|                                                                                     | F2       | PEER  | UCF2                                                                              |                                                                                   |                                                                                    | FHF2                                                                                | FHSF2                                                                               |
|                                                                                     | FX       | TR    | UCFX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | FX..D1   | NTN   | UCFX..D1                                                                          |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FX       | FYH   | UCFX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FX       | ASAHI | UCFX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | MSF      | RHP   | MSF                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | F2       | PEER  | UCFX                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

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|    | F3      | TR    | UCF3                                                                              | NAFU3                                                                             | UKF3+H                                                                             |                                                                                     |                                                                                     |
|                                                                                     | FU3     | GB    | UCFU3                                                                             | UELFU3                                                                            | UKFU3+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | F3..D1  | NTN   | UCF3..D1                                                                          | UELF3..D1W3                                                                       | UKF3..D1;H                                                                         |                                                                                     |                                                                                     |
|                                                                                     | F3      | FYH   | UCF3                                                                              |                                                                                   | UKF3                                                                               |                                                                                     |                                                                                     |
|                                                                                     | F3      | NSK   | UCF3                                                                              | EW3                                                                               | UKF3+H                                                                             |                                                                                     |                                                                                     |
|                                                                                     | F3      | ASAHI | UCF3                                                                              |                                                                                   | UKF3+H                                                                             |                                                                                     |                                                                                     |
|                                                                                     | CJO     | INA   | RCJOY                                                                             | RCJO                                                                              |                                                                                    |                                                                                     |                                                                                     |
|   | FU2     | TR    | UCFU2                                                                             | NAFU2                                                                             | (UKFU2+H)                                                                          | SAFU2                                                                               | (SBFU2)                                                                             |
|                                                                                     | FU2     | GB    | UCFU2                                                                             | UELFU2                                                                            | UKFU2+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FU2..D1 | NTN   |                                                                                   | UELFU2..D1W3                                                                      |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | NF2     | FYH   |                                                                                   | NANF2                                                                             |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | CJ      | INA   | RCJY                                                                              | RCJ                                                                               |                                                                                    | PCJ                                                                                 | PCJY                                                                                |
|                                                                                     | FY      | SKF   | FY..TF                                                                            | FY..WM                                                                            |                                                                                    | FY..FM                                                                              |                                                                                     |
|                                                                                     | SF      | RHP   | SF                                                                                | SF..DEC                                                                           | MSF..K                                                                             | SF..EC                                                                              | SF..A                                                                               |
|                                                                                     | FS2     | PEER  |                                                                                   | HCFS2                                                                             |                                                                                    |                                                                                     |                                                                                     |
|  | FS3     | TR    | UCFS3                                                                             | NAFS3                                                                             | UKFS3+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FS3..D1 | NTN   | UCFS3..D1                                                                         | UELFS3..D1W3                                                                      | UKFS3..D1;H                                                                        |                                                                                     |                                                                                     |
|                                                                                     | FS3     | FYH   | UCFS3                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FS3     | NSK   | UCFS3                                                                             |                                                                                   | UKFS3+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FS3     | ASAHI | UCFS3                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | FL2     | TR    | UCFL2                                                                             | NAFL2                                                                             | UKFL2+H                                                                            | SAFL2                                                                               | SBFL2                                                                               |
|                                                                                     | FL2..D1 | NTN   | UCFL2..D1                                                                         | UELFLU2..D1W3                                                                     | UKFL2..D1;H                                                                        |                                                                                     |                                                                                     |
|                                                                                     | FL2     | FYH   | UCFL2                                                                             |                                                                                   | UKFL2                                                                              |                                                                                     |                                                                                     |
|                                                                                     | FL2     | NSK   | UCFL2                                                                             | EWFL2                                                                             | UKFL2+H                                                                            |                                                                                     | UBFL2..JG00                                                                         |
|                                                                                     | FL2     | ASAHI | UCFL2                                                                             |                                                                                   |                                                                                    |                                                                                     | BFL2                                                                                |
|                                                                                     | FT2     | PEER  | UCFT2                                                                             |                                                                                   |                                                                                    | FHFT2                                                                               | FHSFT2                                                                              |
|  | FLX     | TR    | UCFLX                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FLX..D1 | NTN   | UCFLX..D1                                                                         |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FLX     | FYH   | UCFLX                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FLX     | ASAHI | UCFLX                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | MSFT    | RHP   | MSFT                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | FTX     | PEER  | UCFTX                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FL3     | TR    | UCFL3                                                                             | NAFL3                                                                             | UKFL3+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FLU3    | GB    | UCFLU3                                                                            | UELFLU3                                                                           | UKFLU3+H                                                                           |                                                                                     |                                                                                     |
|                                                                                     | FL3..D1 | NTN   | UCFL3..D1                                                                         | UELFL3..D1W3                                                                      | UKFL3..D1;H                                                                        |                                                                                     |                                                                                     |
|                                                                                     | FL3     | FYH   | UCFL3                                                                             |                                                                                   | UKFL3                                                                              |                                                                                     |                                                                                     |
|                                                                                     | FL3     | NSK   | UCFL3                                                                             | EWFL3                                                                             | UKFL3+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FL3     | ASAHI | UCFL3                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

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|    | FLU2      | TR    | UCFLU2                                                                            | NAFLU2                                                                            | (UKFLU2+H)                                                                         | SAFLU2                                                                              | (SBFLU2)                                                                            |
|                                                                                     | FLU2      | GB    | UCFLU2                                                                            | UELFLU2                                                                           | UKFLU2+H                                                                           |                                                                                     |                                                                                     |
|                                                                                     | FLU2..D1  | NTN   |                                                                                   | UELFLU2..D1W3                                                                     |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | NFL2      | FYH   |                                                                                   | NANFL2                                                                            |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | CJT       | INA   | RCJTY                                                                             | RCJT                                                                              |                                                                                    | PCJT                                                                                | PCJTY                                                                               |
|                                                                                     | FYTB      | SKF   | FYTB..TF                                                                          | FYTB..WF                                                                          |                                                                                    | FYTB..FM                                                                            |                                                                                     |
|                                                                                     | SFT       | RHP   | SFT                                                                               | SFT..DEC                                                                          | MSFT..K                                                                            | SFT..EC                                                                             | SFT..A                                                                              |
|                                                                                     | FTS2      | PEER  |                                                                                   | HCFTS2                                                                            |                                                                                    |                                                                                     |                                                                                     |
|    | LF2       | TR    |                                                                                   |                                                                                   |                                                                                    | SALF2                                                                               | SBLF2                                                                               |
|                                                                                     | LF2       | FYH   |                                                                                   |                                                                                   |                                                                                    | ALF2                                                                                | BLF2                                                                                |
|                                                                                     | LF2..BJ   | NSK   |                                                                                   |                                                                                   |                                                                                    | ENLF2..BJ                                                                           | UBLF2..BJ                                                                           |
|                                                                                     | LF2       | PEER  |                                                                                   |                                                                                   |                                                                                    | FHLF2                                                                               | FHSLF2                                                                              |
|   | LFTC      | TR    |                                                                                   |                                                                                   |                                                                                    | SALFTC2                                                                             | SBLFTC2                                                                             |
|                                                                                     | LCTE..K   | ASAHI |                                                                                   |                                                                                   |                                                                                    |                                                                                     | BLCTE2..K                                                                           |
|                                                                                     | LCTE      | INA   |                                                                                   |                                                                                   |                                                                                    | FLCTE                                                                               | FLCTEY                                                                              |
|                                                                                     | LFTC      | RHP   |                                                                                   |                                                                                   |                                                                                    | LFTC..EC                                                                            | LFTC..A                                                                             |
|  | FD2       | TR    |                                                                                   |                                                                                   |                                                                                    | SAFD2                                                                               | SBFD2                                                                               |
|                                                                                     | FD2       | NTN   |                                                                                   |                                                                                   |                                                                                    | AELFD2..W3                                                                          | ASFD2                                                                               |
|                                                                                     | FD2       | PEER  |                                                                                   |                                                                                   |                                                                                    | FHFD2                                                                               | FHSFD2                                                                              |
|                                                                                     |           | -     |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | PFTD2     | TR    |                                                                                   |                                                                                   |                                                                                    | SAPFTD2                                                                             | SBPFTD2                                                                             |
|                                                                                     | FX2       | PEER  |                                                                                   |                                                                                   |                                                                                    | FHFX2                                                                               | FHSFX2                                                                              |
|                                                                                     |           | -     |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     |           | -     |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | FCT2      | TR    |                                                                                   |                                                                                   |                                                                                    | SAFCT2                                                                              | SBFCT2                                                                              |
|                                                                                     | F3X2      | PEER  |                                                                                   |                                                                                   |                                                                                    | FHF3X2                                                                              | FHSF3X2                                                                             |
|                                                                                     |           | -     |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     |           | -     |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | PFL2      | TR    |                                                                                   |                                                                                   |                                                                                    | SAPFL2                                                                              | SBPFL2                                                                              |
|                                                                                     | PFL2      | GB    |                                                                                   |                                                                                   |                                                                                    | UEPFL2                                                                              | UBPFL2                                                                              |
|                                                                                     | PFL2      | NTN   |                                                                                   |                                                                                   |                                                                                    | ABLPFL2..W3                                                                         | ASPFL2                                                                              |
|                                                                                     | PFL2      | FYH   |                                                                                   |                                                                                   |                                                                                    | SAPFL2                                                                              | SBPFL2                                                                              |
|                                                                                     | PFL2      | NSK   |                                                                                   |                                                                                   |                                                                                    | ENPFL2                                                                              | UBPFL2                                                                              |
|                                                                                     | PFL2      | ASAHI |                                                                                   |                                                                                   |                                                                                    |                                                                                     | BPFL2                                                                               |
|                                                                                     | PLAN..MSB | INA   |                                                                                   |                                                                                   |                                                                                    | RAT                                                                                 | RATY                                                                                |
|                                                                                     | PFT       | SKF   |                                                                                   |                                                                                   |                                                                                    | PFT..FM                                                                             |                                                                                     |
|                                                                                     | SLFL      | RHP   |                                                                                   |                                                                                   |                                                                                    | SLFL..EC                                                                            | SLFL..A                                                                             |
|                                                                                     | PFL..R    | PEER  |                                                                                   |                                                                                   |                                                                                    | FHPFLR2                                                                             | FHSPFLR2                                                                            |
|                                                                                     |           |       |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | FC2       | TR    | UCFC2                                                                             | NAFC2                                                                             | UKFC2+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FC2       | GB    | UCFC2                                                                             | UELFC2                                                                            | UKFC2+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FC2..D1   | NTN   | UCFC2..D1                                                                         | UELFC2..D1W3                                                                      | UKFC2..D1;H                                                                        |                                                                                     |                                                                                     |
|                                                                                     | FC2       | FYH   | UCFC2                                                                             | NAFC2                                                                             | UKFC2                                                                              |                                                                                     |                                                                                     |
|                                                                                     | FC2       | NSK   | UCFC2                                                                             | EWFC2                                                                             | UKFC2+H                                                                            |                                                                                     |                                                                                     |
|                                                                                     | FC2       | ASAHI | UCFC2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FC2       | PEER  | UCFC2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

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|    | PF2        | TR    |                                                                                   |                                                                                   |                                                                                    | SAPF2                                                                               | SBPF2                                                                               |
|                                                                                     | PF2        | GB    |                                                                                   |                                                                                   |                                                                                    | UEPF2                                                                               | UBPF2                                                                               |
|                                                                                     | PF2        | NTN   |                                                                                   |                                                                                   |                                                                                    | AELPF2..W3                                                                          | ASPF2                                                                               |
|                                                                                     | PF2        | FYH   |                                                                                   |                                                                                   |                                                                                    |                                                                                     | SBPF2                                                                               |
|                                                                                     | PF2        | NSK   |                                                                                   |                                                                                   |                                                                                    | ENPF2                                                                               | UBPF2                                                                               |
|                                                                                     | PF2        | ASAHI |                                                                                   |                                                                                   |                                                                                    | KHPF2                                                                               | BPF2                                                                                |
|                                                                                     | FLAN..MSB  | INA   |                                                                                   |                                                                                   |                                                                                    | RA                                                                                  | RAY                                                                                 |
|                                                                                     | PF         | SKF   |                                                                                   |                                                                                   |                                                                                    | PF..FM                                                                              | PF..RM                                                                              |
|                                                                                     | SLFE       | RHP   |                                                                                   |                                                                                   |                                                                                    | SLFE..EC                                                                            | SLFE..A                                                                             |
|                                                                                     | PF..R      | PEER  |                                                                                   |                                                                                   |                                                                                    | FHPFR2                                                                              | FHSPFR2                                                                             |
|   | PFT2       | TR    |                                                                                   |                                                                                   |                                                                                    | SAPFT2                                                                              | SBPFT2                                                                              |
|                                                                                     | PFT2       | GB    |                                                                                   |                                                                                   |                                                                                    | UEPFT2                                                                              | UBPFT2                                                                              |
|                                                                                     | PFT2       | ASAHI |                                                                                   |                                                                                   |                                                                                    |                                                                                     | BPFT2                                                                               |
|                                                                                     | FLAN..MSTR | INA   |                                                                                   |                                                                                   |                                                                                    | RATR                                                                                | RATRY                                                                               |
|                                                                                     | PFD        | SKF   |                                                                                   |                                                                                   |                                                                                    | PFD..FM                                                                             |                                                                                     |
|                                                                                     | SLFT       | RHP   |                                                                                   |                                                                                   |                                                                                    | SLFT..EC                                                                            | SLFT..A                                                                             |
|  | PFT..Z     | PEER  |                                                                                   |                                                                                   |                                                                                    | FHPFTZ2                                                                             |                                                                                     |
|                                                                                     | T2         | TR    | UCT2                                                                              | NAT2                                                                              |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | T2..D1     | NTN   | UCT2..D1                                                                          | UELT2..D1W3                                                                       |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | T2         | FYH   | UCT2                                                                              | NAT2                                                                              |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | T2         | NSK   | UCT2                                                                              | EW2T                                                                              |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | T2         | ASAHI | UCT2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | TUE        | INA   | RTUEY                                                                             | RTUE                                                                              |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | ST2        | TR    | UCST2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | K2         | GB    | UCK2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | ST2        | ASAHI | UCST2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | TU         | SKF   | TU..TF                                                                            |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | ST         | RHP   | ST                                                                                |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | T2         | PEER  | UCT2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | C2         | TR    | UCC2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | C2         | GB    | UCC2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | C2..D1     | NTN   | UCC2..D1                                                                          |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | C2         | FYH   | UCC2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | C2         | NSK   | UCC2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | C2         | ASAHI | UCC2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | SLC        | RHP   | SLC                                                                               |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | C2         | PEER  | UCC2                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FB2        | TR    | UCFB2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FB2        | GB    | UCFB2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FH2..D1    | NTN   | UCFH2..D1                                                                         |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FB2        | FYH   | UCFB2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FK2        | NSK   | UCFK2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FK2        | ASAHI | UCFK2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                     | FB2        | PEER  | UCFB2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |

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|  | FA2     | TR    | UCFA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | FA2     | GB    | UCFA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | FA2..D1 | NTN   | UCFA2..D1                                                                         |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | FA2     | FYH   | UCFA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | FA2     | NSK   | UCFA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | FA2     | ASAHI | UCFA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|  | HA2     | TR    | UCHA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | HA2     | GB    | UCHA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | HB2..D1 | NTN   | UCHB2..D1                                                                         |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | HA2     | FYH   | UCHA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | EH2     | NSK   | UCEH2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | ECH2    | ASAHI | UCECH2                                                                            |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | SCHB    | RHP   | SCHB                                                                              |                                                                                   |                                                                                    |                                                                                     |                                                                                     |
|                                                                                   | HA2     | PEER  | UCHA2                                                                             |                                                                                   |                                                                                    |                                                                                     |                                                                                     |