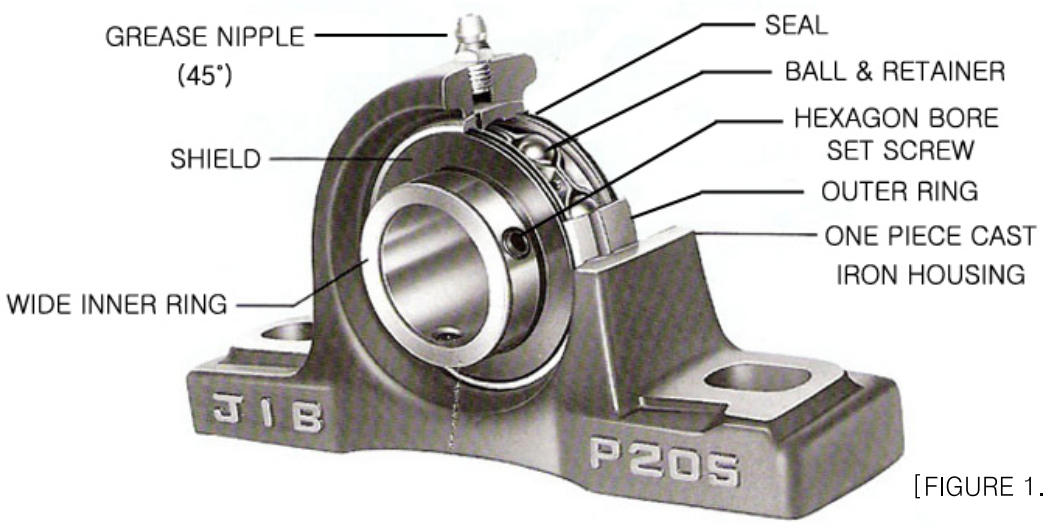
1. BALL BEARING UNIT DESIGN AND SPECIAL FEATURES

1.1 BALL BEARING UNIT DESIGN



[FIGURE 1.1]

1.2 BALL BEARING UNIT'S SPECIAL FEATURES

The ball bearing unit is made by assembling the pre-lubricated and totally sealed deep grooved bearing unit with a proper housing that is selected for the desired operating environment and temperature. This simple interchangeable installation feature of the bearing is combined with easy grease resupply design for use in wide ranging applications.

(1) Self-alignment

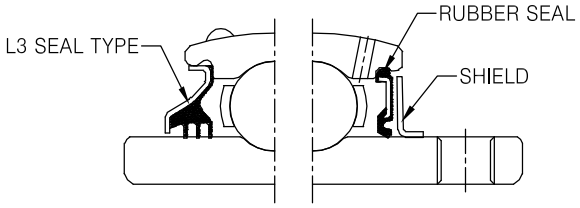
The most important feature of the ball bearing unit are the precisely machined outside diameter face of the outer race of the bearing and the spherically machined inside diameter surface of the housing. The two surfaces are spherically machined and precisely matched to allow for small rotating movement along any axial direction to permit automatic self-alignment of the bearing when the shaft center of axis is out of alignment with the housing by a small amount. This automatic self-alignment feature of the bearing helps to prevent irregular stress on the bearing that can shorten bearing life.

(2) Dependable high load carrying capacity

The ball bearing unit's internal parts are rated equivalent to the 6,200 and 6,300 standard style deep grooved bearings. The bearings have high radial and thrust loading capacities which are enhanced even further by the selection of a high quality lubricant in the totally sealed unit.

(3) Excellent sealing methods

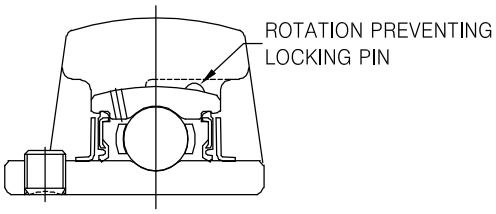
The labyrinth style grease seal is made with a rubber seal attached to the inside diameter surface of the outer race and a protective shield attached to the outside diameter surface of the inner race. The seal is made with a special synthetic rubber to minimize wear and to provide a smooth and continuous pressure con tact with the outside diameter surface of the inner race. The seal prevents the grease from leakage the bearing and at the same time prevents dust and moisture environments, JIB developed the triple seal and the double protection method to provide excellent protection even in the most severest environments.



[FIGURE 1.2]

(4) Antirotation pin for preventing outer race rotation

The Antirotation pin on the outer race prevents the rotation of the outer race during high speed rotations and during high load conditions to prevent wear on the inside diameter surface of the housing. By preventing wear, the designed tolerances of the housing is maintained to prevent forced assembly of the bearing during bearing maintenance. In addition, a decrease of the inside radial clearance caused by the shrink of the outer diameter of the outer race is prevented to extend the life of the bearing.



[FIGURE 1.3]

(5) Fracture prevention for tapped areas

For bolt mounting method units, sufficient mounting strength is needed to prevent possible creep fracture in the clearance space between the shaft and the inner race. Bolt type and locking torque are shown in Table 13.1 for reference. Additionally a part of bearings go through special heat treatment to prevent a crack by the extreme working condition in JIB.

(6) High accuracy ball bearing unit

The quality of the surface finish or surface roughness of the inner and outer race typically represents the overall quality and the ultimate capability of the bearing. The surface finish for JIB bearings are specially produced by an advanced technique developed by JIB for producing excellent quality surfaces. The surface finish of other bearing parts are equivalent to standard ball bearings to guarantee stability and accuracy in high rotation speed.

(7) Abundant styles for all situations and conditions

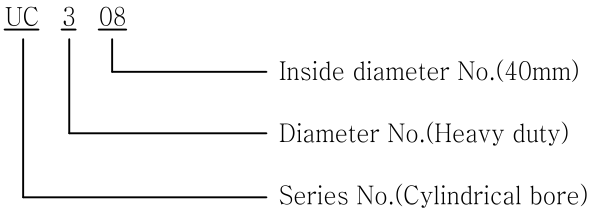
JIB has been producing abundant variety of bearing styles for all types of situations and conditions. Each bearing unit is designed and produced with the long time experience and skills of the company combined with the many special requests and feedbacks provided by our customers. JIB has strived to improve the overall performance of application machines by providing the best possible ball bearing units for each and every operating condition and situations.

2. BALL BEARING UNIT'S BEARING AND HOUSING NO.

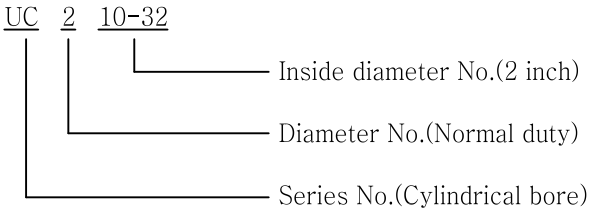
2.1 Bearing No.

Bearing No. describes the bearing's style and basic dimensions. The part number is written in the order of style No., diameter No. and inside diameter No.

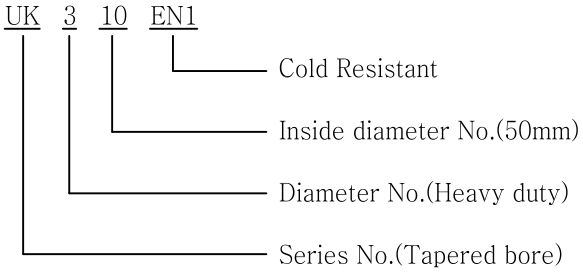
EXAMPLE 1)



EXAMPLE 2)



EXAMPLE 3)



EXAMPLE 4)