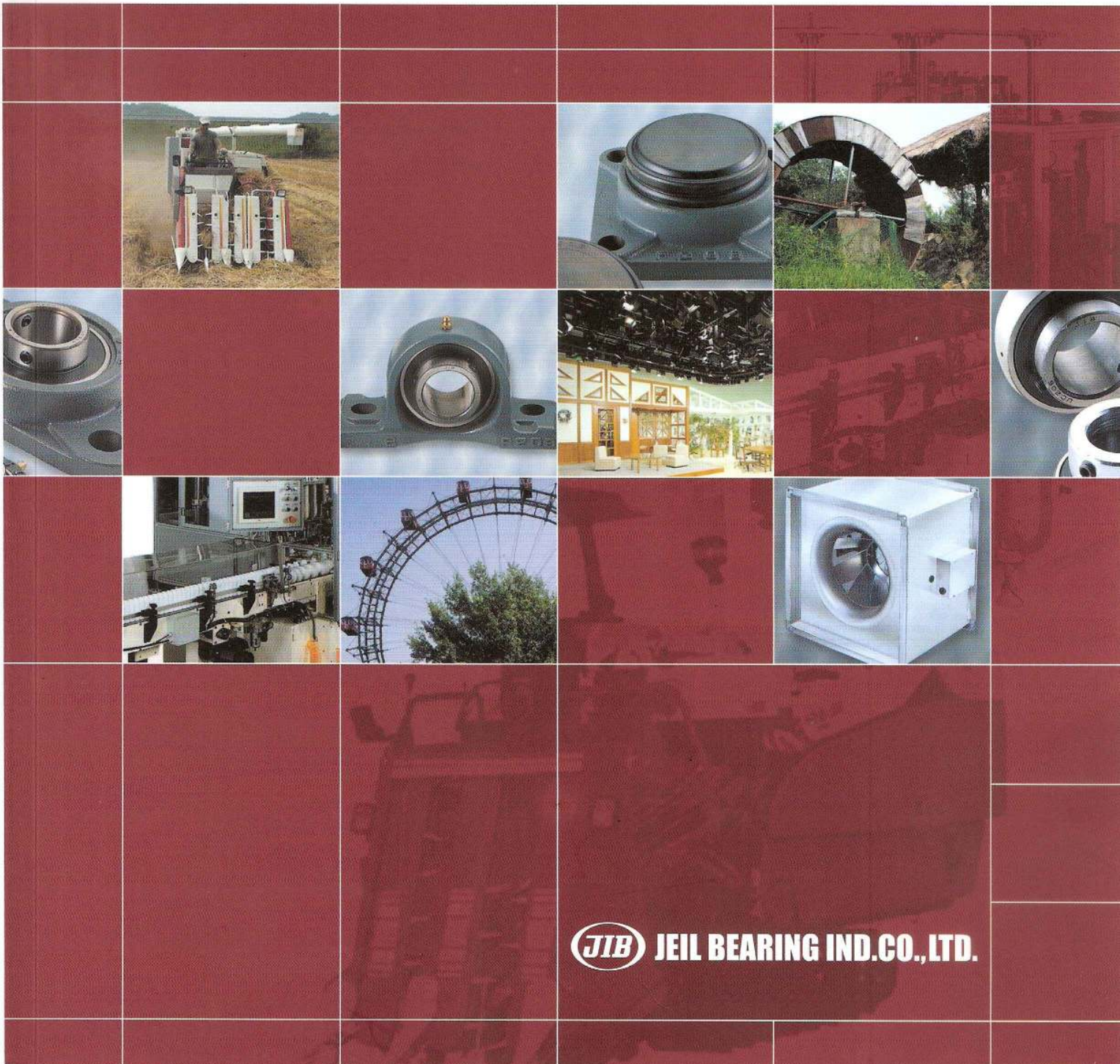
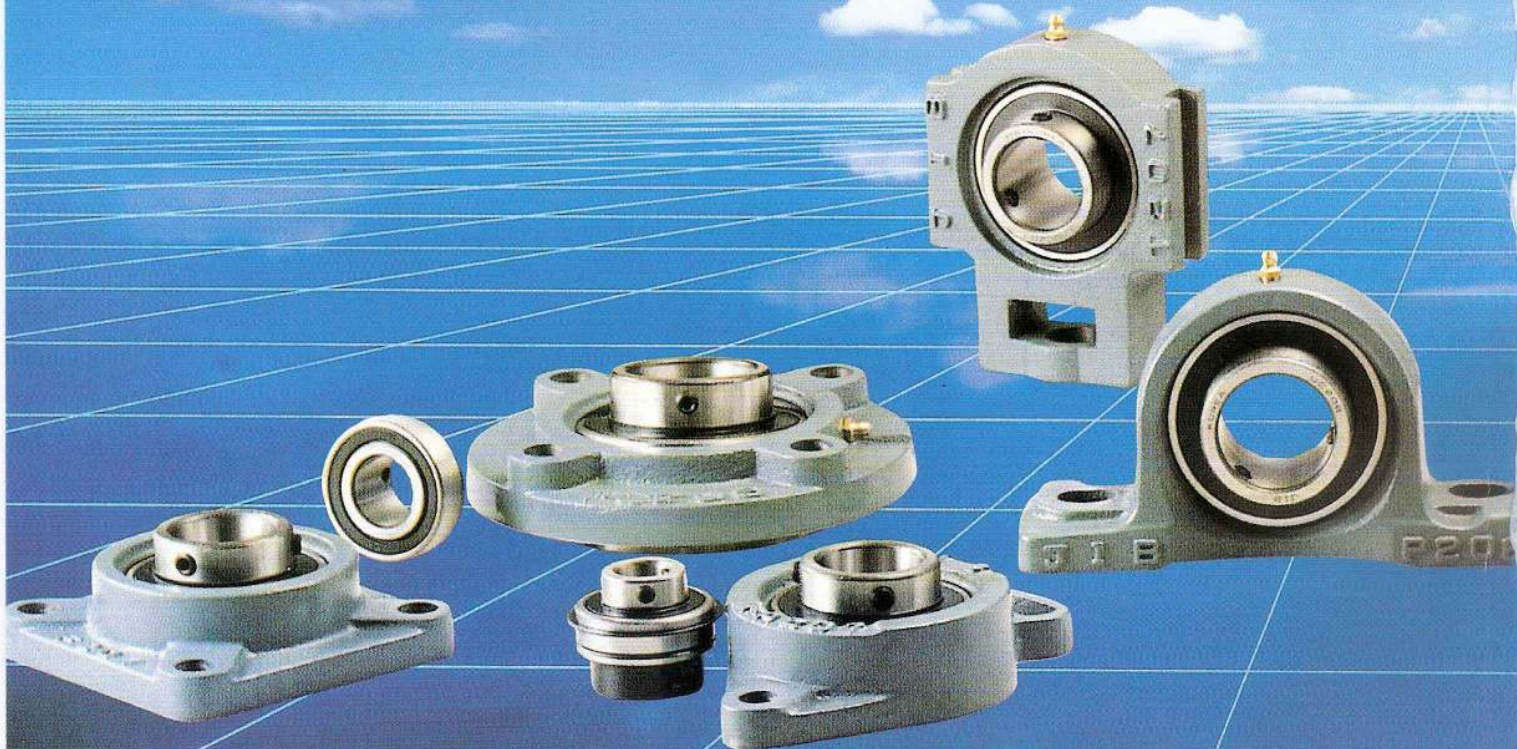




BALL BEARING UNITS

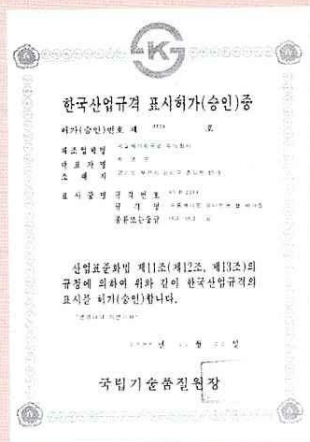


YOUR PARTNER FOR



THE 21ST CENTURY





PREFACE

We would like to sincerely thank all our customers for faithfully supporting. **JIB** Gradually, the range of uses for bearing has been expanding along with the advancement of mechanical industry. At the same time, the demand for higher quality, diversified products and compact design has also been increasing. Jeil Bearing produced this catalog to assist our customers in any way we can in choosing the proper product in this complicated environment. This catalog is an organized summary of our product line and technical information that is needed to select the proper products.

This edition of the catalog uses the KS(Korean Standards) and ISO standardized size and also uses the KS definitions(KSB 0104:Rolling bearing definition) and the ISO definitions(ISO 5593:Rolling bearing definition) whenever possible. The catalog contains abundant array of styles and formats for application in variety of machines and operating conditions. Actual photograph of the units are included for easy reference. Important information about basic radial load ratings, lifetime calculations, bearing handling procedures and installation procedures are also included in the catalog.

Please feel free to let us know of any insufficiencies in the current catalog. We will use our broad experience base to additionally test and research the needed information to be included in the following editions.

Our company was the first in Korea to achieve the KS standards and the ISO9002. We have been continuously growing since its foundation in 1972 where we now carry the responsibility of representing our country's ball bearing industry. In addition to the continuous quality improvement and technology development, we are firmly committed to developing new and innovative products with our in-depth experience and technology base.

Thank you very much.



JEIL BEARING IND.CO.,LTD.

REVISION TABLE

(2005. August Publication)

PAGE	CONTENTS	~ from(Pre-revision)		~ to(Post-revision)	Remarks
P.17	Housing Grease nipple location(Figure1.1)	90 degree location from the center		45 degree location from the center	INCL. all the "P" figure housings
P. 40	Nipple fitting screw threads (Table 11.5)	201~210 : 1/4-28UNF		201~328 : M6X1	
		211~328 : PT-1/8			
P. 108 ~ P110	Dimension "Be" : SA,SB,SC	Type number	Be	Be	
		201~203	12mm	13mm	
		204	14mm	15mm	
		205	15mm	15mm	
		206	16mm	18mm	
		207	17mm	19mm	
		208	18mm	22mm	
		209	19mm	22mm	
		210	20mm	22mm	
		211	21mm	24mm	
		212	22mm	27mm	
P. 22	Oil seal rubber material(Table 3.1)	Cold resistant : Acryl rubber Heat resistant : Acryl rubber		Cold resistant : Fluorine Heat resistant : Fluorine	
P. 76	UCT205-16 "q" dimension	1/4"		1-1/4"	

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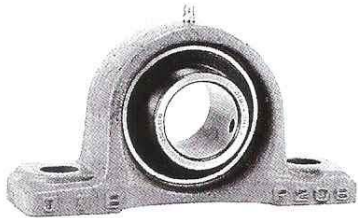
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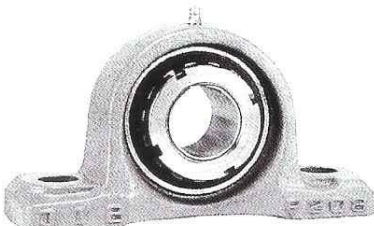


PILLOW BLOCKS(CYLINDRICAL BORE)

UCP

- 2 (Normal duty) refer to p. 51
- X (Medium duty) refer to p. 54
- 3 (Heavy duty) refer to p. 56

This is the most basic unit with a choice of hexagonal set screw or eccentric self locking collar for easy shaft mounting. Dynamically and 3—dimensionally designed and developed housing can withstand load from all directions for normal duty service in all types of power transmission and general machinery.

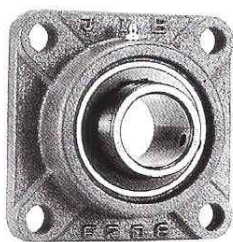


PILLOW BLOCKS(TAPERED BORE)

UKP

- 2 (Normal duty) refer to p. 53
- X (Medium duty) refer to p. 55
- 3 (Heavy duty) refer to p. 57

This design combines the mounting method of the current plummer block and the pillow block. An adapter is used to secure the shaft to the bearing. In addition to regular power transmission use, it is especially appropriate for use on irregular shafts and in the middle of long shafts where accurate rotation is desired.



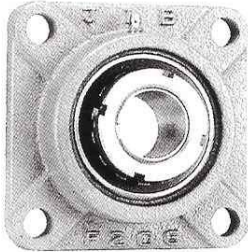
SQUARE FLANGE UNITS(CYLINDRICAL BORE)

UCF

- 2 (Normal duty) refer to p. 58
- X (Medium duty) refer to p. 60
- 3 (Heavy duty) refer to p. 62

The square housing shape is appropriate for mounting on sides of machinery or for vertical mounting. It is designed to carry the load uniformly on four mounting bolts.

It is the most widely used flange shape. Like the pillow style unit, it can reduce operating cost by combining the maximum load carrying capacity with an extended bearing life.



SQUARE FLANGE UNITS(TAPERED BORE)

UKF 2 (Normal duty) refer to p. 59
 X (Medium duty) refer to p. 61
 3 (Heavy duty) refer to p. 63

The bore is tapered for use with an adapter for securing the shaft to the bearing. The Housing is easily mounted to the machine surface with 4 mounting bolts. Like the pillow block, this unit is widely used as the middle bearing of a long shaft.

Higher reliability is achieved when two securing pins are also used in mounting.



FLANGE CARTRIDGE UNITS(CYLINDRICAL BORE)

UCFC 2 (Normal duty) refer to p 64
 X (Medium duty) refer to p. 66

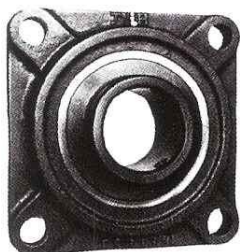
Hexagonal set screw or eccentric self locking collar is used to secure the shaft. This unit can be accurately mounted by aligning the pilot lip on the mounting side of the flange with the assembly hole of the mounting surface. The best product for use in a rotating drums or in cases where eccentric alignment through an assembly hole is possible.



FLANGE CARTRIDGE UNITS(TAPERED BORE)

UKFC 2 (Normal duty) refer to p. 65
 X (Medium duty) refer to p. 67

This unit style uses a shaft securing adapter to mount the shaft. Accurate mounting of the housing unit is possible by aligning the pilot lip on the mounting side of the flange to the assembly hole on the mounting surface. This unit is ideal for use in middle of a long axis or rotating rollers where high rotation accuracy is needed.

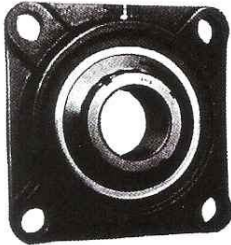


SQUARE PILOTTED FLANGE UNITS(CYLINDRICAL BORE)

UCFS 3 (Heavy duty) refer to p. 68

This A unit has a piloted flange built for heavy duty applications. Two hexagonal set screws on the inner race of the bearing are used to secure the shaft to the bearing. The housing is automatically aligned with the mounting surface by aligning the pilot lip on the mounting side of the flange with the assembly hole of the mounting surface. This unit is best used in situations where accurate alignment is required.

BALL BEARING UNITS TYPE



SQUARE PILOTED FLANGE UNITS(TAPERED BORE)

UKFS 3 (Heavy duty) refer to p. 69

This unit uses an adapter to secure the shaft to the bearing. Accurate mounting is possible by inserting the pilot lip on the mounting side of the flange into the assembly hole of the mounting surface. This unit is best used in the middle of a long axis or in high rotational speed applications.



OVAL FLANGE UNITS(CYLINDRICAL BORE)

UCFL 2 (Normal duty) refer to p. 70
 X (Medium duty) refer to p. 72
 3 (Heavy duty) refer to p. 74

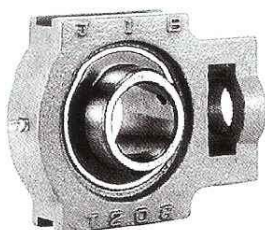
Two hexagonal set screws on the inner race or an eccentric self locking collar is used to secure the shaft to the bearing. The oval shaped housing is mounted with two mounting bolts. The mounting area and the total weight is reduced when compare to the square flange unit. The two mounting bolt hole pitch on the flange is equivalent to the diagonal mounting bolt hole pitch of the square flange for convenient interchangeability.



OVAL FLANGE UNITS(TAPERED BORE)

UKFL 2 (Normal duty) refer to p. 71
 X (Medium duty) refer to p. 73
 3 (Heavy duty) refer to p. 75

This unit uses an adapter to secure the shaft to the bearing. The compact oval shaped housing minimizes the mounting area for the bearing and also reduces the overall weight of the unit. This unit is best used in tight mounting locations like roller conveyors.

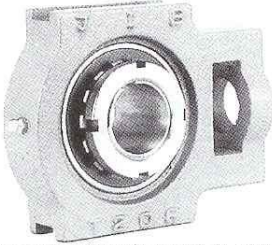


TAKE-UP UNITS(CYLINDRICAL BORE)

UCT 2 (Normal duty) refer to p. 76
 X (Medium duty) refer to p. 78
 3 (Heavy duty) refer to p. 80

Hexagonal set screws or eccentric self-locking collar are used to secure the shaft to the unit. The housing is movable along a guide on the side hole of the housing. This unit is best used in situations where adjustment of the axial distance is needed, such as in the belt conveyor tension pulley.

BALL BEARING UNITS TYPE



TAKE-UP UNITS(TAPERED BORE)

UKT 2 (Normal duty) refer to p. 77
 X (Medium duty) refer to p. 79
 3 (Heavy duty) refer to p. 81

An adapter is used to secure the shaft to the unit. The housing has a sliding groove on the side of the housing. Screw shaft is used on the housing to freely adjust the location of the housing. This unit is best used where axial distance adjustment is necessary as in the belt conveyor tension pulleys.



CARTRIDGE UNITS(CYLINDRICAL)

UCC 2 (Normal duty) refer to p. 82
 X (Medium duty) refer to p. 84
 3 (Heavy duty) refer to p. 86

Hexagonal set screws or an eccentric self-locking collar can be used to secure the shaft to the unit. The precision made housing outside diameter is used where control of axial direction is important. The bearing is widely used where thermal expansion and contraction is a problem. The unit shape is identical to the regular bearing shape and can be used as a regular bearing when automatic self-alignment is desired.



CARTRIDGE UNITS(TAPERED BORE)

UKC 2 (Normal duty) refer to p. 83
 X (Medium duty) refer to p. 85
 3 (Heavy duty) refer to p. 87

An adapter is used to secure the shaft to the unit. The housing outside diameter shape is rounded like a regular bearing. This unit is self-aligning and it can be used instead of a regular bearing when self-alignment is desired. This unit is best used where thermal shaft expansion is expected or where slight axial adjustment is necessary.

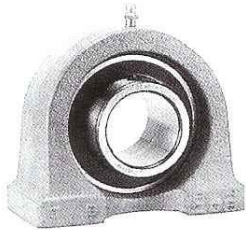


HIGH CENTER OF AXIS PILLOW BLOCKS
 (CYLINDRICAL BORE)

UCPH 2 (Normal duty) refer to p. 88

A pillow block unit with high center of axis for use in strong shock loading conditions. This unit is widely used where the distance between the mounting surface and the shaft is large as in printing machines and weaving machines.

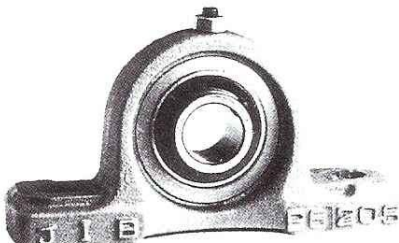
BALL BEARING UNITS TYPE



NARROW BASE PILLOW BLOCKS(CYLINDRICAL BORE)

UCPA 2 (Normal duty) refer to p. 89

Pillow style unit designed for applications where mounting area is limited. The housing is mounted with two tapped holes on the base of the unit, This unit is best used for limited mounting areas as in roller conveyor belts.



HIGH TEMPERATURE PILLOW BLOCKS (CYLINDRICAL BORE)

UCPE 2 (Normal duty) refer to p. 90

A sliding ring is placed in between the housing and the bearing to allow axial movement of the shaft. This unit is best used where operation in varying temperature range causes expansion and contraction of the shaft along the rotation axis.



ADJUSTABLE ANGLE FLANGE UNITS (CYLINDRICAL BORE)

UCFA 2 (Normal duty) refer to p. 91

The mounting angle is adjustable along a single point focus for precise adjustment of the shaft location. The mounting bolt pitch is equivalent to the square flange and the oval flange locking bolt pitch so that they can be mounted interchangeably.



ONE SIDE BRACKET FLANGE UNITS (CYLINDRICAL BORE)

UCFB 2 (Normal duty) refer to p. 92

The unit can be locked to the surface with 3 bolts all on one side of the flange. This unit is useful where mounting area is limited or where mounting surface is vertical to the shaft axis.

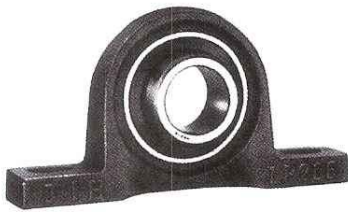
BALL BEARING UNITS TYPE



HANGER UNITS(CYLINDRICAL BORE)

UCHA 2 (Normal duty) refer to p. 93

In this unit, one side of the housing has a female rod end for hanging the unit from a pipe assembly. This unit is used in screw conveyors and in situations where compact installation or where middle of the shaft support is needed.



LIGHT WEIGHT PILLOW BLOCKS(CYLINDRICAL BORE)

SALP 2 (Normal duty) refer to p. 94
SBLP 2 (Normal duty) refer to p. 94

This unit was designed as a low weight and low cost product. Units with nominal inside diameter number greater than or equal to 04 is equivalent to the UCP 2 style. The hexagonal set screw is used in the SBLP 2 unit and the eccentric self locking collar is used in the SALP 2 unit to secure the shaft to the unit.



LIGHT WEIGHT OVAL FLANGE UNITS(CYLINDRICAL)

SALF 2 (Normal duty) refer to p. 95
SBLF 2 (Normal duty) refer to p. 95

This unit is a compact and light weight version of the UCFL 2 unit.

A hexagonal set screw is used in SBLF 2 unit and an eccentric self locking collar is used in SALF 2 unit to secure the shaft to the unit.



PRESSED STEEL PILLOW BLOCKS (CYLINDRICAL BORE)

SAPP 2 (Normal duty) refer to p. 96(SA2 bearing)
SBPP 2 (Normal duty) refer to p. 96(SB2 bearing)

The housing is made of stamped steel for light weight and low cost while maintaining the required strength. This unit is best used for relatively light loading situations as the ones found in light weight conveyor belts.

BALL BEARING UNITS TYPE



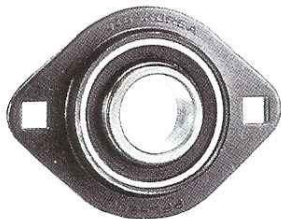
PRESSED STEEL FLANGE UNITS(CYLINDRICAL BORE)

SAPF
SBPF

2 (Normal duty) refer to p. 97 (SA2 bearing)

2 (Normal duty) refer to p. 97 (SB2 bearing)

The stamped steel housing is used to reduce the cost and the weight. This unit is used in relatively mild shaft loading conditions.



PRESSED STEEL OVAL FLANGE UNIT
(CYLINDRICAL BORE)

SAPFL
SBPFL

2(Normal duty) refer to p. 98(SA2 bearing)

2(Normal duty) refer to p. 98(SB2 bearing)

The oval shaped stamped steel housing unit is ideal for use in limited mounting spaces where compact size is needed.

JIB INSERT BEARING FOR UNITS



- UC** 2 (Normal duty) refer to p. 99
 X (Medium duty) refer to p. 101
 3 (Heavy duty) refer to p. 102

The bearing inside diameter is a round bore. The shaft is secured to the wide inner race surface by two hexagonal set screws. The grease supply is sealed in the unit. This unit can be used in wide ranging conditions and it is the most widely used ball bearing.



- UK** 2 (Normal duty) refer to p. 103
 X (Medium duty) refer to p. 104
 3 (Heavy duty) refer to p. 105

The bearing inside diameter is tapered for mounting the shaft with a sleeve adapter. This unit is widely used on long shafts or irregular shafts where long assembly time is required. Like the UC style bearing, the grease supply is inserted and sealed in the unit. Thus, this unit can be operated safely for extended periods.



- SA** 2 (Normal duty) refer to p. 108

The eccentric groove on the outside diameter of the inner race and also on the inside diameter of the collar automatically and firmly secures the shaft to the bearing when the shaft is rotated. High quality grease is sealed in the bearing. This bearing is used in compact and light weight units.



- SB** 2 (Normal duty) refer to p. 109

This unit is a light weight version of the UC2 style bearing for use with stamped steel housing or light weight housings. High quality grease is sealed in the unit. The unit is cost effective since it has high load carrying capacity for its small size and weight.

JIB INSERT BEARING FOR UNITS

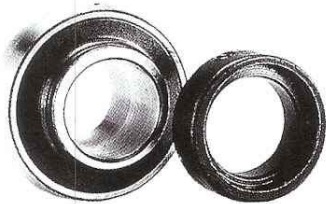
SC 2 (Normal duty) refer to p. 110



Sealed bearing with equal inner and outer race widths. This unit is designed with outside diameter of the 6200 style grooved bearing as the outer surface. This unit is widely used in roller conveyor units.

The bearing inside diameter tolerance is designed to be negative like regular bearings. Ideal press fitted assembly can be made by using the unit with Class h6 tolerance shafts.

HC 2 (Normal duty) refer to p. 100



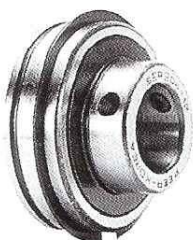
UC style bearing with eccentric self-locking collar. The eccentric wheel on the inner race and the collar automatically secures the shaft when the shaft is rotated. The bearing has high dust and moisture resistance since high quality grease is sealed in the unit. This unit can be operated in wide ranging conditions.

UR 2 (Normal duty) refer to p. 106



This unit is a sealed and grooved ball bearing unit with an extended inner race width for placement of the hexagonal set screws for mounting the shaft. Like the UC style unit, high quality grease is used to protect against dust and moisture. This unit is widely used like a regular ball bearing because of its easy shaft mounting and easy maintenance features.

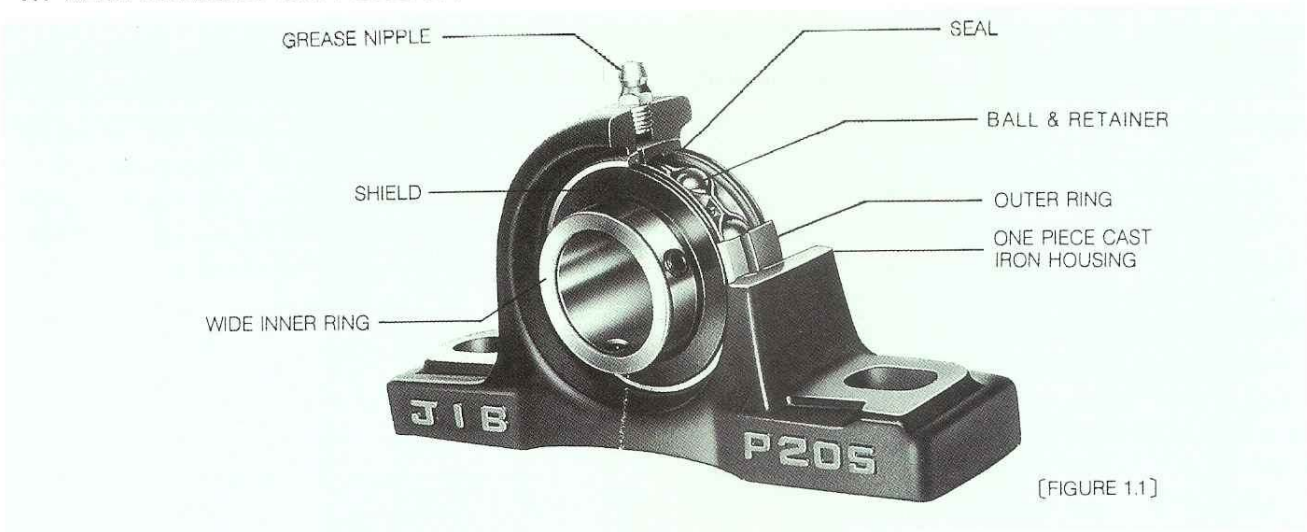
SER 2 (Normal duty) refer to p. 107



The outside diameter of the outer race has a snap ring. Hexagonal set screws are used to mount the shaft to the bearing. This unit was developed to simplify usage in complicated bearing housing like the assembly machine gear housing. Like the UC style unit, this unit bearing is resistant to dust and moisture.

1. BALL BEARING UNIT DESIGN AND SPECIAL FEATURES

1.1 BALL BEARING UNIT DESIGN



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.

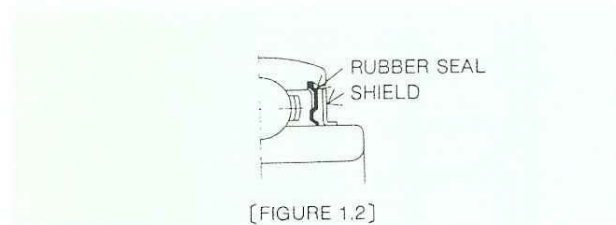
(2) Dependable high load carrying capacity

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

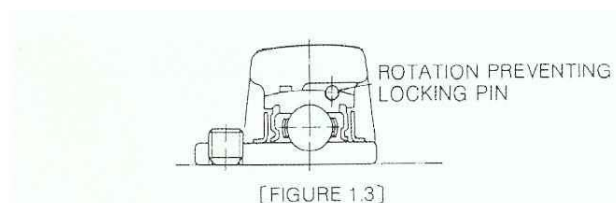
The labyrinth style grease seal is made with a rubber seal attached to the inside diameter surface of the outer race and a protective shield attached to the outside diameter surface of the inner race. The seal is made with a special synthetic rubber to minimize wear

and to provide a smooth and continuous pressure contact 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 from entering the bearing. In high dust and moisture environments, JIB developed the triple seal and the double protection method to provide excellent protection even in the most severest environments.



(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.



(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.

(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

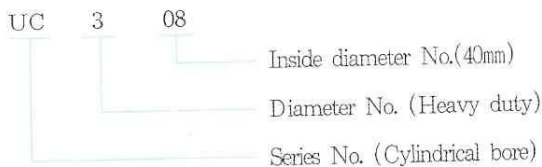
JIB has been producing abundant variety of bearing styles for all types of situations and conditions. Each bearing unit is designed and produced with the long time experience and skills of the company combined with the many special requests and feedbacks provided by our customers. JIB has strived to 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.

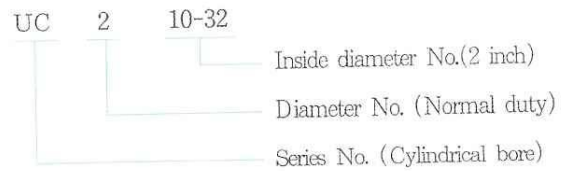
2.1 Bearing No.

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. The KS B 2049(Rolling bearing unit ball bearing) standard size numbers are shown in Table 2.1.

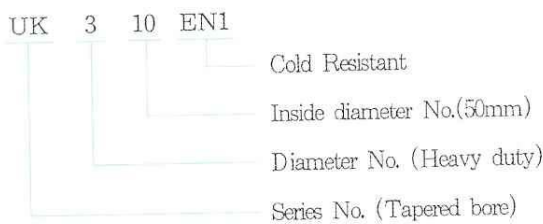
EXAMPLE 1)



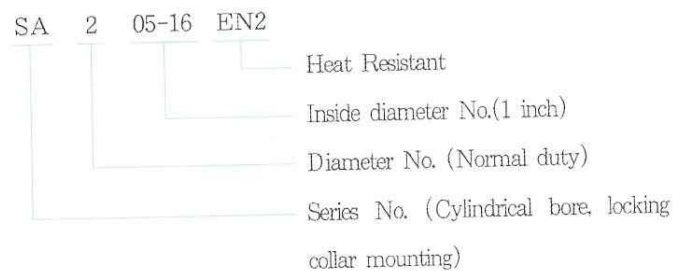
EXAMPLE 2)



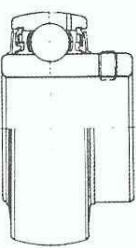
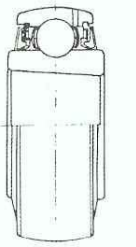
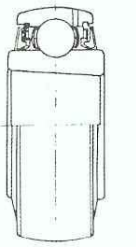
EXAMPLE 3)



EXAMPLE 4)



(TABLE 2.1) KS standard sizes

Bearing Type	Bearing diameter No.	Bearing inside diameter No.			
		in mm		in inch	
		Inside diameter No.	Inside diameter	Inside diameter No.	Inside diameter
 <p>UC Cylindrical bore</p>	<p>2 (normal duty)</p>	01	12	01-8	1/2
		02	15	02-10	5/8
		03	17		
		04	20	04-12	3/4
		05	25	05-14	7/8
				05-16	1
		06	30	06-18	1 1/8
		07	35	07-20	1 1/4
				07-22	1 3/8
		08	40	08-24	1 1/2
 <p>UK Tapered bore</p>	<p>X (medium duty)</p>	09	45	09-26	1 5/8
				09-28	1 3/4
		10	50	10-32	2
		11	55	11-32	2
		12	60	12-36	2 1/4
				12-39	2 7/16
		13	65	13-40	2 1/2
		14	70	14-44	2 3/4
		15	75	15-48	3
		16	80		
 <p>UK Tapered bore</p>	<p>3 (heavy duty)</p>	17	85	17-52	3 1/4
		18	90	18-56	3 1/2
		19	95	19-60	3 3/4
		20	100	20-64	4
		21	105		
		22	110		
		24	120		
		26	130	26-82	5 1/8
		28	140	28-88	5 1/2

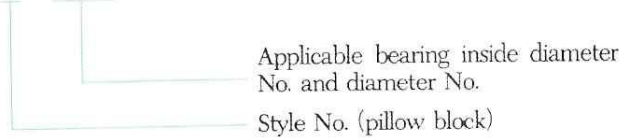
Remark: Products with Size in inches follow the JIB standards.

2.2 Housing style and housing No.

The housing style can be determined from Table 2.2 below. Housing No. represents in order, the housing style No., the applicable bearing inside diameter No. and the diameter No.

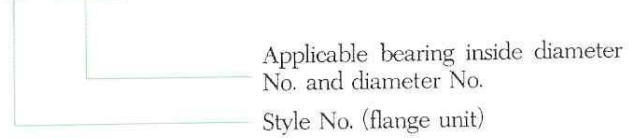
EXAMPLE 1)

P 208




EXAMPLE 2)

F 208



(TABLE 2.2) Housing styles

<p>Pillow block</p>  <p>P</p>	<p>Square flange unit</p>  <p>F</p>	<p>Square piloted flange unit</p>  <p>FS</p>
<p>High center of axis pillow block</p>  <p>PH</p>	<p>Oval flange unit</p>  <p>FL</p>	<p>Round piloted flange unit</p>  <p>FC</p>
<p>Narrow base pillow block</p>  <p>PA</p>	<p>Cartridge unit</p>  <p>C</p>	<p>Take-up unit</p>  <p>T</p>
<p>Pressed steel pillow block</p>  <p>PP</p>	<p>Pressed steel flange units</p>  <p>PF</p>	<p>Pressed steel oval flange unit</p>  <p>PFL</p>

<TABLE 2.3> Unit to. examples

Style	Part No.			Style No.		Center No.	Inside diameter No.	Shaft diameter (mm)	Shaft mounting method
	Unit	Bearing	Housing	Bearing	Housing				
Pillow block(P)	UCP 205	UC 205	P 205	UC	P	2	05	25	Wrench bolt
	UKP 206	UK 206	P 206	UK	P	2	06	30	Adapter, Eccentric
	HCP 208	HC 208	P 208	HC	P	2	08	40	self-locking callar
Flange unit(F)	UCF 308	UC 308	F 308	UC	F	3	08	40	Wrench bolt
Round piloted flange unit (FC)	UCFC 210	UC 210	FC 210	UC	FC	2	10	50	Wrench bolt
Square piloted flange unit(FS)	UCFSX 05	UCX 05	FSX 05	UC	05	X	05	25	Wrench bolt
Oval flange unit(FL)	SAFL 204	SA 204	FL 204	SA	FL	2	04	20	Eccentric self-locking collar
Take-up unit(T)	UCT 202	UC 212	T 212	UC	T	2	12	60	Wrench bolt
	UKT 310	UK 310	T 310	UK	T	3	10	50	Adapter
Cartridge unit(C)	UCC 215	UC 215	C 215	UC	C	2	15	75	Wrench bolt

Remark: The style discrimination is based on KS B2050(rolling bearing unit bearing housing) standards.

3. Special purpose ball bearing units

3.1 Blower unit(classification J5)

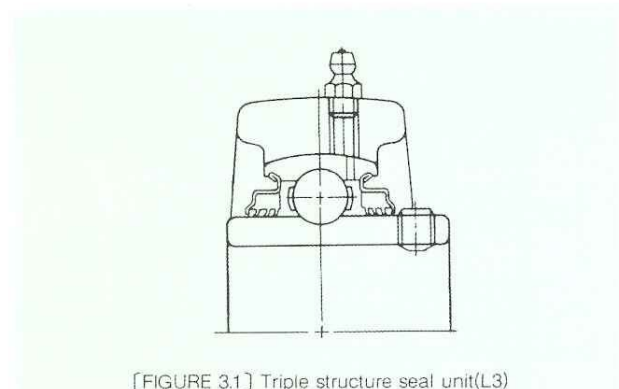
Ball bearing units for use in high speed blowers must not generate large amounts of heat, vibration or noise at high rotation speeds. Therefore, unit ball bearings for blowers must be of a high accuracy and low noise design.

Unit ball bearings for blowers(classification J5) are standardized by JIB. The best technology and designs are used by JIB in producing the bearing units for blowers. Therefore, the bearings made for blower use are the best products made by JIB with the highest quality in surface roughness, orbital shape and bearing rotation accuracy.

3.2 Dust protected and water resistant unit

(1) Triple structure seal

Triple structure seal unit is composed of a special lubricant seal structure made of synthetic rubber which is attached to a stamped steel shield. The combined piece is then attached to the outer race of the bearing. The specially designed triple lip system can effectively prevent dust and moisture from entering the bearing and therefore extend the life of the bearing. The mechanical assembly and handling of the triple structure seal unit is equivalent to the regular bearing since the seal and the bearing form a one piece structure. This triple structure seal is a new method that can be operated safely for extended periods in comparison with the double protection method seal because it does not have the locking side pressure of the double protection method.

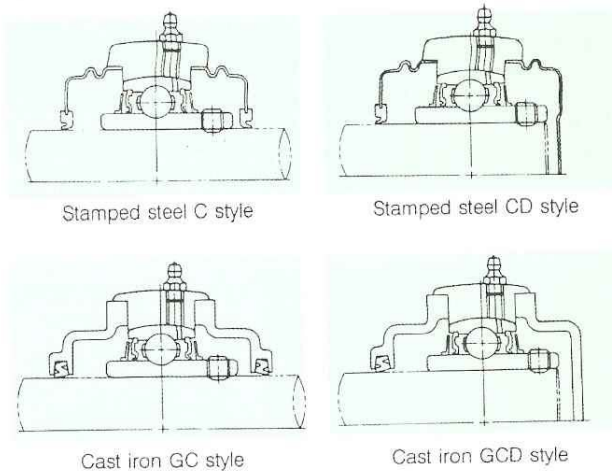


[FIGURE 3.1] Triple structure seal unit(L3)

(2) Double protection method with attached cover (C, CD, GC, GCD)

Cover attached unit is made by adding a stamped steel cover or a cast iron cover to a regular unit so that the protection method is doubled. Stable operation for extended periods is possible even in dusty and moist conditions.

The cover designs are shown in figure 3.2. There are two basic design styles with one style for through shaft units(C and GC styles) and another style for end shaft units(CD and GCD styles).



[FIGURE 3.2] Double protection method units

3.3 cold resistant and Heat resistant units(classification EN1 and EN2)

The ball bearing unit operating temperature range depends on the quality of the grease and on the quality of the oil seal rubber material used in the bearing. Normal operation temperature range for JIB ball bearing unit is from -20°C to 100°C. Heat resistant or cold resistant units should be used in high or low temperature environments outside the normal operating temperature range.

JIB manufactures the following standardized heat and cold resistant bearings shown in Table 3.1.

<TABLE 3.1> Heat resistant and cold resistant units

Classification	No.	Operating temperature range	Lubricating grease	Oil seal rubber material	Bearing clearance	
					UC	UK
Cold resistant	EN1	-43°C ~ +232°C	Super Lube(SYNCO)	Acryl runbber	Normal	C3
Heat resistant	EN2	-43°C ~ +232°C	Super Lube(SYNCO)	Acryl runbber	C4	C5

4 Ball bearing unit materials

4.1 Bearing material

The bearing material for the orbital races and the rotating ball must meet the following requirements.

- 1) Strong against fatigue and repeated stress
- 2) High strength with high hardness number, elasticity, and yield point

- 3) Good internal wear resistance
 - 4) High resistance against shock loads
 - 5) Minimum change in dimension and shape due to aging
- Typically in Japan and in other developed countries, high carbon chromium steel that exceeds the above requirements is used in bearings. Among the various high carbon chromium steels, the most widely used is the STB2 (SUJ2) which is also used by JIB in producing bearings.

<TABLE 4.1> Chemical composition of high carbon chromium bearing steel (KS D 3525)

Name	Chemical composition (%)						Mo
	C	Si	Mn	P	S	Cr	
STB2	0.95~1.10	0.15~0.35	Under 0.05	Under 0.025	Under 0.025	1.03~1.60	—
STB3	0.95~1.10	0.40~0.70	0.090~1.15	Under 0.025	Under 0.025	0.90~1.20	—

Remark: STB2 and STB3 are equivalent to JIS'S SUJ2 and SUJ3, respectively

4.2 Housing material

The housing material used is Class 3 (GC20) from KS D 4301.

Gray cast-iron steel is widely used for machine parts because the vibration absorbing capacity is greater than other metals.

<TABLE 4.2> Mechanical properties of gray cast-iron steel (KS D 4301)

Type	No.	Thickness (mm)	Diameter of testing bar(mm)	Tensile strength (kg/mm)	Travers breaking test		hardness (HB)
					Maximum load(kg)	Deflection(mm)	
Class3	GC20	over 4~8	13	over 24	over 200	over 2.0	under 255
		over 8~15	20	over 22	over 450	over 3.0	under 235
		over 15~30	30	over 20	over 900	over 4.5	under 223
		over 30~50	45	over 17	over 2,000	over 6.5	under 217

4.3 Other components materials

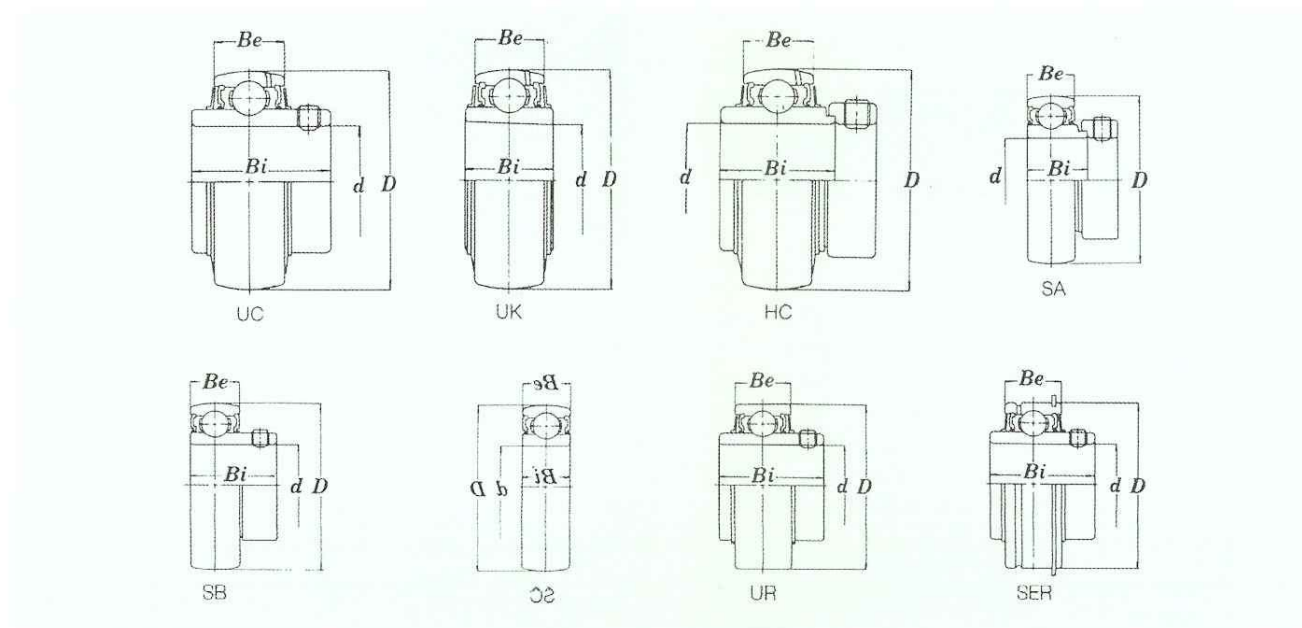
The materials for rolling bearing components are listed in Table 4.3.

<TABLE 4.3> Parts material

Component	Material	No.	Ks standard No.
Seal(heat resistant)	Acryl compound rubber		
Seal(regular)	Nitrile compound rubber	NBR	
Shield	Cold rolled carbon steel and strip	SCPI-S	KS D 3512
Cast-iron cover	Gray cast-iron, Class 3	GC20	KS D 4301
Stamped steel cover	Cold rolled carbon steel and strip	SCPI-S	KS D 3512
Hexagonal set screw	Chromium-molybdenum steel	SCM435	KS D 3711
Hexagonal spanner	Chromium-molybdenum steel	SCM435	KS D 3711
Grease nipple	Brass bar	C3604BE	KS D 5101
Eccentric self-locking collar	Machine use carbon steel	SM25C	KS D 3752
Sleeve adapter	Machine use carbon steel	SM25C	KS D 3752
Nut adapter	Machine use carbon steel	SM25C	KS D 3752
Adapter washer	Cold rolled carbon steel and strip	SCP1-S	KS D 3512

5. Ball bearing unit accuracy

Ball bearing unit accuracy are based on KS B 2049 rolling bearing unit ball bearing and KS B 2050 rolling bearing unit bearing housing standards. JIB also follows the same accuracy standards for ball bearing production.



5.1 Bearing accuracy

<TABLE 5.1> Inner race accuracy

(unit: 0.001 mm)

Nominal inside diameter, d(mm)		Inside diameter								Tolerance of inner race width Bi		Tolerance in radial run-out
		UC, HC, UR, SER, SA, SB				SC						
		over	incl.	Tolerance of dm		Tolerance of d		Tolerance of dm		Tolerance of d		
		max	min	max	min	max	min	max	min	max	min	max
10	18	+15	0	+19	-4	0	-8	+3	-11	0	-120	15
18	31.75	+18	0	+22	-4	0	-10	+3	-13	0	-120	18
31.75	50.8	+21	0	+25	-5	0	-12	+3	-15	0	-120	20
50.8	80	+24	0	+28	-6	-	-	-	-	0	-150	25
80	120	+28	0	+32	-7	-	-	-	-	0	-200	30
120	180	+33	0	+37	-8	-	-	-	-	0	-250	35

Remark: dm is an average diameter calculated from two point measurement of the minimum and maximum diameter.

<TABLE 5.2> Accuracy of inside diameter for Blower bearing unit(J5)

(unit: 0.001mm)

Nominal inside diameter, D		Tolerance of dm		Tolerance of d	
over	incl.	max	min	max	min
10	18	+13	0	+16	-3
18	30	+13	0	+16	-3
30	50	+13	0	+18	-5
50	80	+15	0	+23	-5
80	120	+18	0	+25	-7
120	180	+23	0	+30	-7

Remark: dm is an average diameter calculated from two point measurement of the minimum and maximum diameter.

<TABLE 5.3>

Outer race accuracy

(unit: 0.001mm)

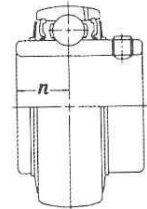
Nominal outside diameter, D(mm)		Tolerance of outside diameter, Dm		Tolerance in radial movement
over	incl.	max	min	max
30	50	0	-11	20
50	80	0	-13	25
80	120	0	-15	35
120	150	0	-18	40
150	180	0	-25	45
180	250	0	-30	50
250	315	0	-35	60

- Remark: 1) The low side tolerance number for the bearing outside diameter Dm in the table does not apply when the distance from the outer race side is less than 1/4 of the outer race width.
 2) Dm is an average diameter calculated from two point measurement of the maximum and minimum diameter.

<TABLE 5.4> Distance between the center axis of the outer race to the inner race, n

(unit: 0.001mm)

Nominal inside diameter, d(mm)	Tolerance of n
under 50	±200
over 50~80	±250
over 80~120	±300
over 120~	±350

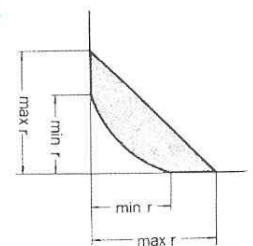


<TABLE 5.5>

Chamfering No.

(unit: mm)

Chamfering radius r. No.	r	
	max	min
1	1.5	0.6
1.5	2	1
2	2.5	1.5
2.5	3	2
3	3.5	2.5
3.5	4	2.5
4	4.5	3
5	6	4



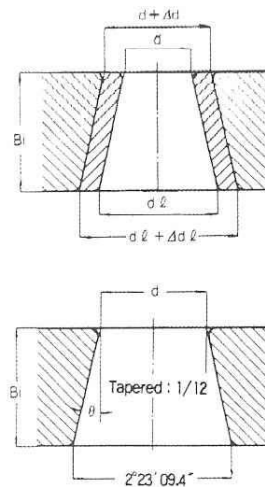
Remark: The Chamfering shape of the race ring should fall inside the shaded area shown in the figure. The shaded area does not represent the actual shape of the Chamfering race.

<TABLE 5.6>

Tapered bore accuracy (unit: 0.001mm)

Nominal inside diameter, d(mm)		Tolerance of d		Tolerance of ($\Delta d \ell - \Delta d$)	
over	incl	max	min	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

- Remarks: 1) Taper tolerance is defined as tolerance of ($\Delta d \ell - \Delta d$), $\Delta d \ell$ and Δd each represents the difference between the tolerances of the large and small end of the taper.
 2) $d \ell$ is calculated by the following equation. $d \ell = d + 0.08333 B_i$, Here B_i : Inner race width Taper 1/12



5.2 Housing Accuracy

JIB housing's spherical inside diameter tolerance listed in the table below are based on class H7 of the KSB2050 standards.

<TABLE 5.7>

Classes for housing spherical inside diameter and their tolerances

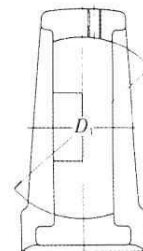
(unit: 0.001mm)

Nominal spherical inside diameter, D ₁ (mm)		Tolerance class H7				Tolerance class J7				Tolerance class K7			
		tolerance of D _{1m}		tolerance of D ₁		tolerance of D _{1m}		tolerance of D ₁		tolerance of D _{1m}		tolerance of D ₁	
over	incl.	max	min	max	min	max	min	max	min	max	min	max	min
30	50	+25	0	+30	-5	+14	-11	+19	-16	+7	-18	+12	-23
50	80	+30	0	+36	-6	+18	-12	+19	-18	+9	-21	+15	-27
80	120	+35	0	+42	-7	+22	-13	+29	-20	+10	-25	+17	-32
120	180	+40	0	+48	-8	+26	-14	+34	-22	+12	-28	+20	-36
180	250	+46	0	+55	-9	+30	-16	+39	-25	+13	-33	+22	-42
250	315	+52	0	+62	-10	+36	-16	+46	-26	+16	-36	+26	-46

- Remarks: 1) D_{1m} is calculated by the equation below where, D_{1max} and D_{1min} are maximum and minimum measurements of D_1 .

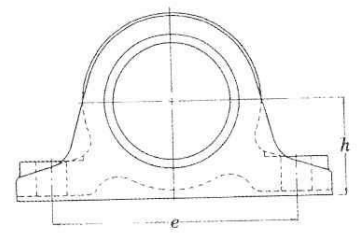
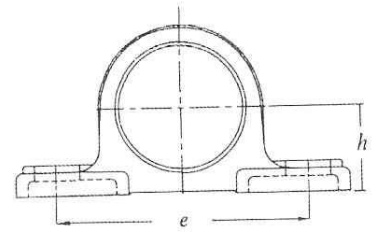
$$D_{1m} = \frac{D_{1max} + D_{1min}}{2}$$

- 2) JIB unit ball bearings have locking pins to prevent rotation of the outer race and therefore meets the H7 classification. Depending on the usage, SA and SB style housings which do not have locking pins are commonly classified as J7. In situations where shock loading and unbalanced operation is a common occurrence, J7 or K7 classified units are needed for high strength and for preventing friction.



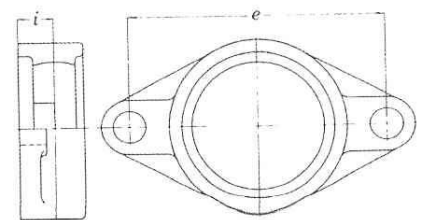
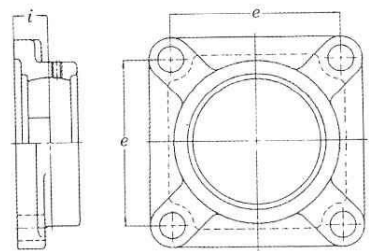
(TABLE 5.8)
pillow block(P, PA, IP, LP, PE, PH) tolerances (unit:0.001mm)

Housing No.			Tolerance of h	Tolerance of e, for PA and IP units	
203			±150	±500	
204					
205	305	X05			
206	306	X06			
207	307	X07			
208	308	X08			
209	309	X09			
210	310	X10			
211	311	X11			
212	312	X12			±200
213	313	X13			
214	314	X14			
215	315	X15			
216	316	X16			
217	317	X17			
218	318	X18			
	319	—	±300		
	320	X20			
	321				
	322				
	324				
	326				
	328				



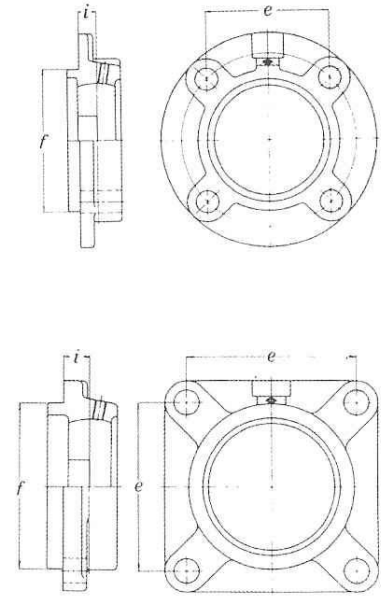
(TABLE 5.9)
Flange unit(NF, NFL, LF, F, FL) tolerances (unit:0.001mm)

Housing No.			Tolerance of e	Tolerance of i
203			±700	±500
204				
205	305	X05		
206	306	X06		
207	307	X07		
208	308	X08		
209	309	X09		
210	310	X10		
211	311	X11		
212	312	X12		
213	313	X13		
214	314	X14		
215	315	X15		
216	316	X16		
217	317	X17		
218	318	X18		
	319	—		
	320	X20		
	321			
	322			
	324			
	326			
	328			



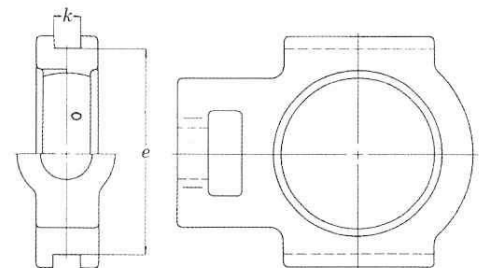
〈TABLE 5.10〉 Piloted flange unit(FC, FS) tolerances (unit:0.001mm)

Housing No.	Tolerance of e	Tolerance of i	Tolerance of Pilot lip run-out (maximum)	Tolerance of f					
				FC2		FCX		FS3	
				max	min	max	min	max	min
204						—	—	—	—
205				0	-46	0	-46	0	-46
206									
207	±700	±500	200			0	-54	0	-54
208									
209				0	-54				
210									
211						0	-63	0	-63
212									
213				0	-63				
214									
215									
216								0	-72
217									
218				0	-72				
319	±1000	±800				0	-72		
320									
321								0	-81
322			400	—	—	—	—		
324									
326								0	-89
328									



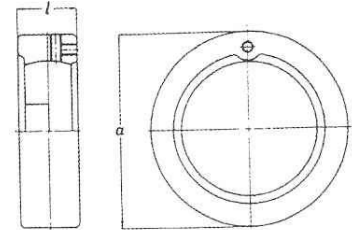
〈TABLE 5.11〉 Take-up(T) tolerances (unit:0.001mm)

Housing No.	Tolerance of k	Tolerance of e	Tolerance of parallel grooves on two sides(maximum)
204			
205			
206			
207	+200	0	
208	0	-500	500
209			
210			
211			
212			
213			
214			600
215			
216			
217	+300	0	
218	0	-800	
319			
320			
321			700
322			
324			
326			
328			800



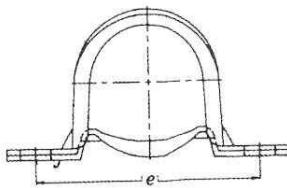
<TABLE 5.12> Cartridge unit (C) tolerances (unit:0.001mm)

Housing No.	Tolerance of a						Tolerance of outside diameter run-out(maximum)	Tolerance of <i>l</i>	
	2		3		X				
	max	min	max	min	max	min			
204									
205	305	X05	0	-30	-	-	-	200	±200
206	306	X06							
207	307	X07							
208	308	X08	0	-35	0	-35			
209	309	X09	0	-35				300	
210	310	X10							
211	311	X11			0	-40			
212	312	X12	0	-40					
213	313	X13						400	
214	314	X14							
215	315	X15							
216	316	X16							
217	317	X17	-	-	0	-46	-		±300
218	318	X18							
	319	-							
	320	X20			0	-52			
	321								
	322								
	324								
	326								
	328				0	-57			



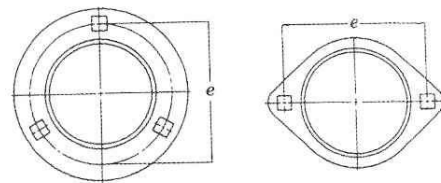
<TABLE 5.13> Pressed steel pillow block(pp) tolerances

Housing No.	Tolerance of e
PP203	±400
PP204	
PP205	
PP206	
PP207	



<TABLE 5.14> Pressed steel flange unit (PF, PFL) tolerances

Housing No.(PF, PFL)	Tolerance of e
203	±400
204	
205	
206	
207	



The dimensional accuracies of permissible machining parts, castings and press Working Parts which are not prescribed in TABLE 5-7 ~ 5-14 follow KS STANDARDS listed in the below TABLE

Dimensional accuracies which are not prescribed individually in dimensional accuracy of Housings

part	KS Standard No.	Grade
PERMISSIBLE MACHINING Parts	KS B 0412 permissible machining deviations in dimensions without tolerance indication	regular
Castings parts	KS B 0250 casting-system of dimensional tolerance	CT9
parts formed by press working	KS B 0413 general dimensional tolerance for parts formed by press working	C

5.3 Bearing radial clearance

Bearing radial clearance has a large influence on the operating characteristics of the bearing unit such as bearing life, noise, vibration and heat generation. Therefore, full consideration of the radial clearance at the desired operating temperature should be made when selecting a bearing unit. The ball bearing unit radial clearance is standardized based on the reference table of KSB2023 (deep grooved ball bear-

ing). JIB'S general purpose bearing is classified as C3. Consideration is based on the regular clearance for the Cylindrical bore style unit and the sleeve inner race expansion for the tapered bore style unit. Specially ordered low temperature bearing should be of a class greater than C3. Class C2 bearing should be used in fan units or high speed operation bearings.

<TABLE 5.15>

Bearing radial clearances

(unit : 0.001mm)

Nominal bearing inside diameter, d(mm)		Clearance									
		C2		regular		C3		C4		C5	
over	incl.	min	max	min	max	min	max	min	max	min	max
6	10	0	7	2	13	8	23	14	29	20	37
10	18	0	9	3	18	11	25	18	33	25	45
18	24	0	10	5	20	13	28	20	36	28	48
24	30	1	11	5	20	13	28	23	41	30	53
30	40	1	11	6	20	15	33	28	46	40	64
40	50	1	11	6	23	18	36	30	51	45	73
50	65	1	15	8	28	23	43	38	61	55	90
65	80	1	15	10	30	25	51	46	71	65	105
80	100	1	18	12	36	30	58	53	84	75	120
100	120	2	20	15	41	36	66	61	97	90	140
120	140	2	23	18	48	41	81	71	114	105	160

Remark: Radial Clearance No. is measured at temperature of 20°C without any external forces acting on any parts of the bearing.

6. Shaft selection

Appropriate shaft selection is an important factor in using the ball bearing unit to its fullest capacity. In the round bore design bearing unit, the shaft is mounted to the inner race by two hexagonal set screws positioned 120degrees apart. The tolerance of the shaft used is listed in Table 6.1 In the table, classifications h7 and h8 are for regular use and classifications j6 and h6 are for high rotation speed use. Shaft tolerances in Table 6.2 should be used for blowers and high

rotation speed bearings. Shaft tolerances in Table 6.3 should be used for high loading and shock loading conditions to prevent flaking and wrench bolt expansion caused by vibrations.

Table 6.1 tolerances can also be used as the basis for the UK bearings. For secure mounting with a nut h9 bearings in Table 6.4 is appropriate.

For reference, Table 6.5 shows a list of r and shaft diameter for shaft with a rounded

<TABLE 6.1>

Round bore style bearing shaft tolerances

(unit : 0.001mm)

Shaft outside diameter (mm)	Tolerance			
	dn ≤ 60000	dn ≤ 100000	dn ≤ 120000	dn > 120000
	h8	h7	h6	j6
over 10~18	0~-27	0~-18	0~-11	+8~-3
over 18~30	0~-33	0~-21	0~-13	+9~-4
over 30~50	0~-39	0~-25	0~-16	+11~-5
over 50~80	0~-46	0~-30	0~-19	+12~-7
over 80~120	0~-54	0~-35	0~-22	+13~-9
over 120~180	0~-63	0~-40	0~-25	+14~-11

Remark: dn = bearing inside diameter, d(mm) x rotation speed, n(rpm)

〈TABLE 6.2〉 High speed blower bearing's shaft tolerances
(unit: 0.001mm)

Shaft outside diameter(mm)	Shaft tolerance	
	h5	j5
over 10~ 18	0~-8	+5~-3
over 18~ 30	0~-9	+5~-4
over 30~ 50	0~-11	+6~-5
over 50~ 80	0~-13	+6~-7
over 80~120	0~-15	+6~-9
over 120~180	0~-18	+7~-11

Remark: Blower bearing unit

Blower bearing unit should generate little heat and noise since they are commonly operated at high speeds.

Therefore, proper shaft must be selected to operate near the maximum speed of the blower unit. The shaft should have good roundness and the bearing should be of high accuracy as shown in Table 6.2

〈TABLE 6.3〉 Cylindrical bore bearing shaft tolerance (High load and shock load use)
(unit: 0.001mm)

Shaft outside diameter (mm)	Tolerance		
	m6	m7	m8
over 10~ 18	+18~+7	+19~+1	+12~+1
over 18~ 30	+21~+8	+23~+2	+15~+2
over 30~ 50	+25~+9	+27~+2	+18~+2
over 50~ 80	+30~+11	+32~+2	+21~+2
over 80~120	+35~+13	+38~+3	+25~+3
over 120~180	+40~+15	+43~+3	+28~+3

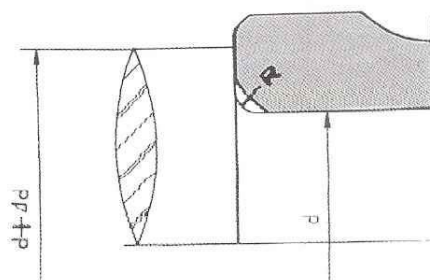
Remark: The allowed tolerance on the radial clearance must be taken into account when the shaft is inserted into the bore.

〈TABLE 6.4〉 Tapered bore bearing shaft tolerance
(unit: 0.001mm)

Shaft outside diameter (mm)	Tolerance	Tolerance of roundness (maximum)
	h9	
over 18~ 30	0~-52	13
over 30~ 50	0~-62	17
over 50~ 80	0~-74	20
over 80~120	0~-87	23
over 120~180	0~-100	31

〈TABLE 6.5〉 The stair, r and shaft diameter number
(unit: mm)

Bearing No.	R(max)	Δd(min)	Bearing No.	R(max)	Δd(min)	Bearing No.	R(max)	Δd(min)
UC201-203	0.6	5	UCX05-X06	1.0	6	UC305-306	1.0	7
UC204-206	1.0	6	UCX07-X10	1.0	7	UC307-309	1.5	9
UC207-210	1.0	7	UCX11-X15	1.5	9	UC310-311	2.0	10
UC211-215	1.5	9	UCX16-X18	2.0	10	UC312-316	2.0	12
UC216-218	2.0	10	UCX20	2.0	12	UC317-324	2.5	14



7. Ball bearing unit operating temperature

7.1 Operating temperature range

The ball bearing unit's operating temperature range is based on the minimum and the maximum allowable temperature of the bearing grease and also the seal.

Normal ball bearing unit's operating temperature range is from approximately -20°C to 100°C . In order to operate outside this range, proper grease type must be used for the intended temperature of operation. Also the sealing method and the radial clearance must be taken into account for proper operation.

7.2 Bearing temperature increase

Increase in bearing temperature is caused by the generation of heat during bearing rotation from internal friction and resistance of grease in the unit. The heat that raises the bearing temperature is from the amount of heat that is left over in the bearing after some of the heat is transferred out of the bearing unit by the housing, the shaft and the body of the machine. Some of the heat is even fanned away by the rotating motion of the bearing. Since the bearing temperature is linked to the ability of the bearing unit to exhaust some of the heat to the surrounding, the ambient temperature around the bearing unit also has an affect on the amount temperature increase that the bearing unit exhibits.

The bearing temperature typically reaches maximum after about 30 minutes to 2 hours of operation. Upon continued operation, the temperature then drops by about 3°C to 5°C to reach the final equilibrium temperature, This drop in temperature from the maximum temperature is due to the stabilization of the grease in the bearing after the grease reaches the maximum temperature and is then allowed to reach equilibrium consistency and quantity inside the bearing. Some of the grease may leak out of the bearing before the unit reaches equilibrium condition.

Normally, the standard bearing temperature increase is about 30°C more than the surrounding temperature for regular operations with regularly sealed bearings. The temperature increase is 35°C more than the surrounding temperature for the triple seal method bearings. If the bearing temperature increase is greater than these amounts, the bearing operation method or the bearing itself must be checked for improper or irregular conditions.

7.3 Temperature change and radial clearance

The temperature of the inner race and the rotating element is commonly higher than the outer race. The temperature difference between the inner and outer race is large if the operation of the machine involves some heating of the shaft and some cooling of the bearing housing.

The temperature difference between the inner and the outer race reduces the radial clearance of the bearing. The regular radial clearance is good only for normal conditions. If the temperature difference is large due to the heat transfer conditions, large clearance bearings of C3 or C4 classes should be used.

The reduction of radial clearance due to temperature difference can be calculated by the following equation.

$$\delta t \doteq 12.5 \times 10^{-6} t \left(\frac{4D+d}{5} \right) \dots\dots\dots(7.1)$$

Here, t: Temperature difference between the inner and the outer race($^{\circ}\text{C}$)

d: Inner race inside diameter (mm)

D: Outer race outside diameter (mm)

The axial clearance can also be insufficient when the bearing units are mounted far apart along the shaft. In this case, the axial expansion and ball bearing axial clearance must be carefully matched for proper operation. The shaft expansion, $\Delta \ell$, can be calculated by the following equation.

$$\Delta \ell = \alpha \cdot \Delta t \cdot \ell \dots\dots\dots(7.2)$$

here, α : expansion coefficient. ($1/^{\circ}\text{C}$)

t: temperature difference ($^{\circ}\text{C}$)

ℓ : distance between units (mm)

8. Bearing life

8.1 Life

Bearing life is defined for each bearing as the total number of revolutions made by the bearing before failure. The failure is usually due to rolling fatigue on the orbiting races or on the balls. It can also be defined as the total number of hours of operation before failure when the bearing is operated at a constant speed.

8.2 Rated life

Rated life for a bearing unit is defined from a set of identical bearings operating in identical conditions. It is the total number of revolutions (or number of hours when operated at the same speed) made by the bearing before failure that is exhibited by 90% of the bearing in the tested set.

8.3 Dynamic radial load rating

Dynamic radial load rating for a bearing is determined by applying a constant radial load during rotation of the inner race with the outer race in fixed position. It is the radial load in constant direction and magnitude that gives the bearing a rated life of 1 million revolutions.

In other words, the dynamic radial load rating for a bearing is the maximum allowable load that gives the bearing a rated life of 1 million revolutions.

8.4 Relationship between rated life and dynamic radial load rating

The following relationship exists for the ball bearing unit's rated life, the dynamic radial load rating(or basic load rating) and the actual load on the bearing.

$$L = \left(\frac{C}{P}\right)^3 \dots\dots\dots (8.1)$$

Here, L : Rated life(unit : 10⁶ revolution)
 P : Bearing load (equivalent radial load) (kgf)
 C : dynamic radial load rating (kgf)

Or, since the rated life is easier to express in terms of operating time rather than in number of revolutions, the following equation applies.

$$L_h = \frac{10^6 \cdot L}{60 \cdot n} = \frac{10^6}{60 \cdot n} \cdot \left(\frac{C}{P}\right)^3 = \frac{50000}{3 \cdot n} \cdot \left(\frac{C}{P}\right)^3 \dots\dots (8.2)$$

Here, n : Rotation speed (rpm)
 L_h : Reted life (hr)

The above equation can be expressed in easier forms for use in real designing problems.

$$L_h = 500 \cdot f_h \cdot f_n \dots\dots (8.3)$$

$$f_h = \frac{C}{P} \cdot f_n \dots\dots (8.4)$$

$$f_n = \left(\frac{33.3}{n}\right)^{\frac{1}{3}} \dots\dots (8.5)$$

Here, f_h and f_n are life and speed factors, respectively. The rated life time can be approximately determined from f_h, f_n and rotation speed by referring to the scale shown in figure 8.1

8.5 Static radial load rating

Static radial load rating is the static load that permanently deforms the contact point (maximum stress point) between the race diameter and the ball by 0.0001 times the ball diameter.

In actually selecting a bearing for different types of operating conditions, the safety factors listed in Table 8.1 should also be included in the calculation.

$$P_o \max = \frac{C_o}{S_f} \dots\dots (8.6)$$

Here, P_o(max): Maximum static equivalent radial load (kgf)

C_o : Static radial load(kgf)

S_f : Safety factor

(TABLE 8.1) Safety factor (S_f)

Operating condition	S _f
Normal operation with small amount of permanent deformities	0.5~1.0
Normal operation	1.0~1.2
Operation with vibration and shock	1.5~2.5
Operation requiring low noise	2.0~3.0

8.6 Equivalent radial load

The total load on the bearing is made of the radial load directed in the perpendicular direction of the shaft axis, and the thrust load directed in the axial direction of the shaft axis. The load, P, used in the calculation of rated life is only the radial component of the load.

But, in real situations where a combination of radial and thrust load is applied to the bearing, both loads are combined and converted to a single basic load for convenience in calculation and manipulation. This basic load is called the equivalent radial load and it is determined by the following equation.

$$P_r = X V F_r + Y F_a \dots\dots (8.7)$$

Here, F_r : Actual radial load (kgf)

F_a : Actual thrust load (kgf)

X : Radial factor, Y : thrust factor, V : Speed factor

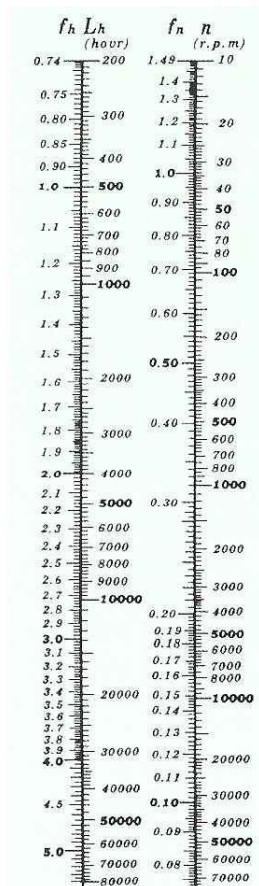
(TABLE 8.2) X, Y and V factors

Fa / Co	V		Fa/VFr > e		e
	Inner race	Outer race	X	Y	
0.014	1.0	1.2	0.56	2.30	0.19
0.028				1.99	0.22
0.056				1.71	0.26
0.084				1.55	0.28
0.11				1.45	0.30
0.17				1.31	0.34
0.28				1.15	0.38
0.42				1.04	0.42
0.56				1.00	0.44

Remarks : 1) C_o = Static radial load (kgf)

2) When $\frac{F_a}{V \cdot f_r} \leq e$, then X=1 and y=0

3) If the exact number of $\frac{F_a}{C_o}$ is not listed in Table 8.2, use interpolation to determine the factor quantity.



[FIGURE 8.1]

8.7 Static equivalent radial load

Static equivalent radial load is the actual load that is required to permanently deform the maximum contact stress point between the race wheel and the ball. The static equivalent radial load is determined by taking the maximum value from the following two equations.

$$P_o = X_o F_r + Y_o F_a \dots\dots(8.9)$$

$$P_o = F_r \dots\dots(8.9)$$

Here, P_o : Static equivalent radial load (kgf)

F_r : Actual radial load (kgf)

F_a : Actual thrust load (kgf)

X_o : Static radial factor

Y_o : Static thrust factor

The Commonly used Values for X_o and Y_o are 0.6 and 0.5 respectively

8.8 Average load

The average load is used to easily calculate the life time of the bearing which is equal to the actual life time when the bearing is operating with pulsating loads

The average load can be calculated by the method in equation 8.10 if the actual load and the total number of revolution is known (Figure 8.2)

$$P_m = 3 \sqrt{\frac{\sum_i (P_i^2 \cdot N_i)}{\sum_i N_i}} \dots\dots(8.10)$$

Here,

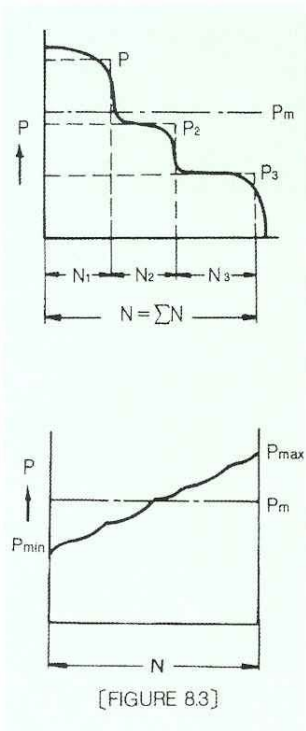
P_m : Average load(kgf)

P_i : Load(kgf)

N_i : Total number of revolutions with P_i load

If the load is changed monotonically and continuously as shown in Figure 8.3, the average load is calculated by equation 8.11

$$P_m = \frac{P_{min} + 2 \cdot P_{max}}{3} \dots\dots(8.11)$$



[FIGURE 8.3]

8.9 Temperature dependence of radial load rating

If the rolling bearing unit is operated at high temperatures above 120°C, the bearing material's degree of hardness is reduced and thus the radial load rating is also reduced. In turn, the rated life is also reduced at high temperature operations. The temperature dependence of the radial load rating is shown in equation 8.12.

$$C_t = f_t \cdot C \dots\dots(8.12)$$

Here, C_t : Dynamic radial load rating at fixed operating temperature (kgf)

f_t : Temperature factor (reducing factor for radial load rating)

C : Dynamic load rating (kgf)

<TABLE 8.3> Temperature factor (f_t)

Bearing temperature(°C)	125	150	175	200	225	250
Temperature factor (f_t)	0.95	0.90	0.85	0.75	0.65	0.6

9. Bearing load calculation

A load on a bearing is commonly produced by the weight of the supporting structure, weight of the shaft itself, power transmission of gear or belt, and loads generated by the operation of the machine. Some loads can be theoretically calculated while others are very difficult to calculate.

In addition, machine operation is usually accompanied by vibration and shocks. These affects make accurate calculation of the applied load very difficult. Therefore, in order to determine the bearing load more accurately, many calculation factors determined from experience are multiplied to the calculated loads.

9.1 Load factor

The real load on a bearing is usually greater than the calculated value because of vibrations and shocks.

Therefore, the real applied load is determined by multiplying the calculated load with load factors.

$$\text{Bearing load} = \text{Load factor}(f_w) \times \text{calculated load} \dots\dots(9.1)$$

<TABLE 9.1> Load factors

Load Condition	f_w	Application example
Smooth operation with no shocks	1.0~1.2	Electrical machines, compressed air machines
Operation with small shocks	1.2~1.5	Power transmission, metallic machines, building machines, moving machines
Operation with frequent vibrations and shocks	1.5~3.0	Construction machines, rolling machines, agricultural machinery

9.2 Belt or chain drive load during rotation

The following method is used when belt or chain is used to transmit power. Added moment M is

$$M=97400 \frac{H}{n} \text{ (Kg-cm) } \dots\dots(9.2)$$

Effective transmission power P is

$$P= \frac{M}{r} \text{ (Kg) } \dots\dots(9.3)$$

Here H : transmission horse power (KW)
 n : rotation speed (rpm)
 r : effective radius of pulley or sprocket wheel

(TABLE 9.2) Belt factor, fb

Belt type	fb
V belt	2.0~2.5
Plane belt(with tension pulley)	2.5~3.0
plane belt	4.0~5.0
Silk belt	3.5~4.5

Remark: 1. The effective transmission power, P, for chain rotation applies when chain factor is from fc=1.25 to 1.5.

2. Take the larger numbers for fb and fc for slow speed operation and for operation with short axis to axis distance.

9.3 Gear rotation load

The calculation method for gear load is different for different styles of gear. The following method applies for the simplest style spur gear.

The gear moment M is,

$$M=97400 \frac{H}{n} \text{ (Kg-cm) } \dots\dots(9.4)$$

In figure 9.1, tangential force P1 is,

$$P1= \frac{M}{r} \text{ (Kg) } \dots\dots(9.5)$$

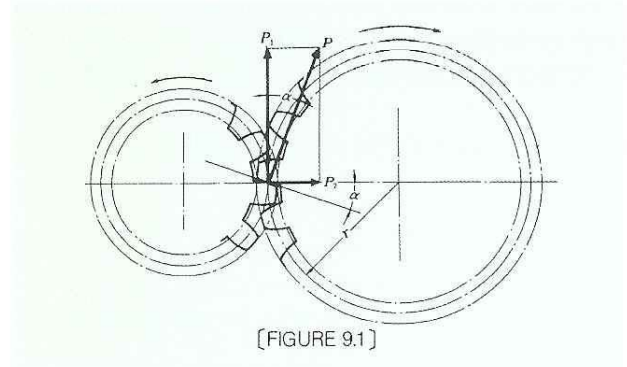
Perpendicular force P2 is,

$$P2=P1 \cdot \tan\alpha \dots\dots(9.6)$$

Therefore, theoretical total force P applied to the bearing is calculated by

$$P= \sqrt{P1^2 + P2^2} = \frac{P1}{\cos\alpha} \dots\dots(9.7)$$

The actual applied load on the bearing must be calculated by multiplying the gear factor, fg, listed in table 9.3. The gear factor is based on the teeth angle and the overall quality of the gear.



(TABLE 9.3) Gear factor, fg

Gear type	fg
Precision gear (both pitch and dimension error are less than 0.02mm)	1.05~1.1
Regular gear (both pitch and dimension error are from 0.02 to 0.1mm)	1.1~1.3

Actual bearing load P is calculated by multiplying the theoretically calculated load Po, with the applicable rotation factor (fb, fc, fg) and load factor fw.

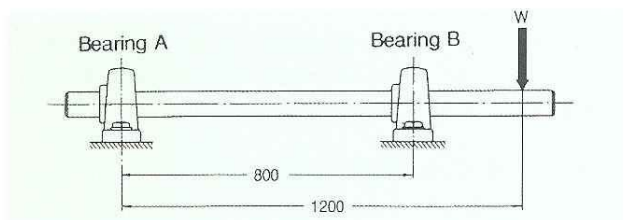
For example, for belt rotation $P=fb \cdot fw \cdot Po \dots(9.8)$

for chain rotation $P=fc \cdot fw \cdot Po \dots(9.9)$

for gear rotation $P=fg \cdot fw \cdot Po \dots(9.10)$

10. Ball bearing unit selection calculation examples

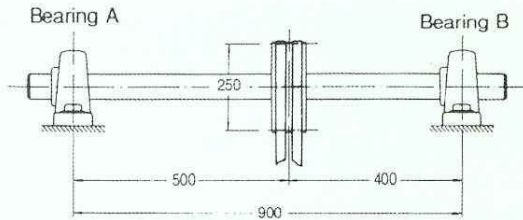
(Example 1) As shown in the drawing, radial load w=500 kgf is applied to the shaft. What is the applied load on bearing A and B?



Solution) $W_a = \frac{1200-800}{800} \times 500 = 250(\text{Kg})$

$W_b = \frac{1200}{800} \times 500 = 750(\text{Kg})$

(Example 2) As shown in the drawing, the shaft is rotated by a V-belt with transmission power $H=7.5\text{KW}$, shaft speed $n=500\text{ rpm}$, and pulley pitch diameter $d=250\text{mm}$. what is the applied load on bearing A and B?



Solution) Rotating moment

$$M = 97400 \times \frac{H}{n}$$

$$= 97400 \times \frac{7.5}{500} = 1461 (\text{Kg} - \text{cm})$$

Effective transmission power P for the V-belt is,

$$P = \frac{M}{r} = \frac{1461}{25/2} = 116.8 (\text{Kg})$$

Now, the belt factor f_b for the above belt is listed in Table 9.2 is 2.5 and the load factor f_w listed in Table 9.1 is 1.2. Then, the real applied force, P , on the bearing is.

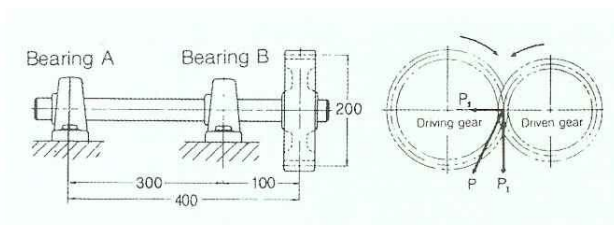
$$P = 2.5 \times 1.2 \times 116.8 = 350.4 (\text{Kg})$$

Therefore, applied force on bearing A and B are

$$W_A = \frac{400}{900} \times 350.4 = 155.7 (\text{Kg})$$

$$W_B = \frac{500}{900} \times 350.4 = 194.7 (\text{Kg})$$

(Example 3) As shown in the drawing, the shaft is rotated by a spur gear with transmission power $H=5.5\text{KW}$, shaft speed $n=500\text{ rpm}$, pitch diameter $d=200\text{ mm}$ and teeth pressure angle $\alpha=14^\circ 30'$. What is the applied load on bearing A and B?



Solution) Rotating moment M on the gear is

$$M = 97400 \times \frac{H}{n}$$

$$= 97400 \times \frac{5.5}{500} = 1071.4 (\text{Kg} - \text{cm})$$

Tangential force P_1 is

$$P_1 = \frac{M}{r} = \frac{1071.4}{10} = 107.1 (\text{Kg})$$

Perpendicular force P_2 is

$$P_2 = P_1 \tan \alpha = 107.1 \times \tan 14^\circ 30' = 27.7 (\text{Kg})$$

Therefore, total applied force P on the gear is

$$P = \sqrt{P_1^2 + P_2^2} = \sqrt{107.1^2 + 27.7^2} = 110.6 (\text{Kg})$$

Assuming that the gear factor $f_g=1.2$ and the load factor $f_w=1.3$, the real applied force W on the shaft is

$$W = 1.2 \times 1.3 \times 110.6 = 172.5 (\text{Kg})$$

Therefore, the applied force on bearing A and B are

$$W_A = \frac{100}{300} \times 172.5 = 57.5 (\text{Kg})$$

$$W_B = \frac{400}{300} \times 172.5 = 230 (\text{Kg})$$

(Example 4) What is the bearing life when UC313 is operated with radial load $F_r=700\text{ Kgf}$, thrust load $F_a=480\text{ Kgf}$ and shaft speed $n=1,200\text{ rpm}$? Assume ideal operating conditions.

Solution) The basic static load C for UC313 is listed in the catalog as $C=9270\text{ kgf}$. The applied equivalent radial load P_r on the bearing is $P_r=X V F_r+Y F_a$. Here, the radial factors are $X=0.56$ and $V=1.0$

Thrust factor is

$$F_a / C_0 = \frac{480}{5980} = 0.0803, \quad Y = 1.55$$

$$P_r = 0.56 \times 1.0 \times 700 + 1.55 \times 480 = 392 + 744 = 1136 (\text{Kg})$$

Therefore, lifetime L_h is

$$L_h = \frac{50000}{3n} \left(\frac{C}{P} \right)^3 = \frac{50000}{(3 \times 1200)} \times \left(\frac{9270}{1136} \right)^3$$

$$= 7547 (\text{hour})$$

(Example 5) Which bearing should be selected when the operation life time should be greater than 6000 hours at shaft speed of $n=1200$ rpm and radial load of $F_r=500$ kgf?

Solution) The life time factor of $f_h=2.29$ can be determined from the bearing calculated life time table for $L_h=6000$. The speed factor $f_n \doteq 0.3$ is determined from shaft speed $n=1200$ rpm. Since the ratio C/P can be used to calculate $c=f_h \frac{P}{f_n} = 2.29 \times \frac{500}{0.3} = 3817$ (kgf), unit diameter 211 or 308 can be selected with basic static load numbers of 4330 and 4070(kgf).

(Example 6) Which bearing should be selected when the ambient temperature is 150°C and axis to axis distance is 1200mm ? The shaft material used is 45ϕ mild steel (SM20C material).

Solution) First, select the heat resistant bearing that could be used at 150°C . Next, calculate the thermal shaft expansion at the temperature

$$\Delta l = l_0 \cdot \alpha(t_1 + t_0)$$

Here, l_0 =axial distance at room temperature

α =Coefficient of linear expansion(SM20C
 $=11.7 \times 10^{-6}/^\circ\text{C}$)

t_0 =normal temperature (assume 20°C)

t_1 =surrounding temperature during
 operation

$$\Delta l = 1200 \times 11.7 \times 10^{-6} \times (150 - 20) = 1.825(\text{mm})$$

The expansion is 1.825mm. Therefore, class 13 heat resistant bearing should be used following the special bearing mounting method. The life time should be calculated with basic static load determined from the temperature factor f_t in Table 8.3.

(Example 7) Is it possible to guarantee a 2 year bearing life when UC207 bearing unit is used 8 hours a day with radial load of 200 kgf and shaft speed of 3200 rpm?

Solution) In this example, the maximum speed for high speed and load operation is 3800 rpm. The required guaranteed life time is $8 \times 360 \times 2 = 5760$ hours. The calculated life time can be determined from the lifetime table with

$$f_n = \left(\frac{33.3}{n}\right)^{\frac{1}{3}}$$

$f_n \doteq 0.218$, basic static load for UC 207

$$C = 2570(\text{kgf})$$

$$f_h = f_n \frac{C}{P} = 0.218 \times \frac{2570}{200} = 2.8$$

Therefore, the calculated life time is determined from the table as 11000 hours. Two year operation is therefore guaranteed.

(Example 8) Which bearing should be selected when the radial load is 1000 kgf, the speed is $n=12$ rpm and the safety factor is $f_s=2.0$? Operating lifetime required is 8000 hours.

$$\text{Solution) } L_h = 500 \cdot f_h^3, f_h = \left(\frac{8000}{500}\right)^{\frac{1}{3}} = 2.52$$

$$f_n = \left(\frac{33.3}{n}\right)^{\frac{1}{3}} = \left(\frac{33.3}{12}\right)^{\frac{1}{3}} = 1.40$$

$$\text{here, } f_h = f_n \cdot \frac{C}{P} \text{ therefore, } C = P \cdot \frac{f_h}{f_n} = 1000 \times \frac{2.52}{1.4} = 1800(\text{kg})$$

Since UC 200 series has $C=3510$ kg, select UC 210 series with $C_0=2320$ kgf

11. Grease lubrication

11.1 Grease

Grease is a semi-solid ointment type lubricant that provides a stationary continuous supply of lubricant to the bearing surface. It is a suspension of thickener in base oil with some chemical additives added to enhanced the chemical and physical properties. The type of additives that is added to the grease depends on the temperature of the operation and other desired properties.

Careful selection of grease is important because there are many qualities of greases for each type of grease. Variety of grease types and their qualities are summarized in table 11.1

(TABLE 11.1) Grease type and quality

Grease type (common name)		Thickener	Physical appearance	Melting point(C°)	Water resistance	Mechanical stability	Operating temperature range(C°)	Speed range	Usage
Calcium soap (cup grease)		Ca	Butter like	80~90	Good	Good	-10~+70	Medium~low speed	Regular use, low speed and light load, cup grease for regular plane bearing
Calcium complex soap		Ca	Butter like	200~280	Good	Good	-10~+150	Medium~Low speed	All purpose roller bearing
Mixed Calcium & Lithium soap		Ca	Butter like	170~190	Good	Excellent	-10~+130	Medium~Low	Medium size ball bearing, typical roller bearing
Sodium soap (fiber glass)	Long fiber	Ca	fiber like	150~180	Good~poor	Good	-10~100	Medium~Low	Less than medium speed bearing
	Short fiber	Na	Short fiber ~butter like	150~180	Good~poor	Excellent ~Good	-10~+100	High~low speed	Medium to high speed bearing, relatively high temperature roller gearing
Aluminum soap		Al	fluid	70~90	Good	Good~poor	-10~+80	Medium ~low speed	High vibration bearing, automobile window gear(especially where adhesion is required)
Calcium and lead mixture		Ca+Pb	Short fiber ~butter like	70~80	Good	Excellent ~Good	-10~+90	Medium ~low speed	In rolling machine, automobile windows with shock loading
Calcium+sodium mixture		Na+Ca	Short fiber ~butter like	150~180	Good~poor	Excellent ~Good	-10~+120	High~low speed	Rolling bearing, large ball bearing for high speed operation
Lithium soap	Metallic fiber	Li	Butter like	170~190	Good	Excellent	-30~130	Fast ~low speed	Medium~small size ball bearing, typical rolling bearing
	Silicon ester	Li	Short fiber	170~220	Good	Good	-50~+130	Medium ~Low speed	Ball bearing with wide operating temperature range, extended operating time
Lithium complex soap		Li	Butter like	200~260	Good	Excellent	-30~+150	High~low speed	Medium to small size ball bearing, typical rolling bearing
Non soap		Silicagel, Bentone	Butter like	Over 250 (no dropping point)	Good~poor	Good~poor	-10~200	Medium ~low speed	All purpose, rolling bearing

11.2 Grease selection

Grease can be separated into three main ingredients. They are the base oil which provides the lubricating characteristics, the thickener which provides the special consistency of grease and finally the additives, which provides the additional enhanced properties of the grease.

(1) Base oil

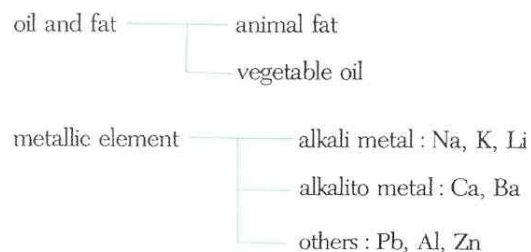
Base oil can be divided into mineral and synthetic types. Based on temperature, mineral oil is widely used as a low to high viscosity base oil.

The most important determining characteristic for grease is the base oil viscosity. Proper viscosity base oil should be selected based on operating conditions.

Commonly, for high load, low speed and high temperature lubrication, high viscosity base oil is used. For light load, high speed and low temperature lubrication, low viscosity base oil is used. Synthetic base oil should be used for extremely low temperature, relatively high temperature or for other special applications.

(2) Thickener

Metallic soap is the most widely used thickener, but grease can also be produced with non-soap thickeners. Metallic soap is made by chemically combining fat and alkali metal or alkalito metal. The following list represents typical materials for the thickener.



(3) Additives

Based on the operating temperature, various types of additives are added to the grease. Commonly, grease with extreme pressure additive is used in medium load and shock load operating conditions. Grease with anti-oxidant additive is used when the grease is not intended to be re-supplied for a very long time. In addition, tackiness agents, rust inhibitors, film strength increasing agents, stabilizers and protection agents are also used as additives.

11.3 Grease properties

(1) Consistency

Consistency of grease describes the way the internal physical characteristic is changed by external influences. It is expressed by NLGI(National Lubricating Grease Institute) determined grades. 9 grades of the NLGI consistency is shown in Table 11.2. The higher number indicates higher consistency. The most commonly used classes are NLGI 0, 1, 2 and 3.

<TABLE 11.2>

NLGI Grease classification

Grade No. (NLGI)	Consistency	Operating condition and usage
0	385~355	For concentrated supply, when fretting is possible
1	340~310	Closed supply, low temperature, when fretting is possible
2	295~265	Regular use, sealed style ball bearing
3	250~220	Regular use, sealed style ball bearing, high temperature
4	205~175	High temperature, when grease is used to seal

Remark: Consistency; expresses the penetration depth(1/10 mm)of a fixed weight cone into the grease. Larger number means softer.

(2) Dropping point

Dropping point is the minimum temperature at which the grease structure changes from a semi-solid to a liquid as the grease temperature is increased. The maximum operating temperature for the bearing is not directly expressed by the dropping point, but is related to the overall heat resistance of the grease.

Commonly,

Calcium grease : less than 100°C

Sodium grease : 170°C ~200°C

Lithium complex grease : dropping point is above 230°C

11.4 Grease supply amount

The inserted grease lubricates the internal parts of the bearing and the seal. The grease also prevents entrance of dust and moisture. But, if the grease is over filled, it can cause excessive temperature increase due to additional friction caused by the grease. The grease can then soften and leak through the seal. Ball bearing unit is properly filled by filling about 30 to 35% of the internal volume of the bearing.

Appropriate amount is based on operating conditions and cannot be determined systematically. In order to avoid excessive filling, about 80% of the filling amount is appropriate for most application. The standard amount filled by JIB is listed in Table 11.3.

<TABLE 11.3>

Amount of grease supplied based on bearing style No.

(unit : g)

Style No.	Supply amount	Style No.	Supply amount
UC201~UC205	1.4	UC305	3.0
UC206~UCX05	2.5	UC306	4.5
UC207~UCX06	3.0	UC307	6.0
UC208~UCX07	4.0	UC308	9.0
UC209~UCX08	4.5	UC309	11.0
UC210~UCX09	5.5	UC310	14.0
UC211~UCX10	7.0	UC311	17.0
UC212~UCX11	9.0	UC312	21.0
UC213~UCX12	11.0	UC313	26.0
UC214~UCX13	13.0	UC314	33.0
UC215~UCX14	14.0	UC315	37.0
UC216~UCX15	20.0	UC316	46.0
UC217~UCX16	24.0	UC317	51.0
UC218~UCX17	31.0	UC318	63.0
UCX18	40.0	UC319	72.0
UCX20	58.0	UC320	90.0
		UC321	105.0
		UC322	130.0
		UC324	150.0
		UC326	190.0
		UC328	240.0

*The listed amount must be multiplied by 1.5 to 2 times in severe dust or moisture environment.

11.5 Grease re-supply

Appropriate time for re-supplying the grease to the bearing is at about 1/3 to 1/2 of the calculated grease life time. When the unit is operated above 100°C, the grease should be resupplied at 1/3 of the calculated life time to allow for some safety margin. Practical grease supply time based on

bearing operating temperature is shown in table 11.4 for reference. Also, when the operating environment is severe or when the operating temperature is above 120°C, grease resupply period should be appropriately shortened.

(TABLE 11.4)

Period between grease re-supply(assume 8 to 10 hours operation per day for normal operation)

Bearing operating temperature(°C)	Period			Bearing	Grease
	Good environmental condition	Dusty condition	High dust and moisture condition		
under50	No need to re-supply	1year	4months	Regular	Shell Alvania SYNCO G2
under70	1year	4months	1month		
under100	6months	2months	2weeks		
under120	2months	2weeks	5days	Heat resistant (EN2)	Super Lube
under150	2weeks	5days	2days		
under180	1week	2days	1day		
under200	3days	1day	1day		

※ The greases listed in the table may be changed without notice to improve the quality.

11.6 Grease life

The grease that is supplied and sealed in the bearing reduces the friction and wear and thus reduces the generation of heat by the bearing and at the same time prevents seizure and rusting of the bearing.

Although the greases used by JIB are carefully chosen to be of a very high quality grease, the aging and oxidation of the base oil is not prevented because of the intense physical action of the ball and the retainer during rotation. The continuous physical shearing of the grease by the contact points of the ball and the rotating race can physically breakdown and age the supplied grease. The ultimate life of the bearing unit is dependent on the life of the grease when grease is not re-supplied to the unit. Therefore, in operating ball bearing units, the life of the grease used in the unit should be checked before starting operation. In normal operating conditions, the sealed bearing's grease life is determined by the following equation.

$$\log t = 4.73 - (T - 17.2) \times (0.0104 + 8.46n \times 10^{-7})$$

$$- 0.03 \frac{n \cdot Fr^{1.5}}{C^{1.9}}$$

Here t : Average life of grease (hour)

T : Bearing operating temperature (°C)

n : Rotation speed (rpm)

Fr : Radial load (kgf)

C : Equivalent static radial load rating (kgf)

The calculation shows that grease life is strongly dependent on the operating temperature.

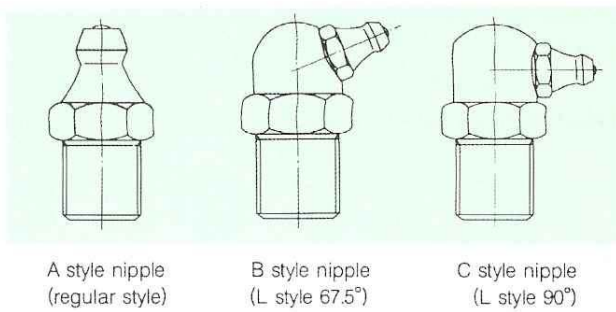
The grease life is also shortened from the calculated value if the grease operated above 100°C temperature and if the bearing unit is operated in severe dusty and moist environment. Therefore, the bearing unit's grease should be periodically checked and maintained ahead of time in severe operating conditions.

11.7 Grease mixture compatibility

For proper maintenance of the ball bearing unit, different grease should not be used to re-supply the unit because the physical structure of the grease could be destroyed by mixing greases with two different types of thickeners. Even for greases with the same type of thickeners, differences in additives could cause adverse or unexpected effects on the grease, especially at operating conditions near the maximum speed of the bearing.

11.8 Grease nipple

There are 3 different nipple styles based on shape as shown in Figure 11. 1. The proper style of nipple should be used based on the requirements of the operating location. The fitting thread type is based on KS B 2801 standards shown in Table 11.5



[FIGURE 11.1] Nipple types

<TABLE 11.5>
Nipple fitting screw threads

Bearing style No.	Nipple screw diameter No.(d)
UC201 ~ 210 UCX05 ~ X09 UC305 ~ 308	$\frac{1}{4}$ - 28UNF
UC211 ~ 218 UCX10 ~ X20 UC309 ~ 328	PT - $\frac{1}{8}$

<TABLE 11.6>

Major manufacturers list of typical grease products and their special characteristics

Product name	Manufacturer	Thickner	Base oil	Dropping point	NLGI No.	Operating temperature range	Extreme pressure handling	Water resistance	Oxidation resistance	Temperature resistance	Mechanical stability	Remarks
Shell Alvania Grease G	Shell Korea	Li/Ca Mixture	Mineral	180	1,2,3	-25 ~ +125	⊙	⊙	⊙	⊙	⊙	Industrial and automobile use multi-purpose grease
Shell Alvania EP	Shell Korea	Li	Mineral	190	0,1,2	-25 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use extreme pressure grease
Shell Retinax A	Shell Korea	Li	Mineral	190	2	-25 ~ +130	⊙	⊙	⊙	⊙	⊙	Automobile use extreme pressure grease
Shell Retinax AM	Shell Korea	Li	Mineral	190	2	-25 ~ +130	⊙	⊙	⊙	⊙	⊙	Automobile use extreme pressure grease
Shell Retinax LX	Shell Korea	Li complex	Mineral	260	2	-25 ~ +180	⊙	⊙	⊙	⊙⊙	⊙	Industrial and automobile use multipurpose, high quality, and extreme pressure grease
Shell Darina R2	Shell Korea	Bentonite	Mineral	None	2	-10 ~ +200	⊙	⊙	⊙	⊙	⊙	Heat resistant grease
Shell S-8772	Shell Korea	Ca complex	Mineral	150	2	-50 ~ +80	⊙	⊙	⊙	⊙	⊙	Cold resistant grease
SK Crown Grease	SK	Li	Mineral	190	0,1,2,3	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use multipurpose grease
SK Crown EP	SK	Li	Mineral	190	0,1,2	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use extreme pressure grease
Marfac Multipurpose	LG	Li	Mineral	200	2,3	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use multipurpose grease
Thermatex EP	LG	Bentonite	Mineral	None	1,2	-10 ~ +200	⊙	⊙	⊙	⊙	⊙	Industrial use heat resistant grease
Molyte EP2	LG	Li	Mineral	195	2	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use extreme pressure grease
Multifac EP	LG	Li	Mineral	195	0,1,2	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use extreme pressure grease
Unimoly GL 2N	Cleever	Li	Mineral	190	2	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use multipurpose grease
Centoplex 24DL	Cleever	Li	Mineral	170	2	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	General grease
Centoplex 2	Cleever	Li	Mineral	190	3	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	General grease
Microlobe GL262	Cleever	Li complex	Mineral	260	2	-20 ~ +180	⊙	⊙	⊙	⊙⊙	⊙	Automobile wheel bearing grease
Unimoly GB2	Cleever	Bentonite	Mineral	None	2	-10 ~ +200	⊙	⊙	⊙	⊙	⊙	Molybdenum containing high temperature grease
Hirax Hirex OHD	Chunmee	Li	Mineral	210	1,2,3	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Automobile use extreme pressure grease
Hirax MP-HT	Chunmee	Li complex	Mineral	260	1,2,3	-20 ~ +180	⊙	⊙	⊙	⊙⊙	⊙	Automobile use extreme pressure grease
Hirax Hirex EP	Chunmee	Li	Mineral	200	0,1,2	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Industrial use extreme pressure grease
Hirax Doublex	Chunmee	Li	Mineral	200	1,2,3	-20 ~ +130	⊙	⊙	⊙	⊙	⊙	Molybdenum containing extreme pressure grease
Hirax Pemalub-B	Chunmee	Non-soap	Mineral	None	1,2,3	-10 ~ +200	⊙	⊙	⊙	⊙	⊙	High temperature grease
Super Lube	Synco	Pite	Pao	None	2	-43 ~ +232	⊙	⊙	⊙	⊙	⊙	Heat & Cold resistant grease

(The product quality listed above could be changed by the manufacturers)

⊙ Good ⊙ Excellent

-Provided by Shell Korea-

12. Bearing seal methods

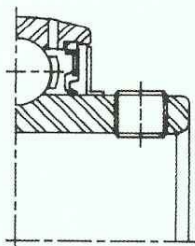
12.1 Bearing seal methods

The bearing can be quickly destroyed if contaminants enter the internal moving parts of the bearing or if the lubricating grease is allowed to leak out of the bearing. The bearing seal method is therefore developed to prevent entrance of contaminants and at the same time prevent grease from leaking out of the bearing to enhance the life of the bearing.

The bearing seal method is divided into contact and non-contact types. The non-contact seal has low frictional resistance but the sealing capability is not as good as the contact type seal. Normally, JIB uses a combination of both sealing methods, the oil seal and the slinger, to protect the bearing. In the bearing seal method, the frictional resistance caused by the seal and the protection capability of the seal are oppositely related. In other words, improving the protection capability reduces the low friction capability and conversely, improving the low friction capability reduces the protection capability. Therefore, the seal method for the bearing unit should be carefully chosen to match the purpose and the operating condition.

(1) Oil seal and shield method (SL)

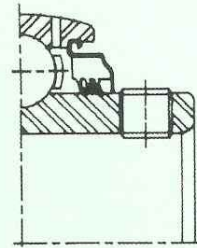
The most commonly used representative seal method at JIB is the oil seal and shield protection method. The oil seal is fixed to the outer race and the shield is press fitted to the inner race of the bearing unit to rotate with the inner race. The rotation of the bearing thus rotates the shield at the same time to create a fanning effect which creates an ideal labyrinth structure between the two seal types to increase the overall protection capability of seal.



[FIGURE 12.1]

(2) Triple seal method (L3)

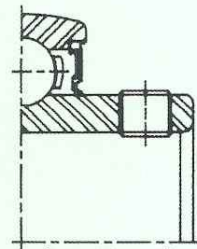
The slinger and the oil seal are fitted together to produce a single piece seal with a triple lipped (unit styles 204 and 205 have 2 lips) system. During operation, the spaces between the lips are filled by grease to provide lubrication and protection at the same time. This method provides an excellent protection against dust, moisture and gas as shown in Figure 12.5 and 12.6



[FIGURE 12.2]

(3) Simple seal method (L)

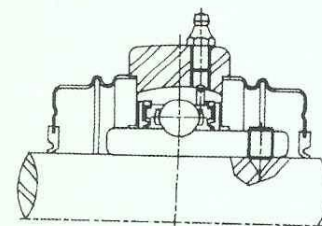
The special synthetic rubber seal is fixed to a stamped steel shield which is attached to the outer race. The lip of the rubber seal makes an appropriate contact seal with the face of the inner race to provide low frictional resistance against rotation while protecting the bearing. The stamped steel shield provides mechanical support for the rubber seal. This method can provide safe operation for extended periods in normal operating conditions (SA2, SB2, SC2)



[FIGURE 12.3]

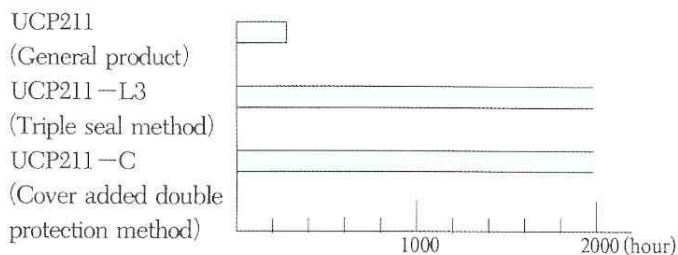
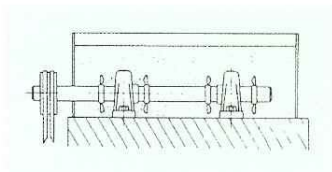
(4) Attached cover double protection method (C, CD, GC, GCD)

The double protection method is made by attaching an additional external cover to the body of a bearing unit that already has a sealing method built into the unit. The double protection method provides the best protection capability for the bearing unit by adding a second layer of protection in addition to the excellent protection provided by the oil seal/slinger method, the simple seal method or the triple seal method. The excellent protection capability of the double protection method is shown in Figure 12.6.



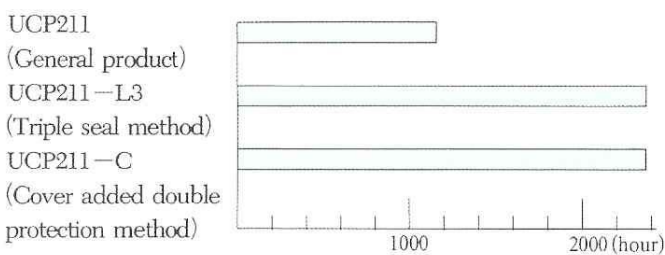
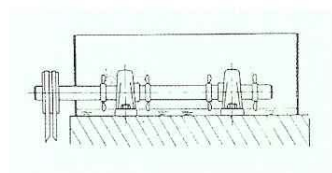
[FIGURE 12.4]

Shaft speed : 700rpm
 Test condition : 400 mesh GC flour powder
 Carrying load : belt tension



[FIGURE 12.5] Particulate test

Shaft speed : 400rpm
 Test of water : tap
 Carrying load : belt tension



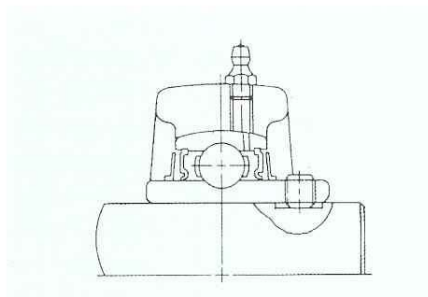
[FIGURE 12.6] Moisture test

In the particulate test, the general product can last for 250 hours without producing any abnormal sound cause by the intrusion of contaminants into the bearing. The triple seal method and the double protection method can last for 2000 hours without any strangeness. In the moisture test, general products can last for 1200 hours without forming rust and the triple seal and the double protection method can last for 2400 hours without forming rust.

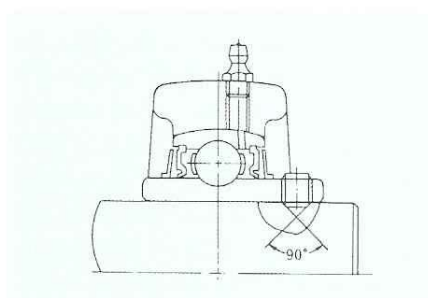
13. Bearing Locking method

13.1 Bolt Locking

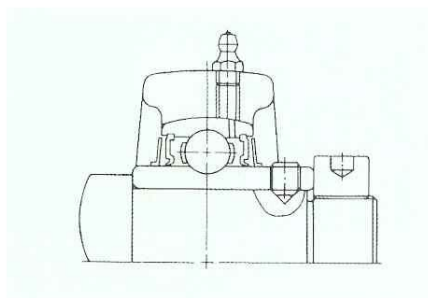
The shaft mounting by bolt method is a simple way of fixing the shaft to the bearing with two hexagonal screws located 120 apart on the inner race of the bearing. In conditions where there are vibrations, repeated reverse shaft direction operation, frequent start and stop operation, or in high axial load condition with high speed rotation, the following locking methods, shown in Figure 13.1 should be used.



Groove is made on the shaft surface.



Pilot drill hole is made on the shaft surface.



Where there is high axial loading, machine a column on the shaft and secure with a nut.

[FIGURE 13.1] Bolt locking methods

<TABLE 13.1>

Bolt type and locking torque

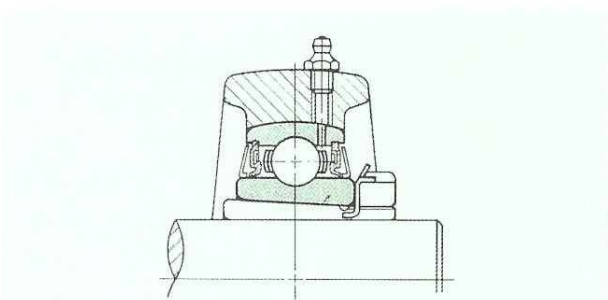
mm Bolt	inchbolt	Bearing No.			Locking torque (kg-cm)
M 6×0.75	1/4 -28 UNF	UC 201~206	UCX 05	UC 305~306	40
M 8×1.0	5/16 -24 UNF	UC 207~209	UCX 06~X08	UC 307	90
M10×1.25	3/8 -24 UNF	UC 210~212	UCX 09~X11	UC 308~309	180
M12×1.5	7/16 -20 UNF	UC 213~218	UCX 12~X17	UC 310~314	280
M14×1.5	9/16 -18 UNF		UCX 18	UC 315~316	350
M16×1.5	5/8 -18 UNF		UCX 20	UC 317~319	600
M18×1.5	5/8 -18 UNF			UC 320~324	650
M20×1.5	3/4 -16 UNF			UC 326~328	800

13.2 Adapter sleeve locking

Adapter sleeve locking method is used with bearing units that have a 1/12 tapered inner race inside diameter. The shaft is locked by inserting the sleeve into the tapered bore followed by the placement of a washer and then a nut which is used to tighten the sleeve over the shaft.

The sleeve is initially inserted into the bore and then gently tapped with a wooden hammer. The nut is at first tightened by hand and then further tightened with a spanner by 2/5 to 3/5 turn of the nut. After the nut is tightened, the metal teeth on the washer should be bent and placed in the grooves on the nut. If the metal teeth are not bent properly, the shaft is not squeezed enough by the sleeve for firm locking. This can lead the bearing to slip, slide, creep and hammer.

Conversely, if the nut is over tightened, the radial clearance inside the bearing is reduced which can then lead to excessive heat generation and burning of high load contact areas. Therefore, the nut should never be over tightened.



[FIGURE 13.2] Adapter sleeve locking method

<TABLE 13.2>

Adapter locking torque

(unit : kg-cm)

Bearing part No.	Locking torque	Bearing part No.	Locking torque	Bearing part No.	Locking torque
UK 205	180	UK 305	250	UK 319	6400
UK 206	280	UK 306	400	UK 320	8000
UK 207	380	UK 307	600	UK 322	10000
UK 208	480	UK 308	750	UK 324	13000
UK 209	580	UK 309	1050	UK 326	16000
UK 210	680	UK 310	1350	UK 328	18000
UK 211	900	UK 311	1600		
UK 212	1200	UK 312	1900		
UK 213	1400	UK 313	2400		
UK 215	1600	UK 315	3400		
UK 216	1900	UK 316	3900		
UK 217	2200	UK 317	4400		
UK 218	2600	UK 318	5400		

13.3 Eccentric self locking collar locking

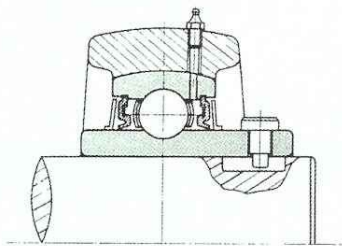
The eccentric self locking collar mounting method uses an eccentrically locking collar on the inside inner race outer circumference. This shaft locking method is simpler to use than both the bolt locking method or the adapter sleeve mounting method because the rotating shaft is used to generate the shaft locking force. The self-locking feature of the collar works by converting the rotation of the shaft into a contact force between the eccentric collar, the inner race and the shaft.



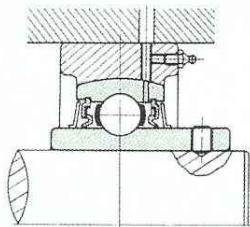
[FIGURE 13.3]

14. Use of heat resistant bearing(EN2)

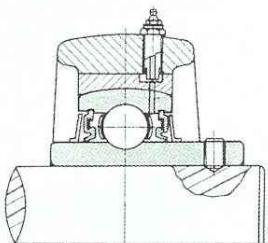
Heat resistant bearing units operating at high temperatures receive thrust loading from the expansion of the shaft. In these types of situations, one bearing unit should be firmly fixed to the locking surface and the other bearing unit should be locked freely to absorb the expansion of the shaft as shown in figure 14.1. (Heat resistant bearing unit should be used with a selection of proper quality grease and specially ordered C3 class large radial clearance bearing.)



Machine a key slot on the shaft and use the locking bolt as the key so that the shaft and the bearing inner race can move against each other.

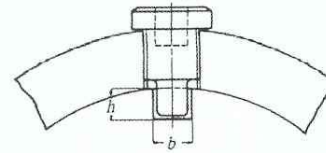


Use the rounded cartridge style bearing with the housing unit so that the outer surface of the cartridge housing can move.(UCC)



Use a PE style unit with a ring inserted between the bearing and the housing so that the outer surface of the ring and the inner surface of the housing can slide against each other.

[FIGURE 14.1]



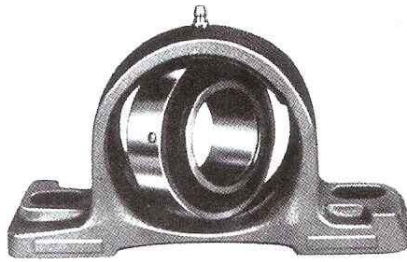
<TABLE 14.1> Groove dimensions for vertical hem bar style locking bolt (unit: mm)

Bearing No.	Locking bolt No.	Depth, h	Minimum width, b
UC201 ~ UC206	M6 × 0.75	5	4
UC207 ~ UC209	M8 × 1.0	6	6
UC210 ~ UC213	M10 × 1.25	6.5	7
UC214 ~ UC218	M12 × 1.5	8	9
UCX05	M6 × 0.75	5	4
UCX06 ~ UCX08	M8 × 1.0	5	6
UCX09 ~ UCX12	M10 × 1.25	6.5	7
UCX13 ~ UCX17	M12 × 1.5	7	9
UCX18	M14 × 1.5	7	10
UCX20	M16 × 1.5	7	12
UC305 ~ UC306	M6 × 0.75	5	4
UC307	M8 × 1.0	6	6
UC308 ~ UC309	M10 × 1.25	6.5	7
UC310 ~ UC314	M12 × 1.5	8	9
UC315 ~ UC316	M14 × 1.5	8	10
UC317 ~ UC319	M16 × 1.5	8	12
UC320 ~ UC324	M18 × 1.5	8	13
UC326 ~ UC328	M20 × 1.5	8	15

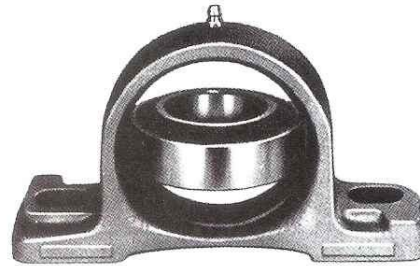
15. Ball bearing unit interchangeability

JIB ball bearing unit bearings and housings are compatible for easy exchangeability. Therefore, if the bearing cannot be used for some reason such as abnormal heat generation or excess noise, the bearing can be changed while continuing to use the same housing. Conversely, the housing can be exchanged while keeping the same bearing if there is a problem with the housing. When the bearing is removed from the housing, the bearing locking pin should be rotated to face the front as shown in the Figure 15.1

Next, the bearing should be rotated to a position where the housing inside diameter assembly groove and the bearing width are equal as shown in the Figure 15.2. Then, the bearing can be simply removed by pulling towards the assembly groove. Assembly of the bearing unit is in opposite order of disassembly



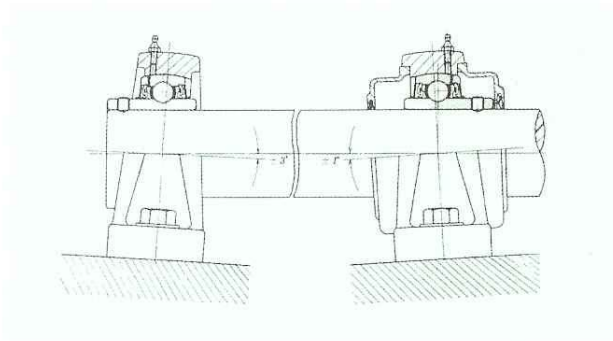
[FIGURE 15.1]



[FIGURE 15.2]

16. Ball bearing unit mounting

The bearing unit should be mounted within $\pm 3^\circ$ of the bearing locking angle. The operation of the bearing is not affected if the angle between the base of the unit and the shaft axis is greater than $\pm 3^\circ$. But, there is a possibility that the bearing will not be properly lubricated by the grease. If the unit is also used with an additional cover, the cover will provide an irregular seal with the shaft. In this case, the locking angle should be $\pm 1^\circ$ for proper operation.



[FIGURE 16.1] Shaft mounting angle

17. Ball bearing unit's maximum rotation speed

Normally, high speed operation of the ball bearing is accompanied by increase in heat and noise because of the friction between the ball and the inside diameter of the outer race and the resistance of the grease. The ball bearing unit could be destroyed if the rotation speed is too high. Therefore, the maximum rotation speed should be known for the bearing to ensure safe operation of the bearing unit. The most commonly used system is the dn and dmn values (d =shaft diameter, dm =ball pitch diameter, n =rpm) Ad-

ditional limitation caused by the contact pressure of the seal for bearing units with seal and shield protection method should also be considered in determining the maximum speed. The maximum rotation speed for regular bearing, units with regular and simple seal methods are listed in Table 17.1

(TABLE 17.1) Ball bearing unit maximum rotating speed
(unit: rpm)

Part No.	Speed	Part No.	Speed	Part No.	Speed
UC201~UC204	6000				
UC205	5300	UCX05	4500	UC305	4800
UC206	4500	UCX06	3800	UC306	4000
UC207	3800	UCX07	3400	UC307	3600
UC208	3400	UCX08	3200	UC308	3200
UC209	3200	UCX09	2900	UC309	2800
UC210	2900	UCX10	2600	UC310	2500
UC211	2600	UCX11	2400	UC311	2400
UC212	2400	UCX12	2300	UC312	2200
UC213	2300	UCX13	2200	UC313	2000
UC214	2200	UCX14	2000	UC314	1900
UC215	2000	UCX15	1800	UC315	1700
UC216	1800	UCX16	1700	UC316	1600
UC217	1700	UCX17	1600	UC317	1500
UC218	1600	UCX18	1500	UC318	1400
		UCX20	1300	UC319	1350
				UC320	1300
				UC321	1200
				UC322	1150
				UC324	1100
				UC326	1000
				UC328	900

Remark: 1) For triple seal method units, the maximum speed is about 25% of the numbers listed in the table.
2) For cover added double protection method units, the maximum speed is about 80% of the numbers listed in the table.

18. Abnormal behavior of ball bearing unit and their cause

Improper behavior of bearing is usually caused by improper maintenance or installation. Therefore, care should be taken during maintenance machine and installation, depending on the operating and the operating condition.

Also, in bearing operation, one cause can commonly be expressed as a secondary affect. The list in Table 18.1 which shows a relatively large number of causes for abnormally operating bearings should be used to prevent abnormal operation.

<TABLE 18.1>
Abnormal behavior and their cause

Behavior	Cause
Excess torque	Tight assembly, overtightening of adapter causing reduced clearance, overlap of shield and seal due to physical shock during installation, inaccurate alignment of bearings when more than 2 bearing units are installed on a single axis
Noise and vibration	Breakdown of the orbital race surface due to improper handling or installation, not enough clearance for operation, early stage of flaking or breakdown on the orbital race surface or groove or the ball, expansion of bearing mounting bolt or housing mounting bolt, too much bearing clearance, bent shaft, unbalanced load acting on the axis of the rotating machine, more than 3 units mounted on a single axis, bad mounting surface angle, vibration of shaft axis, too much clearance between the shaft and the bearing inside diameter, not enough strength on the mounting surface, breakdown of sealing method causing entrance of foreign contaminants into the bearing
Temperature increase	Not enough bearing clearance during operation, operating above the maximum rotation speed, improper grease supply, overlap between shield and seal due to installation shock, not enough free play for shaft expansion on the free mounted side bearing, early stage of breakdown for some bearing parts

19. Ball bearing unit maintenance procedure

The maintenance of ball bearing should follow carefully planned practices adopted to match the precision of the ball bearing parts. No matter how good the quality and the capability of the bearing is, the expected life time of a bearing can not be achieved without good maintenance practices. The maintenance procedure described below are essentially basic practices. The maintenance procedure described below are essentially basic practices for all bearing maintenance. Still, any careless handling will not allow the bearing to be used as an integral mechanical part. Therefore, the user must pay special attention to the proper maintenance practices.

- 1) Maintain a clean assembly and disassembly area and use clean tools.
- 2) Handle the ball bearing with clean and dry hands.
- 3) Assembly bar can break easily so do not use tools that can create dusty particles.

- 4) Use a clean dry cloth to wipe the bearing once the wrapping on the bearing is removed.
- 5) The proper type and amount of grease should be used.
- 6) Grease supply should be protected from entrance of foreign particles and the grease container should be kept closed when not in use.
- 7) The rotation stop locking pin should not be removed unless a special reason exists. (Steel plate housing use)
- 8) Forced assembly should be avoided to maintain the housing and bearing assembly clearance unless it is a high speed situation.
- 9) Use JIB'S housing if possible and try to avoid using other company's
- 10) Housings that do not use the rotation stopping locking pin with JIB bearings.
- 11) Housings without the rotation stopping locking pin have low assembly grooves which can allow the locking pin to slide in between the housing and the outer race. This can often reduce the internal radial clearance and thus reduce the bearing life.

20. Table of relationships between load and rotating speed based on 500 hr minimum life ball bearing unit

In the table below (Table 20.1), the load and speed for each ball bearing style are outlined and summarized for easy reference.

The load and speed listed in the table was based on load calculation previously described in section 9.

(Example)

$$\text{Bearing load} = \text{Calculated load} \times \text{Load factor} \times \text{Belt factor}$$

<TABLE 20.1>

Relationship between load and rotation speed

Bearing No.							Load and rotating speed													
UC200	UK200	UCX00	SER200	HC200	SA200	SB200	33 1/3	50	100	250	500	750	1000	1200	1500	2000	2400	3600	5000	RPM
-	-	-	-	-	201-203	201-203	960	840	670	490	390	340	310	290	270	250	230	200	180	
204	-	-	201-204	204	204	204	1280	1120	890	650	520	450	410	390	360	330	310	270	240	
205	205	-	205	205	205	205	1400	1220	970	720	570	500	450	420	390	360	340	290	260	
206	206	X05	206	206	206	206	1950	1700	1350	1000	790	690	630	590	550	500	470	410	370	
207	207	X06	207	207	207	207	2570	2250	1780	1310	1040	910	830	780	720	660	620	540	-	L
208	208	X07	208	208	208	208	2910	2540	2020	1490	1180	1030	940	880	820	740	700	610	-	O
209	209	X08	209	209	209	209	3200	2800	2220	1630	1300	1130	1030	970	900	820	770	-	-	A
210	210	X09	210	210	210	210	3510	3070	2430	1790	1420	1240	1130	1060	990	900	840	-	-	D
211	211	X10	211	211	211	211	4330	3780	3000	2210	1760	1530	1390	1310	1220	1110	1040	-	-	
212	212	X11	212	212	212	212	5240	4580	3630	2680	2120	1860	1690	1590	1470	1340	1260	-	-	
213	213	X12	-	-	-	-	5720	5000	3970	2920	2320	2030	1840	1730	1610	1460	-	-	-	
214	-	X13	-	-	-	-	6220	5430	4310	3180	2520	2200	2000	1880	1750	1590	-	-	-	(Kg)
215	215	X14	-	-	-	-	6740	5890	4670	3440	2730	2390	2170	2040	1890	1720	-	-	-	
216	216	X15	-	-	-	-	7260	6340	5030	3710	2940	2570	2340	2200	2040	-	-	-	-	
217	217	X16	-	-	-	-	8390	7330	5820	4290	3400	2970	2700	2540	2360	-	-	-	-	
218	218	X17	-	-	-	-	9600	8390	6660	4900	3890	3400	3090	2910	2700	-	-	-	-	

Table of relationship between load and rotation speed

Bearing No.		Load and rotating speed													RPM
UC300	UK300	33 1/3	50	100	250	500	750	1000	1200	1500	2000	2400	3600	5000	
305	305	2100	1830	1460	1070	850	740	680	640	590	540	500	440	400	
306	306	2660	2320	1840	1360	1080	940	860	810	750	680	640	560	500	
307	307	3330	2910	2310	1700	1350	1180	1070	1010	940	850	800	700	—	
308	308	4070	3560	2820	2080	1650	1440	1310	1230	1140	1040	980	850	—	
309	309	3890	4270	3390	2500	1980	1730	1570	1480	1370	1250	1180	—	—	
310	310	6200	5420	4300	3170	2510	2200	2000	1880	1740	1580	1490	—	—	
311	311	7160	6250	4960	3660	2900	2540	2300	2170	2010	1830	1720	—	—	L
312	312	8180	7150	5670	4180	3320	2900	2630	2480	2300	2090	1970	—	—	O
313	313	9270	8100	6430	4740	3760	3280	2980	2810	2610	2370	—	—	—	A
314	—	10400	9090	7210	5310	4220	3680	3350	3150	2920	2660	—	—	—	D
315	315	11300	9870	7830	5770	4580	4000	3640	3420	3180	2890	—	—	—	
316	316	12300	10750	8530	6280	4990	4360	3960	3730	3460	—	—	—	—	
317	317	13300	11620	9220	6790	5390	4710	4280	4030	—	—	—	—	—	
318	318	14300	12490	9920	7310	5800	5070	4600	4330	—	—	—	—	—	
319	319	15300	13370	10610	7820	6200	5420	4920	4630	—	—	—	—	—	(kgf)
320	320	17300	15110	12000	8840	7010	6130	5570	5240	—	—	—	—	—	
321	—	18400	16070	12760	9400	7460	6520	5920	—	—	—	—	—	—	
322	322	20500	17190	14210	10470	8310	7260	6600	—	—	—	—	—	—	
324	324	20700	18080	14350	10580	8390	7330	6660	—	—	—	—	—	—	
326	326	22900	20000	15880	11700	9290	8110	—	—	—	—	—	—	—	
328	328	25300	22100	17540	12930	10260	8960	—	—	—	—	—	—	—	

Proof of 500 hr life (bearing life = $\frac{10^6}{60 \times n} \times (\frac{C}{P})^3$)

Example 1) For UC205, when n=50 and p=1220 kgf (equivalent static load rating for 205 bearing is listed in the catalog as 1400kgf)

Therefore, $\frac{10^6}{60 \times 50} \times (\frac{1400}{1220})^3 \doteq 500\text{hr}$

Example 2) For UC315, when n=1500, p=3180 kgf and C=11300kg

Therefore, $\frac{10^6}{60 \times 1500} \times (\frac{11300}{3180})^3 \doteq 500\text{hr}$

BALL BEARING UNIT AND UNIT BEARING TABLES

1)UCP2	51	22)UCFLX	72	43)UCHA2	93
2)HCP2	52	23)UKFLX	73	44)SALP2	94
3)UKP2	53	24)UCFL3	74	SBLP2	
4)UCPX	54	25)UKFL3	75	45)SALF2	95
5)UKPX	55	26)UCT2	76	SBLF2	
6)UCP3	56	27)UKT2	77	46)SAPP2	96
7)UKP3	57	28)UCTX	78	SBPP2	
8)UCF2	58	29)UKTX	79	47)SAPF2	97
9)UKF2	59	30)UCT3	80	SBPF2	
10)UCFX	60	31)UKT3	81	48)SAPFL2	98
11)UKFX	61	32)UCC2	82	SBPFL2	
12)UCF3	62	33)UKC2	83	49)UC2	99
13)UKF3	63	34)UCCX	84	50)HC2	100
14)UCFC2	64	35)UKCX	85	CHC2	
15)UKFC2	65	36)UCC3	86	51)UCX	101
16)UCFCX	66	37)UKC3	87	52)UC3	102
17)UKFCX	67	38)UCPH2	88	53)UK2	103
18)UCFS3	68	39)UCPA2	89	54)UKX	104
19)UKFS3	69	40)UCPE2	90	55)UK3	105
20)UCFL2	70	41)UCFA2	91	56)UR2	106
21)UKFL2	71	42)UCFB2	92	57)SER2	107
				58)SA2	108
				CSA2	
				59)SB2	109
				CSB2	
				60)SC2	110
				61)ADAPTER	111

PILLOW BLOCK BALL BEARING UNITS

UCP2
(NORMAL DUTY)



SL TYPE SEAL,

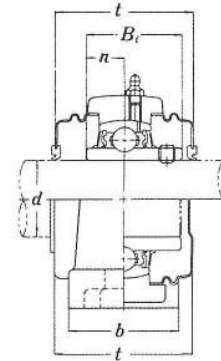
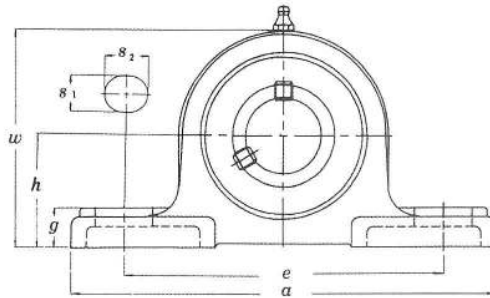
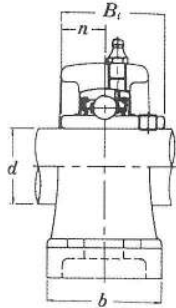


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCP2-C... WITH COVER, BOTH SIDES OPEN

UCP2-CD... WITH COVER, ONE SIDE CLOSED

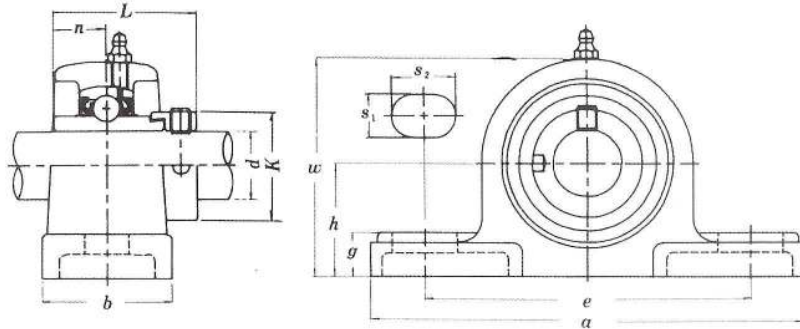


Unit No.	Shaft Dia.		Dimensions (in./mm)										Bolt Used		Bearing No.	Housing No.	Weight (kgf)	
	d (in.)	d (mm)	h	a	e	b	S ₂	S ₁	g	w	t	Bi	n	(mm)				(in.)
UCP 201-8 202-10 203	1/2	12	13/16	5	33/4	1 1/2	3/4	1/2	19/32	23/8	123/32	1.2205	0.5000	10	3/8	UC 201-8 202-10 203	P 203	0.63 0.61 0.60
	5/8	15	30.2	127	95	38	19	13	15	60	44	31.0	12.7					
	5/8	17																
UCP 204-12 204	3/4	20	15/16	5	33/4	1 1/2	3/4	1/2	19/32	217/32	123/32	1.2205	0.5000	10	3/8	UC 204-12 204	P 204	0.66
	3/4	20	33.3	127	95	38	19	13	15	64	44	31.0	12.7					
UCP 205-14 205-15 205 205-16	7/8	25	17/16	5 1/2	4 1/8	1 1/2	3/4	1/2	5/8	225/32	17/8	1.3425	0.5630	10	3/8	UC 205-14 205-15 205 205-16	P 205	0.8
	15/16		36.5	140	105	38	19	13	16	71	48	34.1	14.3					
	1		36.5	140	105	38	19	13	16	71	48	34.1	14.3					
UCP 206-18 206 206-19	1 1/8	30	11 1/16	6 1/2	4 3/4	1 7/8	13/16	21/32	23/32	35/16	21/16	1.5000	0.6260	14	1/2	UC 206-18 206 206-19	P 206	1.3
	1 3/16		42.9	165	121	48	21	17	18	84	52	38.1	15.9					
UCP 207-20 207-21 207-22 207 207-23	1 1/4	35	1 7/8	6 9/16	5	1 7/8	13/16	21/32	3/4	321/32	25/16	1.6890	0.6890	14	1/2	UC 207-20 207-21 207-22 207 207-23	P 207	1.6
	1 5/16		47.6	167	127	48	21	17	19	93	59	42.9	17.5					
	1 3/8		47.6	167	127	48	21	17	19	93	59	42.9	17.5					
	1 7/16		47.6	167	127	48	21	17	19	93	59	42.9	17.5					
UCP 208-24 208-25 208	1 1/2	40	11 5/16	7 1/4	5 13/32	2 1/8	13/16	21/32	3/4	327/32	2 11/16	1.9370	0.7480	14	1/2	UC 208-24 208-25 208	P 208	2.0
	1 9/16		49.2	184	137	54	21	17	19	98	68	49.2	19.0					
UCP 209-26 209-27 209-28 209	1 5/8	45	2 1/8	7 15/32	5 3/4	2 1/8	13/16	21/32	25/32	43/16	2 11/16	1.9370	0.7480	14	1/2	UC 209-26 209-27 209-28 209	P 209	2.2
	1 11/16		54.0	190	146	54	21	17	20	106	68	49.2	19.0					
UCP 210-30 210-31 210 210-32	1 7/8	50	2 1/4	8 1/8	6 1/4	2 3/8	7/8	25/32	7/8	47/16	2 7/8	2.0315	0.7480	16	5/8	UC 210-30 210-31 210 210-32	P 210	2.9
	1 15/16		57.2	206	159	60	22	20	22	113	73	51.6	19.0					
UCP 211-32 211-34 211 211-35	2	55	2 1/2	8 5/8	6 23/32	2 3/8	7/8	25/32	7/8	429/32	2 15/16	2.1890	0.8740	16	5/8	UC 211-32 211-34 211 211-35	P 211	3.6
	2 1/8		63.5	219	171	60	22	20	22	125	75	55.6	22.2					
	2 3/16		63.5	219	171	60	22	20	22	125	75	55.6	22.2					
UCP 212-36 212 212-38 212-39	2 1/4	60	2 3/4	9 1/2	7 1/4	2 3/4	1	25/32	1	57/16	3 15/32	2.5630	1.0000	16	5/8	UC 212-36 212 212-38 212-39	P 212	4.9
	2 3/8		69.8	241	184	70	25	20	25	138	88	65.1	25.4					
UCP 213-40 213	2 1/2	65	3	10 7/16	8	2 3/4	1 3/16	1	1 1/16	529/32	3 15/32	2.5630	1.0000	20	3/4	UC 213-40 213	P 213	5.9
	2 1/2		76.2	265	203	70	30	25	27	150	88	65.1	25.4					
UCP 214-44 214	2 3/4	70	3 3/8	10 5/32	8 9/32	2 27/32	1 3/16	1	1 1/16	65/32	3 27/32	2.9370	1.1890	20	3/4	UC 214-44 214	P 214	6.8
	2 3/4		79.4	266	210	72	30	25	27	156	98	74.6	30.2					
UCP 215 215-48	3	75	3 1/4	10 13/16	8 17/32	2 29/32	1 3/16	1	1 3/32	63/8	3 27/32	3.0630	1.3110	20	3/4	UC 215 215-48	P 215	7.4
	3		82.6	275	217	74	30	25	28	162	98	77.8	33.3					
UCP 216	3 1/2	80	3 1/2	11 1/2	9 1/8	3 1/16	1 3/8	1	1 1/4	627/32	4 1/4	3.2520	1.3110	20	3/4	UC 216	P 216	9.0
	3 1/2		88.9	292	232	78	35	25	32	174	108	82.6	33.3					
UCP 217-52 217	3 1/4	85	3 3/4	12 7/32	9 23/32	3 9/32	1 9/16	1	1 1/4	79/32	4 13/32	3.3740	1.3425	20	3/4	UC 217-52 217	P 217	10.8
	3 1/4		95.2	310	247	83	40	25	32	185	112	85.7	34.1					
UCP 218-56 218	3 1/2	90	4	12 7/8	10 5/16	3 15/32	1 25/32	1 1/16	1 11/32	725/32	4 13/16	3.7795	1.5630	22	7/8	UC 218-56 218	P 218	13.9
	3 1/2		101.6	327	262	88	45	27	34	198	122	96.0	39.7					

PILLOW BLOCK BALL BEARING UNITS

HCP2

(NORMAL DUTY, WITH ECCENTRIC LOCKING COLLAR)



Unit No.	Shaft Dia.		Dimensions (in./mm)											Bolt Used		Bearing No.	Housing No.	Weight (kgf)		
	d		h	a	e	b	S ₂	S ₁	g	w	L	n	i	k	(mm)				(in.)	
	(in.)	(mm)																		
HCP 201-8	1/2	12																HC 201-8		0.71
202		15	13/16	5	3 3/4	1 1/2	3/4	1/2	19/32	2 3/8	1.7204	0.6732	0.3740	1.2598	10	3/8		P 203		0.69
202-10	5/8	17																202-10		0.68
203																		203		
HCP 204-12	3/4	20	15/16	5	3 3/4	1 1/2	3/4	1/2	19/32	2 17/32	1.7204	0.6732	0.3740	1.2598	10	3/8		HC 204-12	P 204	0.73
204			33.3	127	95	38	19	13	15	64	43.7	17.1	9.5	32			204			
HCP 205-14	7/8	25	17/16	5 1/2	4 1/8	1 1/2	3/4	1/2	5/8	2 25/32	1.7480	0.6890	0.3740	1.5000	10	3/8		HC 205-14	P 205	0.87
205-15	15/16		36.5	140	105	38	19	13	16	71	44.4	17.5	9.5	38.1			205-15			
205																	205			
205-16	1																205-16			
HCP 206-18	1 1/8	30	1 11/16	6 1/2	4 3/4	1 7/8	13/16	2 1/32	23/32	3 5/16	1.9055	0.7204	0.4685	1.7480	14	1/2		HC 206-18	P 206	1.4
206	1 3/16		42.9	165	121	48	21	17	18	84	48.4	18.3	11.9	44.4			206			
206-19	1 1/4																206-19			
206-20																	206-20			
HCP 207-20	1 1/4	35	1 7/8	6 9/16	5	1 7/8	13/16	2 1/32	3/4	3 2 1/32	2.0157	0.7402	0.5315	2.1890	14	1/2		HC 207-20	P 207	1.8
207-22	1 3/8		47.6	167	127	48	21	17	19	93	51.2	18.8	13.5	55.6			207-22			
207																	207			
207-23	1 7/16																207-23			
HCP 208-24	1 1/2	40	1 15/16	7 1/4	5 13/32	2 1/8	13/16	2 1/32	3/4	3 2 1/32	2.2205	0.8425	0.5315	2.3740	14	1/2		HC 208-24	P 208	2.1
208			49.2	184	137	54	21	17	19	98	56.4	21.4	13.5	60.3			208			
HCP 209-26	1 5/8	45	2 1/8	7 15/32	5 3/4	2 1/8	13/16	2 1/32	25/32	4 3/16	2.2205	0.8425	0.5315	2.5000	14	1/2		HC 209-26	P 209	2.4
209-27	1 11/16		54.0	190	146	54	21	17	20	106	56.4	21.4	13.5	63.5			209-27			
209-28	1 3/4																209-28			
209																	209			
HCP 210-31	1 15/16	50	2 1/4	8 1/8	6 1/4	2 3/8	7/8	25/32	7/8	4 7/16	2.4685	0.9685	0.5315	2.7480	16	5/8		HC 210-31	P 210	3.1
210	2		57.2	206	159	60	22	20	22	113	62.7	24.6	13.5	69.8			210			
210-32																	210-32			
HCP 211-32	2	55	2 1/2	8 5/8	6 23/32	2 3/8	7/8	25/32	7/8	4 29/32	2.8110	1.0945	0.6299	3.0000	16	5/8		HC 211-32	P 211	3.9
211			63.5	219	171	60	22	20	22	125	71.4	27.8	16.0	76.2			211			
211-35	2 3/16																211-35			
HCP 212-36	2 1/4	60	2 3/4	9 1/2	7 1/4	2 3/4	1	25/32	1	5 7/16	3.0630	1.2204	0.6299	3.3110	16	5/8		HC 212-36	P 212	5.2
212			69.8	241	184	70	25	20	25	138	77.8	3.1	16.0	84.1			212			
212-39	2 7/16																212-39			
HCP 213-40	2 1/2	65	3	10 7/16	8	2 3/4	1 3/16	1	1 1/16	5 29/32	3.3740	1.3425	0.6890	3.3858	20	3/4		HC 213-40	P 213	6.5
213			76.2	265	203	70	30	25	27	150	85.7	34.1	17.5	86			213			
HCP 214-44	2 3/4	70	3 1/8	10 1/2	8 9/32	2 2 7/32	1 3/16	1	1 1/16	6 5/32	3.3740	1.3425	0.6890	3.5433	20	3/4		HC 214-44	P 214	7.26
214			79.4	266	210	72	30	25	27	156	85.7	34.1	17.5	90			214			
HCP 215-47	2 15/16	75	3 1/4	10 13/16	8 1 7/32	2 29/32	1 3/16	1	1 3/32	6 3/8	3.6260	1.4685	0.6890	4.0157	20	3/4		HC 215-47	P 215	7.9
215			82.6	275	217	74	30	25	28	162	92.1	37.3	17.5	102			215			

PILLOW BLOCK BALL BEARING UNITS

UKP2

(WITH ADAPTER LOCKING, NORMAL DUTY)



SL TYPE SEAL,

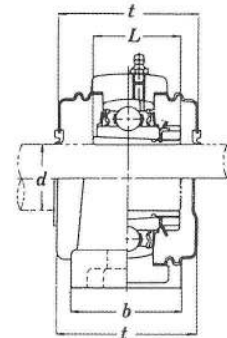
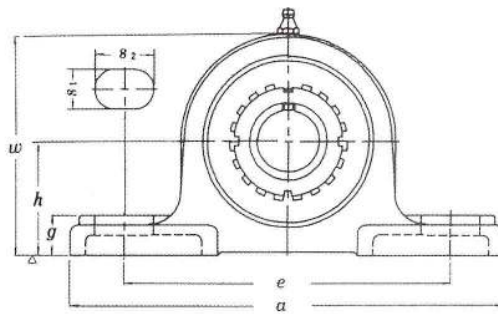
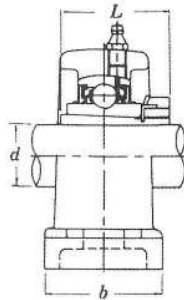


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKP2-C... WITH COVER, BOTH SIDES OPEN

UKP2-CD... WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in.) (mm)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		h	a	e	b	S ₂	S ₁	g	w	t	L	V	(mm)	(in.)				
	(in.)	(mm)																	
UKP 205 205	3/4	20	17 ¹ / ₁₆ 36.5	5 ¹ / ₂ 140	4 ¹ / ₈ 105	1 ¹ / ₂ 38	3/4 19	1/2 13	5/8 16	2 ²⁵ / ₃₂ 71	1 ⁷ / ₈ 48	1 ⁵ / ₃₂ 29	3/4 18.7	10	3/8	UK 205	P205	HE2305 H 2305	0.84
UKP 206 206 206 206	7/8 15/16 1	25	11 ¹ / ₁₆ 42.9	6 ¹ / ₂ 165	4 ⁹ / ₁₆ 121	1 ⁷ / ₈ 48	13/16 21	2 ¹ / ₃₂ 17	23/32 18	3 ⁵ / ₁₆ 84	2 ¹ / ₁₆ 52	1 ⁷ / ₃₂ 31	2 ⁵ / ₃₂ 19.7	14	1/2	UK 206	P206	HS2306 HA2306 H 2306 HE2306	1.4
UKP 207 207 207	1 ¹ / ₈ 13/16	30	1 ⁷ / ₈ 47.6	6 ⁹ / ₁₆ 167	5 127	1 ⁷ / ₈ 48	13/16 21	2 ¹ / ₃₂ 17	3/4 19	3 ²¹ / ₃₂ 93	2 ⁵ / ₁₆ 59	1 ³ / ₈ 35	7/8 22.2	14	1/2	UK 207	P207	HS2307 H 2307 HA2307	1.7
UKP 208 208 208	1 ¹ / ₄ 13/8	35	1 ¹⁵ / ₁₆ 49.2	7 ¹ / ₄ 184	5 ¹³ / ₃₂ 137	2 ¹ / ₈ 54	13/16 21	2 ¹ / ₃₂ 17	3/4 19	3 ²⁷ / ₃₂ 98	2 ¹¹ / ₁₆ 68	1 ¹³ / ₃₂ 36	1 ⁵ / ₁₆ 23.7	14	1/2	UK 208	P208	HE2308 HS2308 H 2308	2.0
UKP 209 209 209 209	1 ⁷ / ₁₆ 1 ¹ / ₂ 1 ⁵ / ₈	40	2 ¹ / ₈ 54.0	7 ¹⁵ / ₃₂ 190	5 ³ / ₄ 146	2 ¹ / ₈ 54	13/16 21	2 ¹ / ₃₂ 17	2 ⁵ / ₃₂ 20	4 ³ / ₁₆ 106	2 ¹¹ / ₁₆ 68	1 ¹⁷ / ₃₂ 36	1 25.7	14	1/2	UK 209	P209	HA2309 HE2309 H 2309 HS2309	2.3
UKP 210 210 210	1 ¹¹ / ₁₆ 13/4	45	2 ¹ / ₄ 57.2	8 ¹ / ₈ 206	6 ¹ / ₄ 159	2 ³ / ₈ 60	7/8 22	2 ⁵ / ₃₂ 20	7/8 22	4 ⁷ / ₁₆ 113	2 ⁷ / ₈ 73	1 ²¹ / ₃₂ 42	1 ¹ / ₁₆ 26.7	16	5/8	UK 210	P210	HA2310 HE2310 H 2310	3.0
UKP 211 211 211 211	1 ⁷ / ₈ 15/16 2	50	2 ¹ / ₂ 63.5	8 ⁵ / ₈ 219	6 ²³ / ₃₂ 171	2 ³ / ₈ 60	7/8 22	2 ⁵ / ₃₂ 20	7/8 22	4 ²⁹ / ₃₂ 125	2 ¹⁵ / ₁₆ 75	1 ²⁵ / ₃₂ 45	1 ³ / ₃₂ 27.7	16	5/8	UK 211	P211	HS2311 HA2311 H 2311 HE2311	3.7
UKP 212 212	2 ¹ / ₈	55	2 ³ / ₄ 69.8	9 ¹ / ₂ 241	7 ¹ / ₄ 184	2 ³ / ₄ 70	1 25	2 ⁵ / ₃₂ 20	1 25	5 ⁷ / ₁₆ 138	3 ¹⁵ / ₃₂ 88	1 ²⁷ / ₃₂ 47	1 ⁵ / ₃₂ 29	16	5/8	UK 212	P212	HS2312 H 2312	4.8
UKP 213 213 213 213	2 ³ / ₁₆ 2 ¹ / ₄ 2 ³ / ₈	60	3 76.2	10 ⁷ / ₁₆ 265	8 203	2 ³ / ₄ 70	1 ³ / ₁₆ 30	1 25	1 ¹ / ₁₆ 27	5 ²⁹ / ₃₂ 150	3 ¹⁵ / ₃₂ 88	1 ³¹ / ₃₂ 50	1 ¹ / ₄ 31.5	20	3/4	UK 213	P213	HA2313 HE2313 H 2313 HS2313	5.8
UKP 215 215 215	2 ⁷ / ₁₆ 2 ¹ / ₂	65	3 ¹ / ₄ 82.6	10 ¹³ / ₁₆ 275	8 ¹⁷ / ₃₂ 217	2 ²⁹ / ₃₂ 74	1 ³ / ₁₆ 30	1 25	1 ³ / ₃₂ 28	6 ³ / ₈ 162	3 ²⁷ / ₃₂ 98	2 ⁵ / ₃₂ 55	1 ¹¹ / ₃₂ 34.5	20	3/4	UK 215	P215	HA2315 HE2315 H 2315	7.7
UKP 216 216 216	2 ¹¹ / ₁₆ 2 ³ / ₄	70	3 ¹ / ₂ 88.9	11 ¹ / ₂ 292	9 ¹ / ₈ 232	3 ¹ / ₁₆ 78	1 ³ / ₈ 35	1 25	1 ¹ / ₄ 32	6 ²⁷ / ₃₂ 174	4 ¹ / ₄ 108	2 ⁵ / ₁₆ 59	1 ¹ / ₂ 37.8	20	3/4	UK 216	P216	HA2316 HE2316 H 2316	9.2
UKP 217 217 217	2 ¹⁵ / ₁₆	75	3 ³ / ₄ 95.2	12 ⁷ / ₃₂ 310	9 ²³ / ₃₂ 247	3 ⁹ / ₃₂ 83	1 ⁹ / ₁₆ 40	1 25	1 ¹ / ₄ 32	7 ⁹ / ₃₂ 185	4 ¹³ / ₃₂ 112	2 ¹⁵ / ₃₂ 63	1 ⁹ / ₁₆ 39.8	20	3/4	UK 217	P217	HA2317 H 2317 HE2317	11.0
UKP 218		80	4 101.6	12 ⁷ / ₈ 327	10 ⁵ / ₁₆ 262	3 ¹⁵ / ₃₂ 88	1 ²⁵ / ₃₂ 45	1 ¹ / ₁₆ 27	1 ¹¹ / ₃₂ 34	7 ²⁵ / ₃₂ 198	4 ¹³ / ₁₆ 122	2 ⁹ / ₁₆ 65	1 ²¹ / ₃₂ 41.8	22	7/8	UK 218	P218	H 2318	13.8

PILLOW BLOCK BALL BEARING UNITS

UCPX
(MEDIUM DUTY)



SL TYPE SEAL

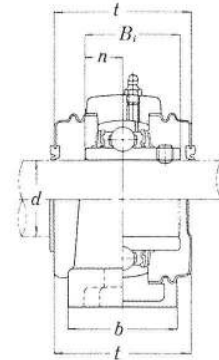
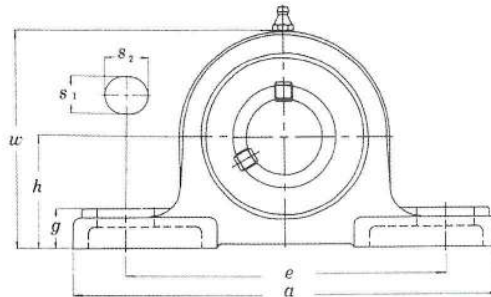
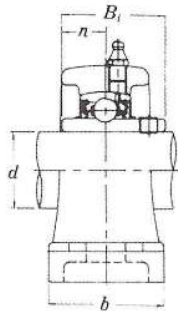


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCPX-C... WITH COVER, BOTH SIDES OPEN

UCPX-CD... WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in./mm)													Bolt Used		Bearing No.	Housing No.	Weight (kgf)
	d		h	a	e	b	S ₂	S ₁	g	w	t	B _i	n	(mm)	(in.)					
	(in.)	(mm)																		
UCP X05 X05-16	1	25	1 3/4 44.4	6 1/4 159	4 11/16 119	2 51	1 25	2 1/32 17	5/8 16	3 3/8 86	2 1/16 52	1.5000 38.1	0.6260 15.9	14	1/2	UC X05 X05-16	P X05	1.5		
UCP X06 X06-19 X06-20	1 3/16 1 1/4	30	1 7/8 47.6	6 7/8 175	5 127	2 1/4 57	1 25	2 1/32 17	2 1/32 17	3 21/32 93	2 5/16 59	1.6890 42.9	0.6890 17.5	14	1/2	UC X06 X06-19 X06-20	P X06	2.1		
UCP X07-22 X07 X07-23	1 3/8 1 7/16	35	2 1/8 54.0	8 203	5 21/32 144	2 1/4 57	1 3/16 30	2 1/32 17	3/4 19	4 1/8 105	2 11/16 68	1.9370 49.2	0.7480 19.0	14	1/2	UC X07-22 X07 X07-23	P X07	2.7		
UCP X08-24 X08	1 1/2	40	2 5/16 58.7	8 3/4 222	6 5/32 156	2 5/8 67	1 1/4 32	2 5/32 20	1 3/16 21	4 1/2 114	2 11/16 68	1.9370 49.2	0.7480 19.0	16	5/8	UC X08-24 X08	P X08	3.5		
UCP X09-27 X09-28 X09	1 11/16 1 3/4	45	2 5/16 58.7	8 3/4 222	6 5/32 156	2 5/8 67	1 5/16 33	2 5/32 20	1 3/16 21	4 9/16 116	2 7/8 73	2.0315 51.6	0.7480 19.0	16	5/8	UC X09-27 X09-28 X09	P X09	3.7		
UCP X10-31 X10 X10-32	1 15/16 2	50	2 1/2 63.5	9 1/2 241	6 23/32 171	2 7/8 73	1 13/32 36	2 5/32 20	7/8 22	4 31/32 126	2 15/16 75	2.1890 55.6	0.8740 22.2	16	5/8	UC X10-31 X10 X10-32	P X10	4.6		
UCP X11 X11-35 X11-36	2 3/16 2 1/4	55	2 3/4 69.8	10 1/4 260	7 1/4 184	3 1/8 79	1 13/32 36	1 25	1 3/32 28	5 15/32 139	3 15/32 88	2.5630 65.1	1.0000 25.4	20	3/4	UC X11 X11-35 X11-36	P X11	6.5		
UCP X12 X12-38 X12-39	2 3/8 2 7/16	60	3 76.2	11 1/4 286	8 203	3 9/32 83	1 9/16 40	1 25	1 3/32 28	5 31/32 152	3 15/32 88	2.5630 65.1	1.0000 25.4	20	3/4	UC X12 X12-38 X12-39	P X12	7.7		
UCP X13-40 X13	2 1/2	65	3 76.2	11 1/4 286	8 203	3 9/32 83	1 9/16 40	1 25	1 3/32 28	6 3/32 155	3 27/32 98	2.9370 74.6	1.1890 30.2	20	3/4	UC X13-40 X13	P X13	8.1		
UCP X14-44 X14	2 3/4	70	3 1/2 88.9	13 330	9 1/32 229	3 1/2 89	1 31/32 50	1 1/16 27	1 1/4 32	6 23/32 171	3 27/32 98	3.0630 77.8	1.3110 33.3	22	7/8	UC X14-44 X14	P X14	10.2		
UCP X15 X15-48	3	75	3 1/2 88.9	13 330	9 1/32 229	3 1/2 89	1 31/32 50	1 1/16 27	1 1/4 32	6 7/8 175	4 1/4 108	3.2520 82.6	1.3110 33.3	22	7/8	UC X15 X15-48	P X15	10.8		
UCP X16		80	4 101.6	15 381	11 5/32 283	4 1/32 102	2 9/32 58	1 1/16 27	1 11/32 34	7 11/16 195	4 13/32 112	3.3740 85.7	1.3425 34.1	22	7/8	UC X16	P X16	15.3		
UCP X17		85	4 101.6	15 381	11 5/32 283	4 1/32 102	2 3/8 60	1 1/16 27	1 11/32 34	7 7/8 200	4 13/32 122	3.7795 96.0	1.5630 39.7	22	7/8	UC X17	P X17	16.1		
UCP X18-56 X18	3 1/2	90	4 101.6	15 381	11 5/32 283	4 3/8 111	2 5/8 60	1 1/16 27	1 1/2 38	8 1/32 204	6 5/16 160	4.0945 104	1.6890 42.9	22	7/8	UC X18-56 X18	P X18	19.1		
UCP X20 X20-64	4	100	5 127	17 432	13 9/32 337	4 3/4 121	2 9/16 65	1 15/16 33	1 25/32 45	9 21/32 245	7 13/32 188	4.6260 117.5	1.9370 49.2	27	1	UC X20 X20-64	P X20	30.4		

PILLOW BLOCK BALL BEARING UNITS

UKPX

(WITH ADAPTER LOCKING, MEDIUM DUTY)

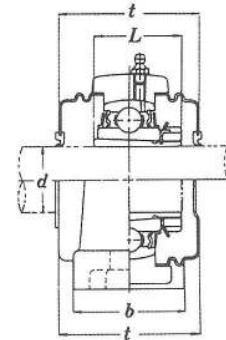
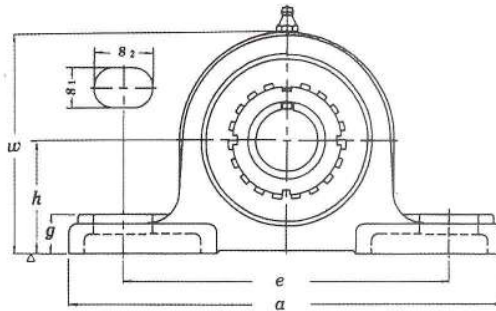
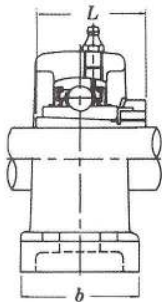


SL TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKPX-C.....WITH COVER, BOTH SIDES OPEN

UKPX-CD.....WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in./mm)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		h	a	e	b	S ₂	S ₁	g	w	t	L	V	(mm)	(in.)				
	(in.)	(mm)																	
UKP X05 X05	3/4	20	1 3/4 44.4	6 1/4 159	4 11/16 119	2 51	1 25	2 1/32 17	5/8 16	3 3/8 86	2 1/16 52	1 3/8 35	2 5/32 19.7	14	1/2	UK X05	P X05	HE2305 H 2305	1.5
UKP X06 X06 X06 X06	7/8 1 5/16 1	25	1 7/8 47.6	6 7/8 175	5 127	2 1/4 57	1 25	2 1/32 17	2 1/32 17	3 21/32 93	2 5/16 59	1 1/2 38	2 7/32 21.2	14	1/2	UK X06	P X06	HS2306 HA2306 H 2306 HE2306	2.1
UKP X07 X07 X07	1 1/8 1 3/16	30	2 1/8 54.0	8 203	5 21/32 144	2 1/4 57	1 3/16 30	2 1/32 17	3/4 19	4 1/8 105	2 11/16 68	1 11/16 43	2 9/32 22.7	14	1/2	UK X07	P X07	HS2307 H 2307 HA2307	2.7
UKP X08 X08 X08	1 1/4 1 9/8	35	2 5/16 58.7	8 3/4 222	6 5/32 156	2 5/8 67	1 1/4 32	2 5/32 20	1 3/16 21	4 1/2 114	2 11/16 68	1 13/16 46	3 1/32 24.7	16	5/8	UK X08	P X08	HE2308 HS2308 H 2308	3.5
UKP X09 X09 X09 X09	1 7/16 1 1/2 1 5/8	40	2 5/16 58.7	8 3/4 222	6 5/32 156	2 5/8 67	1 5/16 33	2 5/32 20	1 3/16 21	4 9/16 116	2 7/8 73	1 31/32 50	1 25.7	16	5/8	UK X09	P X09	HA2309 HE2309 H 2309 HS2309	3.7
UKP X10 X10 X10	1 11/16 1 3/4	45	2 1/2 63.5	9 1/2 241	6 23/32 171	2 7/8 73	1 13/32 36	2 5/32 20	7/8 22	4 31/32 126	2 15/16 75	2 5/32 55	1 3/32 27.7	16	5/8	UK X10	P X10	HA2310 HE2310 H 2310	4.6
UKP X11 X11 X11 X11	1 7/8 1 15/16 2	50	2 3/4 69.8	10 1/4 260	7 1/4 184	3 1/8 79	1 13/32 36	1 25	1 3/32 28	5 15/32 139	3 15/32 88	2 5/16 59	1 1/8 28.7	20	3/4	UK X11	P X11	HS2311 HA2311 H 2311 HE2311	6.2
UKP X12 X12	2 1/8	55	3 76.2	11 1/4 286	8 203	3 9/32 83	1 9/16 40	1 25	1 3/32 28	5 31/32 152	3 15/32 88	2 7/16 62	1 9/16 30.5	20	3/4	UK X12	P X12	HS2312 H 2312	7.5
UKP X13 X13 X13 X13	2 3/16 2 1/4 2 3/8	60	3 76.2	11 1/4 286	8 203	3 9/32 83	1 9/16 40	1 25	1 3/32 28	6 3/32 155	3 27/32 98	2 9/16 65	1 5/16 33.5	20	3/4	UK X13	P X13	HA2313 HE2313 H 2313 HS2313	7.8
UKP X15 X15 X15	2 1/2 2 5/8	65	3 1/2 88.9	13 330	9 1/32 229	3 1/2 89	1 31/32 50	1 1/16 27	1 1/4 32	6 7/8 175	4 1/4 108	2 7/8 73	1 13/32 35.5	22	7/8	UK X15	P X15	HE2315 H 2315 HS2315	10.5
UKP X16 X16	2 3/4	70	4 101.6	15 381	11 5/32 283	4 1/32 102	2 9/32 58	1 1/16 27	1 11/32 34	7 1/16 195	4 13/32 112	3 1/16 78	1 17/32 38.8	22	7/8	UK X16	P X16	HE2316 H 2316	15.4
UKP X17 X17 X17 X17	2 7/8 2 15/16 3	75	4 101.6	15 381	11 5/32 283	4 1/32 102	2 3/8 60	1 1/16 27	1 11/32 34	7 7/8 200	4 13/16 122	3 7/32 82	1 21/32 41.8	22	7/8	UK X17	P X17	HS2317 HA2317 H 2317 HE2317	15.8
UKP X18		80	4 101.6	15 381	11 5/32 283	4 9/8 111	2 9/8 60	1 1/16 27	1 1/2 38	8 1/32 204	6 5/16 160	3 3/8 86	1 11/16 42.8	22	7/8	UK X18	P X18	H 2318	18.6
UKP X20 X20	3 1/2	90	5 127.0	17 432	13 9/32 337	4 3/4 121	2 9/16 65	1 5/16 33	1 25/32 45	9 21/32 245	7 13/32 188	3 13/16 97	1 27/32 46.8	27	1	UK X20	P X20	HE2320 H 2320	29.3

PILLOW BLOCK BALL BEARING UNITS

UCP3
(HEAVY DUTY)

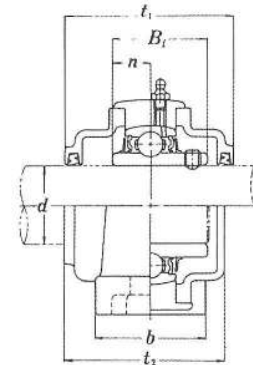
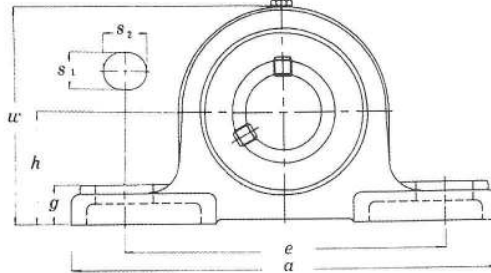
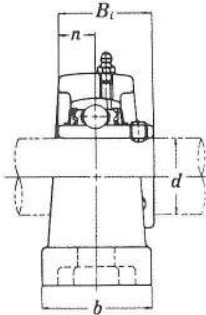


SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)
UCP3-GC... WITH COVER, BOTH SIDES OPEN
UCP3-GCD... WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in. / mm)													Bolt Used		Bearing No.	Housing No.	Weight (kgf)
	d		h	a	e	b	S ₂	S ₁	g	w	t ₁	t ₂	B _i	n	(mm)	(in.)				
	(in.)	(mm)																		
UCP 305 305-16	1	25	1 ⁴⁹ / ₆₄ 45	6 ⁷ / ₈ 175	5 ³ / ₁₆ 132	1 ³ / ₄ 45	2 ⁵ / ₃₂ 20	2 ¹ / ₃₂ 17	5/8 16	3 ¹¹ / ₃₂ 85	3 76	2 ²⁵ / ₃₂ 71	1.4961 38	0.5906 15	14	1/2	UC 305 305-16	P 305	1.7	
UCP 306-18 306	1 1/8	30	1 ³¹ / ₃₂ 50	7 ⁹ / ₃₂ 180	5 1/2 140	1 ³¹ / ₃₂ 50	2 ⁵ / ₃₂ 20	2 ¹ / ₃₂ 17	3/4 19	3 3/4 95	3 7/32 82	3 1/32 77	1.6929 43	0.6693 17	14	1/2	UC 306-18 306	P 306	2.2	
UCP 307-20 307-22 307 307-23	1 1/4 1 3/8 1 7/16	35	2 ¹³ / ₆₄ 56	8 ⁹ / ₃₂ 210	6 5/16 160	2 7/32 56	1 25	2 ¹ / ₃₂ 17	13/16 21	4 7/32 107	3 15/32 88	3 9/32 83	1.8897 48	0.7480 19	14	1/2	UC 307-20 307-22 307 307-23	P 307	3.0	
UCP 308-24 308	1 1/2	40	2 ²³ / ₆₄ 60	8 ²¹ / ₃₂ 220	6 11/16 170	2 3/8 60	1 1/16 27	2 ¹ / ₃₂ 17	2 9/32 23	4 21/32 118	3 25/32 96	3 19/32 91	2.0472 52	0.7480 19	14	1/2	UC 308-24 308	P 308	3.8	
UCP 309-28 309	1 3/4	45	2 ⁴¹ / ₆₄ 67	9 ²¹ / ₃₂ 245	7 15/32 190	2 5/8 67	1 3/16 30	2 ⁵ / ₃₂ 20	1 25	5 9/16 132	4 1/32 102	3 25/32 96	2.2441 57	0.8661 22	16	5/8	UC 309-28 309	P 309	4.9	
UCP 310-31 310	1 15/16	50	2 ⁶¹ / ₆₄ 75	10 ¹³ / ₁₆ 275	8 11/32 212	2 15/16 75	1 3/8 35	2 ⁵ / ₃₂ 20	1 3/32 28	5 13/16 148	4 11/32 110	4 3/32 104	2.4015 61	0.8661 22	16	5/8	UC 310-31 310	P 310	6.6	
UCP 311-32 311	2	55	3 ⁵ / ₃₂ 80	12 ⁷ / ₃₂ 310	9 9/32 236	3 5/32 80	1 1/2 38	2 ⁵ / ₃₂ 20	1 7/32 31	6 7/32 158	4 1/2 114	4 1/4 108	2.5984 66	0.9842 25	16	5/8	UC 311-32 311	P 311	7.9	
UCP 312		60	3 ¹¹ / ₃₂ 85	13 330	9 27/32 250	3 11/32 85	1 1/2 38	1 25	1 9/16 33	6 9/16 167	4 7/8 124	4 19/32 117	2.7953 71	1.0236 26	20	3/4	UC 312	P 312	9.5	
UCP 313-40 313	2 1/2	65	3 ³⁵ / ₆₄ 90	13 3/8 340	10 1/4 260	3 17/32 90	1 1/2 38	1 25	1 13/32 36	6 15/16 176	4 19/16 122	4 9/16 116	2.9528 75	1.1811 30	20	3/4	UC 313-40 313	P 313	10.7	
UCP 314-44 314	2 3/4	70	3 ⁴⁷ / ₆₄ 95	14 3/16 360	11 1/32 280	3 17/32 90	1 9/16 40	1 1/16 27	1 9/16 40	7 5/16 186	4 7/8 124	4 19/32 117	3.0709 78	1.2992 33	22	7/8	UC 314-44 314	P 314	12.4	
UCP 315 315-48	3	75	3 ¹⁵ / ₁₆ 100	14 31/32 380	11 13/32 290	3 15/16 100	1 9/16 40	1 1/16 27	1 9/16 40	7 25/32 198	5 9/32 134	5 127	3.2283 82	1.2598 32	22	7/8	UC 315 315-48	P 315	14.8	
UCP 316		80	4 ¹¹ / ₆₄ 106	15 3/4 400	11 13/16 300	4 11/32 110	1 9/16 40	1 1/16 27	1 3/4 45	8 7/32 209	5 7/16 138	5 5/32 131	3.3858 86	1.3386 34	22	7/8	UC 316	P 316	18.5	
UCP 317		85	4 ¹⁹ / ₃₂ 112	16 11/32 420	12 19/32 320	4 11/32 110	1 25/32 45	1 5/16 33	1 3/4 45	8 21/32 220	5 9/4 146	5 15/32 139	3.7795 96	1.5748 40	27	1	UC 317	P 317	20.3	
UCP 318-56 318	3 1/2	90	4 ⁴¹ / ₆₄ 118	16 19/16 430	13 330	4 11/32 110	1 25/32 45	1 5/16 33	1 31/32 50	9 7/32 234	5 29/32 150	5 19/32 142	3.7795 96	1.5748 40	27	1	UC 318-56 318	P 318	22.8	
UCP 319		95	4 ⁵⁹ / ₆₄ 125	17 1/2 470	14 3/16 360	4 23/32 120	1 31/32 50	1 13/32 36	1 5/16 35	10 3/32 248	6 3/8 162	6 1/16 154	4.0551 103	1.6142 41	30	1 1/8	UC 319	P 319	29.0	
UCP 320 320-64	4	100	5 ³⁹ / ₆₄ 140	19 9/32 490	14 31/32 380	4 23/32 120	1 31/32 50	1 13/32 36	1 9/16 35	10 3/4 273	6 27/32 174	6 15/32 164	4.2519 108	1.6535 42	30	1 1/8	UC 320 320-64	P 320	35.1	
UCP 321		105	5 ³⁹ / ₆₄ 140	19 9/32 490	14 31/32 380	4 23/32 120	1 31/32 50	1 13/32 36	1 9/16 35	10 15/16 278	6 11/16 180	6 11/16 170	4.4094 112	1.7323 44	30	1 1/8	UC 321	P 321	36	
UCP 322		110	5 ²⁹ / ₃₂ 150	20 15/32 520	15 3/4 400	5 1/2 140	2 5/32 55	1 9/16 40	2 3/8 60	11 21/32 296	7 13/32 188	6 15/16 176	4.6063 117	1.8110 46	33	1 1/4	UC 322	P 322	44	
UCP 324		120	6 15/64 180	22 7/16 570	17 23/32 450	5 1/2 140	2 5/32 55	1 9/16 40	2 3/4 70	12 7/16 316	7 23/32 196	7 1/4 184	4.9606 126	2.0079 51	33	1 1/4	UC 324	P 324	55.4	
UCP 326		130	7 3/32 180	23 9/8 600	18 29/32 480	5 1/2 140	2 5/32 55	1 9/16 40	3 1/8 80	13 31/32 355	8 7/16 214	7 31/32 202	5.3150 135	2.1260 54	33	1 1/4	UC 326	P 326	72.1	
UCP 328		140	7 7/8 200	24 13/32 620	19 11/16 500	5 1/2 140	2 5/32 55	1 9/16 40	3 1/8 80	15 15/32 393	8 3/4 222	8 11/32 212	5.7086 145	2.3228 59	33	1 1/4	UC 328	P 328	92.5	

PILLOW BLOCK BALL BEARING UNITS

UKP3

(WITH ADAPTER LOCKING, HEAVY DUTY)

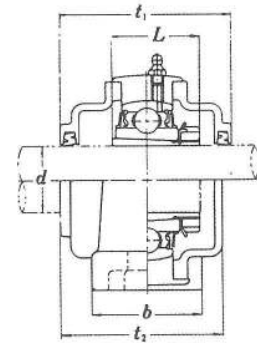
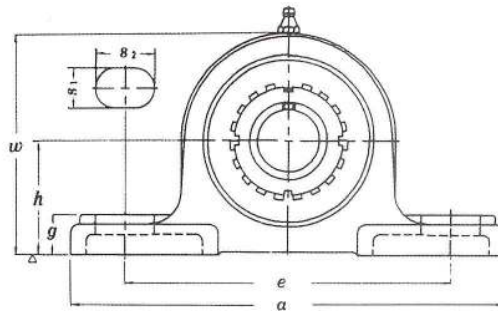
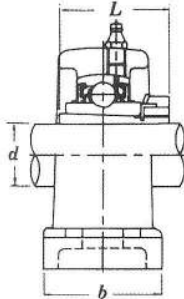


SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)
 UKP3-GC.....WITH COVER, BOTH SIDES OPEN
 UKP3-GCD.....WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in./mm)												Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d (in.)	d (mm)	h	a	e	b	S ₂	S ₁	g	w	t ₁	t ₂	L	V	(mm)	(in.)				
UKP 305	3/4	20	1 ⁴⁹ / ₆₄	6 ⁷ / ₈	5 ³ / ₁₆	1 ³ / ₄	2 ⁵ / ₃₂	2 ¹ / ₃₂	5/8	3 ¹¹ / ₃₂	3	2 ²⁵ / ₃₂	1 ³ / ₈	2 ⁷ / ₃₂	14	1/2	UK 305	P 305	HE2305 H 2305	1.7
UKP 306	7/8	25	1 ³¹ / ₃₂	7 ³ / ₃₂	5 1/2	1 ³¹ / ₃₂	2 ⁵ / ₃₂	2 ¹ / ₃₂	3/4	3 ³ / ₄	3 ⁷ / ₃₂	3 ¹ / ₃₂	1 1/2	2 ⁹ / ₃₂	14	1/2	UK 306	P 306	HS2306 HA2306 H 2306 HE2306	2.3
UKP 307	1 1/8	30	2 ¹³ / ₆₄	8 ⁹ / ₃₂	6 ⁵ / ₁₆	2 ⁷ / ₃₂	1	2 ¹ / ₃₂	13/16	4 ⁷ / ₃₂	3 ¹⁵ / ₃₂	3 ⁹ / ₃₂	1 ¹¹ / ₁₆	1	14	1/2	UK 307	P 307	HS2307 H 2307 HA2307	3.0
UKP 308	1 1/4	35	2 ²³ / ₆₄	8 ²¹ / ₃₂	6 ¹¹ / ₁₆	2 ³ / ₈	1 1/16	2 ¹ / ₃₂	2 ⁹ / ₃₂	4 ²¹ / ₃₂	3 ²⁵ / ₃₂	3 ¹⁹ / ₃₂	1 ¹³ / ₁₆	1 ³ / ₃₂	14	1/2	UK 308	P 308	HE2308 HS2308 H 2308	3.8
UKP 309	1 7/16	40	2 ⁴¹ / ₆₄	9 ²¹ / ₃₂	7 ¹⁵ / ₃₂	2 ⁵ / ₈	1 ³ / ₁₆	2 ⁵ / ₃₂	1	5 ³ / ₁₆	4 ¹ / ₃₂	3 ²⁵ / ₃₂	1 ³¹ / ₃₂	1 ³ / ₁₆	16	5/8	UK 309	P 309	HA2309 HE2309 H 2309 HS2309	5.0
UKP 310	1 11/16	45	2 ⁶¹ / ₆₄	10 ¹³ / ₁₆	8 ¹¹ / ₃₂	2 ¹⁵ / ₁₆	1 ³ / ₈	2 ⁵ / ₃₂	1 ³ / ₃₂	5 ¹³ / ₁₆	4 ¹¹ / ₃₂	4 ⁹ / ₃₂	2 ⁹ / ₃₂	1 ¹⁹ / ₃₂	16	5/8	UK 310	P 310	HA2310 HE2310 H 2310	6.7
UKP 311	1 7/8	50	3 ⁹ / ₃₂	12 ⁷ / ₃₂	9 ⁹ / ₃₂	3 ⁵ / ₃₂	1 1/2	2 ⁵ / ₃₂	1 ⁷ / ₃₂	6 ⁷ / ₃₂	4 ¹ / ₂	4 ¹ / ₄	2 ⁵ / ₁₆	1 ⁵ / ₁₆	16	5/8	UK 311	P 311	HS2311 HA2311 H 2311 HE2311	8.1
UKP 312	2 1/8	55	3 ¹¹ / ₃₂	13	9 ²⁷ / ₃₂	3 ¹¹ / ₃₂	1 1/2	1	1 ⁵ / ₁₆	6 ⁹ / ₁₆	4 ⁷ / ₈	4 ¹⁹ / ₃₂	2 ⁷ / ₁₆	1 ¹⁹ / ₃₂	20	3/4	UK 312	P 312	HS2312 H 2312	9.4
UKP 313	2 9/16	60	3 ²⁵ / ₆₄	13 ³ / ₈	10 ¹ / ₄	3 ¹⁷ / ₃₂	1 1/2	1	1 ¹³ / ₃₂	6 ¹⁵ / ₁₆	4 ¹³ / ₁₆	4 ⁹ / ₁₆	2 ⁹ / ₁₆	1 1/2	20	3/4	UK 313	P 313	HA2313 HE2313 H 2313 HS2313	10.8
UKP 315	2 1/2	65	3 ¹⁵ / ₁₆	14 ³¹ / ₃₂	11 ¹³ / ₃₂	3 ¹⁵ / ₁₆	1 ⁹ / ₁₆	1 1/16	1 ⁹ / ₁₆	7 ²⁵ / ₃₂	5 ⁹ / ₃₂	5	2 ⁷ / ₈	1 ²¹ / ₃₂	22	7/8	UK 315	P 315	HE2315 H 2315	14.9
UKP 316	2 3/4	70	4 ¹¹ / ₆₄	15 ³ / ₄	11 ¹⁹ / ₁₆	4 ¹¹ / ₃₂	1 ⁹ / ₁₆	1 1/16	1 ³ / ₄	8 ⁷ / ₃₂	5 ⁷ / ₁₆	5 ³ / ₃₂	3 ¹ / ₁₆	1 ⁹ / ₄	22	7/8	UK 316	P 316	HE2316 H 2316	18.6
UKP 317	3	75	4 ¹³ / ₃₂	16 ¹⁷ / ₃₂	12 ¹⁹ / ₃₂	4 ¹¹ / ₃₂	1 ²⁵ / ₃₂	1 ⁵ / ₁₆	1 ³ / ₄	8 ²¹ / ₃₂	5 ³ / ₄	5 ¹⁵ / ₃₂	3 ⁷ / ₃₂	1 ⁷ / ₈	27	1	UK 317	P 317	H 2317 HE2317	20.2
UKP 318	3 1/8	80	4 ⁴¹ / ₆₄	16 ¹⁵ / ₁₆	13	4 ¹¹ / ₃₂	1 ²⁵ / ₃₂	1 ⁵ / ₁₆	1 ³¹ / ₃₂	9 ⁷ / ₃₂	5 ²⁹ / ₃₂	5 ¹⁹ / ₃₂	3 ⁹ / ₈	1 ⁷ / ₈	27	1	UK 318	P 318	H 2318	22.8
UKP 319	3 1/4	85	4 ⁵⁹ / ₆₄	18 ¹ / ₂	14 ⁹ / ₁₆	4 ²³ / ₃₂	1 ³¹ / ₃₂	1 ¹⁹ / ₃₂	1 ³¹ / ₃₂	9 ³ / ₄	6 ³ / ₈	6 ¹ / ₁₆	3 ¹⁷ / ₃₂	2 ¹ / ₃₂	30	1 1/8	UK 319	P 319	HE2319 H 2319	29.3
UKP 320	3 1/2	90	5 ³³ / ₆₄	19 ⁹ / ₃₂	14 ³¹ / ₃₂	4 ²³ / ₃₂	1 ³¹ / ₃₂	1 ³¹ / ₃₂	2 ⁵ / ₃₂	10 ⁹ / ₁₆	6 ²⁷ / ₃₂	6 ¹⁹ / ₃₂	3 ¹⁹ / ₁₆	2 ¹ / ₈	30	1 1/8	UK 320	P 320	HE2320 H 2320	34.8
UKP 322	4	100	5 ²⁹ / ₃₂	20 ¹⁵ / ₃₂	15 ¹ / ₄	5 1/2	2 ⁵ / ₃₂	1 ⁹ / ₁₆	2 ³ / ₈	11 ²¹ / ₃₂	7 ¹³ / ₃₂	6 ¹⁵ / ₁₆	4 ¹ / ₈	2 ¹¹ / ₃₂	33	1 1/4	UK 322	P 322	H 2322 HE2322	43.9
UKP 324	4 7/16	110	6 ¹⁹ / ₆₄	22 ⁷ / ₁₆	17 ²³ / ₃₂	5 1/2	2 ⁵ / ₃₂	1 ⁹ / ₁₆	2 ³ / ₄	12 ⁷ / ₁₆	7 ²³ / ₃₂	7 ¹ / ₄	4 ¹³ / ₃₂	2 ¹⁹ / ₃₂	33	1 1/4	UK 324	P 324	H 2324 HA2324	55.7
UKP 326	4 1/2	115	7 ³ / ₃₂	23 ⁹ / ₈	18 ²⁹ / ₃₂	5 1/2	2 ⁵ / ₃₂	1 ⁹ / ₁₆	3 ¹ / ₈	13 ³¹ / ₃₂	8 ⁷ / ₁₆	7 ³¹ / ₃₂	4 ³ / ₄	2 ⁵ / ₈	33	1 1/4	UK 326	P 326	HE2326 H 2326	71.9
UKP 328	4 15/16	125	7 ⁷ / ₈	24 ¹³ / ₃₂	19 ¹¹ / ₁₆	5 1/2	2 ⁵ / ₃₂	1 ⁹ / ₁₆	3 ¹ / ₈	15 ¹⁵ / ₃₂	8 ³ / ₄	8 ¹¹ / ₃₂	5 ⁵ / ₃₂	2 ²⁷ / ₃₂	33	1 1/4	UK 328	P 328	H 2328 HA2328	92.5

SQUARE FLANGE BALL BEARING UNITS

UCF2
(NORMAL DUTY)



SL TYPE SEAL

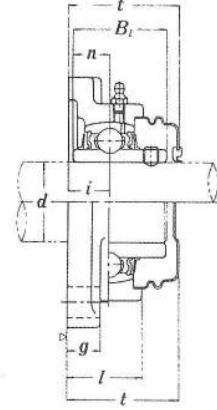
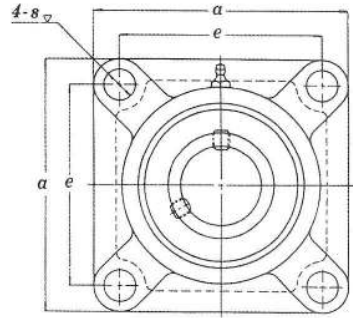
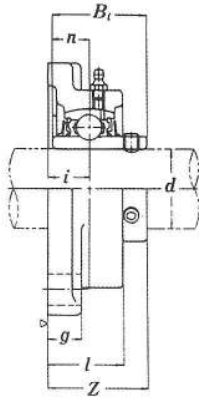


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCF2-C... WITH OPEN COVER

UCF2-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in./mm)									Bolt Used		Bearing No.	Housing No.	Weight (kgf)		
	d		a	e	i	g	l	s	Z	t	Bi	n	(mm)				(in.)	
	(in.)	(mm)																
UCF 201-8	1/2	12													UC 201-8 202 202-10 203 204-12 204	F 204	0.64	
202	5/8	15	3 3/8	2 33/64	19/32	7/16	1	15/32	15/16	115/32	1.2205	0.5000	10	3/8				0.62
203		17	86	64	15	11	25.5	12	33.3	37.0	31.0	12.7						0.61
204-12	3/4	20																0.59
204																		
UCF 205-14	7/8		3 3/4	2 3/4	5/8	1/2	1 1/16	15/32	113/32	19/16	1.3425	0.5630	10	3/8	UC 205-14 205-15 205 205-16	F 205	0.83	
205-15	15/16	25	95	70	16	13	27	12	35.7	40	34.1	14.3						
205																		
205-16	1																	
UCF 206-18	1 1/8		4 1/4	3 17/64	45/64	1/2	1 7/32	15/32	119/32	1 23/32	1.5000	0.6260	10	3/8	UC 206-18 206 206-19	F 206	1.1	
206	13/16	30	108	83	18	13	31	12	40.2	44.0	38.1	15.9						
206-19																		
UCF 207-20	1 1/4		4 19/32	3 5/8	3/4	19/32	1 11/32	35/64	1 3/4	1 15/16	1.6890	0.6890	12	7/16	UC 207-20 207-21 207-22 207 207-23	F 207	1.5	
207-21	15/16	35	117	92	19	15	34	14	44.4	49	42.9	17.5						
207-22	13/8																	
207																		
207-23	17/16																	
UCF 208-24	1 1/2		5 1/8	4 1/64	53/64	19/32	1 13/32	5/8	2 1/32	2 5/32	1.9370	0.7480	14	1/2	UC 208-24 208-25 208	F 208	1.9	
208-25	19/16	40	130	102	21	15	36	16	51.2	55.0	49.2	19.0						
208																		
UCF 209-26	1 5/8		5 13/32	4 9/64	55/64	5/8	1 1/2	5/8	2 1/16	2 7/32	1.9370	0.7480	14	1/2	UC 209-26 209-27 209-28 209	F 209	2.2	
209-27	1 11/16	45	137	105	22	16	38	16	52.2	56.0	49.2	19.0						
209-28	1 3/4																	
209																		
UCF 210-30	1 7/8		5 5/8	4 3/8	55/64	5/8	1 9/16	5/8	2 5/32	2 5/16	2.0315	0.7480	14	1/2	UC 210-30 210-31 210 210-32	F 210	2.5	
210-31	1 15/16	50	143	111	22	16	40	16	54.6	59	51.6	19.0						
210																		
210-32	2																	
UCF 211-32	2		6 3/8	5 1/8	63/64	23/32	1 11/16	3/4	2 5/16	2 15/32	2.1890	0.8740	16	5/8	UC 211-32 211-34 211 211-35	F 211	3.4	
211-34	2 1/8	55	162	130	25	18	43	19	58.4	63	55.6	22.2						
211																		
211-35	2 3/16																	
UCF 212-36	2 1/4		6 7/8	5 5/8	1 9/64	23/32	1 7/8	3/4	2 23/32	2 7/8	2.5630	1.0000	16	5/8	UC 212-36 212 212-38 212-39	F 212	4.2	
212		60	175	143	29	18	48	19	68.7	73.0	65.1	25.4						
212-38	2 3/8																	
212-39	2 7/16																	
UCF 213-40	2 1/2		7 3/8	5 55/64	1 3/16	7/8	1 31/32	3/4	2 3/4	2 29/32	2.5630	1.0000	16	5/8	UC 213-40 213	F 213	5.2	
213		65	187	149	30	22	50	19	69.7	74	65.1	25.4						
UCF 214-44	2 3/4		7 19/32	5 63/64	1 7/32	7/8	2 1/8	3/4	2 31/32	3 5/32	2.9370	1.1890	16	5/8	UC 214-44 214	F 214	5.9	
214		70	193	152	31	22	54	19	75.4	80.0	74.6	30.2						
UCF 215		75	7 1/8	6 17/64	1 11/32	7/8	2 7/32	3/4	3 3/32	3 9/32	3.0630	1.3110	16	5/8	UC 215 215-48	F 215	6.4	
215-48	3		200	159	34	22	56	19	78.5	83.0	77.8	33.3						
UCF 216		80	8 3/16	6 1/2	1 11/32	7/8	2 9/32	29/32	3 9/32	3 15/32	3.2520	1.3110	20	3/4	UC 216	F 216	7.3	
			208	165	34	22	58	23	83.3	88.0	82.6	33.3						
UCF 217-52	3 1/4		8 21/32	6 57/64	1 27/64	15/16	2 15/32	29/32	3 7/16	3 5/8	3.3740	1.3425	20	3/4	UC 217-52 217	F 217	8.9	
217		85	220	175	36	24	63	23	87.6	92.0	85.7	34.1						
UCF 218-56	3 1/2		9 1/4	7 23/64	1 37/64	1	2 11/16	29/32	3 25/32	3 31/32	3.7795	1.5630	20	3/4	UC 218-56 218	F 218	11.4	
218		90	235	187	40	25	68	23	96.3	101.0	96.0	39.7						

SQUARE FLANGE BALL BEARING UNITS

UKF2

(WITH ADAPTER LOCKING, NORMAL DUTY)



SL TYPE SEAL,

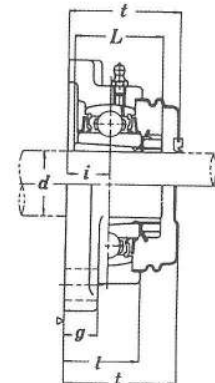
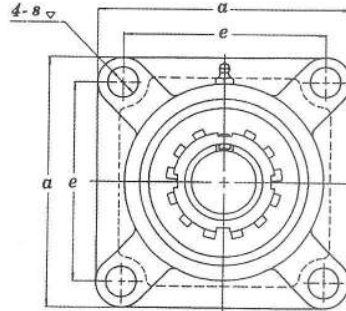
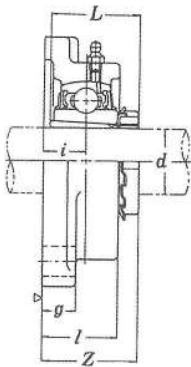


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKF2-C... WITH OPEN COVER

UKF2-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d (in.)	d (mm)	a	e	i	g	l	s	Z	t	L	V	(mm)	(in.)					
UKF 205 205	3/4	20	3 3/4 95	2 3/4 70	5/8 16	1/2 13	1 1/16 27	15/32 12	1 3/8 34.7	1 9/16 40	1 5/32 29	3/4 18.7	10	3/8	UK 205	F 205	HE2305 H 2305	0.87	
UKF 206 206 206 206	7/8 15/16 1	25	4 1/4 108	3 17/64 83	45/64 18	1/2 13	17/32 31	15/32 12	1 1/2 37.7	1 23/32 44	17/32 31	25/32 19.7	10	3/8	UK 206	F 206	HS2306 HA2306 H 2306 HE2306	1.3	
UKF 207 207 207	1 1/8 1 3/16	30	4 19/32 117	3 5/8 92	3/4 19	19/32 15	1 11/32 34	35/64 14	1 5/8 41.2	1 15/16 49	3/8 35	1 7/8 22.2	12	7/16	UK 207	F 207	HS2307 H 2307 HA2307	1.6	
UKF 208 208 208	1 1/4 1 3/8	35	5 1/8 130	4 1/64 102	53/64 21	19/32 15	1 13/32 36	5/8 16	1 3/4 44.7	2 5/32 55.0	1 13/32 36	1 5/16 23.7	14	1/2	UK 208	F 208	HE2308 HS2308 H 2308	1.9	
UKF 209 209 209 209	1 7/16 1 1/2 1 5/8	40	5 13/32 137	4 9/64 105	55/64 22	5/8 16	1 1/2 38	5/8 16	1 27/32 47.2	2 7/32 56.0	1 17/32 39	1 25.7	14	1/2	UK 209	F 209	HA2309 HE2309 H 2309 HS2309	2.3	
UKF 210 210 210	1 11/16 1 3/4	45	5 5/8 143	4 3/8 111	55/64 22	5/8 16	1 9/16 40	5/8 16	1 29/32 48.7	1 5/16 59	1 21/32 42	1 1/16 26.7	14	1/2	UK 210	F 210	HA2310 HE2310 H 2310	2.6	
UKF 211 211 211 211	1 7/8 1 15/16 2	50	6 3/8 162	5 1/8 130	63/64 25	23/32 18	1 11/16 43	3/4 19	2 1/16 52.7	2 15/32 63	1 25/32 45	1 3/32 27.7	16	5/8	UK 211	F 211	HS2311 HA2311 H 2311 HE2311	3.5	
UKF 212 212	2 1/8	55	6 7/8 175	5 5/8 143	1 9/64 29	23/32 18	1 7/8 48	3/4 19	2 9/32 58.0	2 7/8 73.0	1 27/32 47	1 5/32 29	16	5/8	UK 212	F 212	HS2312 H 2312	4.1	
UKF 213 213 213 213	2 3/16 2 1/4 2 3/8	60	7 3/8 187	5 55/64 149	1 3/16 30	7/8 22	1 31/32 50	3/4 19	2 13/32 61.5	2 29/32 74	1 31/32 50	1 1/4 31.5	16	5/8	UK 213	F 213	HA2313 HE2313 H 2313 HS2313	5.1	
UKF 215 215 215	2 7/16 2 1/2	65	7 7/8 200	6 17/64 159	1 11/32 34	7/8 22	2 7/32 56	3/4 19	2 11/16 68.5	3 9/32 83.0	2 5/32 55	1 11/32 34.5	16	5/8	UK 215	F 215	HA2315 HE2315 H 2315	6.5	
UKF 216 216 216	2 11/16 2 1/2	70	8 3/16 208	6 1/2 165	1 11/32 34	7/8 22	2 9/32 58	2 29/32 23	2 13/16 71.8	3 15/32 88.0	2 5/16 59	1 1/2 37.8	20	3/4	UK 216	F 216	HA2316 HE2316 H 2316	7.6	
UKF 217 217 217	2 15/16 3	75	8 21/32 220	6 57/64 175	1 27/64 36	1 5/16 24	2 15/32 63	2 9/32 23	2 31/32 75.8	3 5/8 92.0	2 15/32 63	1 9/16 39.8	20	3/4	UK 217	F 217	HA2317 H 2317 HE2317	9.0	
UKF 218		80	9 1/4 235	7 23/64 187	1 37/64 40	1 25	2 11/16 68	2 9/32 23	3 7/32 81.8	3 31/32 101.0	2 9/16 65	1 21/32 41.8	20	3/4	UK 218	F 218	H 2318	11.4	

SQUARE FLANGE BALL BEARING UNITS

UCFX
(MEDIUM DUTY)



SL TYPE SEAL

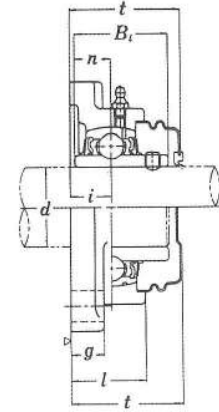
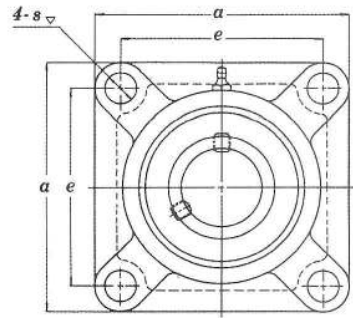
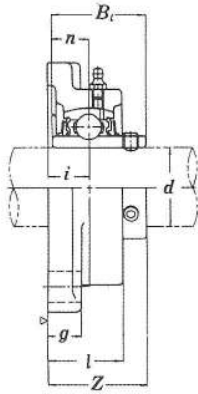


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCFX-C... WITH OPEN COVER

UCFX-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.) (mm)										Bolt Used		Bearing No.	Housing No.	Weight (kgf)
	d		a	e	i	g	l	s	Z	t	Bi	n					
	(in.)	(mm)											(mm)	(in.)			
UCF X05 X05-16	1	25	4 ¹ / ₄ 108	3 ¹⁷ / ₆₄ 83	4 ⁵ / ₆₄ 18	1/2 13	1 ³ / ₁₆ 30	1 ⁵ / ₃₂ 12	1 ¹⁰ / ₃₂ 40.2	1 ²³ / ₃₂ 44	1.5000 38.1	0.6260 15.9	10	3/8	UC X05 X05-16	F X05	1.2
UCF X06 X06-19 X06-20	1 ³ / ₁₆ 1 ¹ / ₄	30	4 ¹⁰ / ₃₂ 117	3 ⁵ / ₈ 92	3/4 19	9/16 14	1 ¹¹ / ₃₂ 34	5/8 16	1 ³ / ₄ 44.4	1 ¹⁵ / ₁₆ 49	1.6890 42.9	0.6890 17.5	14	1/2	UC X06 X06-19 X06-20	F X06	1.6
UCF X07-22 X07 X07-23	1 ³ / ₈ 1 ⁷ / ₁₆	35	5 ¹ / ₈ 130	4 ¹ / ₆₄ 102	5 ⁵ / ₆₄ 21	9/16 14	1 ¹ / ₂ 38	5/8 16	2 ¹ / ₃₂ 51.2	2 ⁵ / ₃₂ 55.0	1.9370 49.2	0.7480 19.0	14	1/2	UC X07-22 X07 X07-23	F X07	2.0
UCF X08-24 X08	1 ¹ / ₂	40	5 ¹³ / ₃₂ 137	4 ⁹ / ₆₄ 105	5 ⁵ / ₆₄ 22	9/16 14	1 ⁹ / ₁₆ 40	3/4 19	2 ¹ / ₁₆ 52.2	2 ⁷ / ₃₂ 56.0	1.9370 49.2	0.7480 19.0	16	5/8	UC X08-24 X08	F X08	2.4
UCF X09-27 X09-28 X09	1 ¹¹ / ₁₆ 1 ³ / ₄	45	5 ⁵ / ₈ 143	4 ² / ₈ 111	2 ²⁹ / ₃₂ 23	9/16 14	1 ⁹ / ₁₆ 40	3/4 19	2 ² / ₁₆ 55.6	2 ¹¹ / ₃₂ 60	2.0315 51.6	0.7480 19.0	16	5/8	UC X09-27 X09-28 X09	F X09	2.7
UCF X10-31 X10 X10-32	1 ¹⁵ / ₁₆ 2	50	6 ³ / ₈ 162	5 ¹ / ₈ 130	1 ¹ / ₃₂ 26	2 ⁵ / ₃₂ 20	1 ²³ / ₃₂ 44	3/4 19	2 ¹¹ / ₃₂ 59.4	2 ¹ / ₂ 64	2.1890 55.6	0.8740 22.2	16	5/8	UC X10-31 X10 X10-32	F X10	3.7
UCF X11 X11-35 X11-36	2 ³ / ₁₆ 2 ¹ / ₄	55	6 ⁷ / ₈ 175	5 ⁵ / ₈ 143	1 ⁹ / ₆₄ 29	2 ⁵ / ₃₂ 20	1 ¹⁵ / ₁₆ 49	3/4 19	2 ²³ / ₃₂ 66.7	2 ⁷ / ₈ 73.0	2.5630 65.1	1.0000 25.4	16	5/8	UC X11 X11-35 X11-36	F X11	4.9
UCF X12 X12-38 X12-39	2 ³ / ₈ 2 ⁷ / ₁₆	60	7 ³ / ₈ 187	5 ⁵⁵ / ₆₄ 149	1 ¹¹ / ₃₂ 34	1 ³ / ₁₆ 21	2 ⁵ / ₁₆ 59	3/4 19	2 ²⁹ / ₃₂ 73.7	3 ¹ / ₁₆ 76.0	2.5630 65.1	1.0000 25.4	16	5/8	UC X12 X12-38 X12-39	F X12	5.7
UCF X13-40 X13	2 ¹ / ₂	65	7 ³ / ₈ 187	5 ⁵⁵ / ₆₄ 149	1 ¹¹ / ₃₂ 34	1 ³ / ₁₆ 21	2 ⁵ / ₁₆ 59	3/4 19	3 ³ / ₃₂ 78.4	3 ⁹ / ₃₂ 83.0	2.9370 74.6	1.1890 30.2	16	5/8	UC X13-40 X13	F X13	6.3
UCF X14-44 X14	2 ³ / ₄	70	7 ³ / ₄ 197	5 ⁶² / ₆₄ 152	1 ²⁹ / ₆₄ 37	7/8 22	2 ³ / ₈ 60	2 ²⁹ / ₃₂ 23	3 ⁷ / ₃₂ 81.5	3 ³ / ₈ 86.0	3.0630 77.8	1.3110 33.3	20	3/4	UC X14-44 X14	F X14	7.0
UCF X15 X15-48	3	75	7 ³ / ₄ 197	5 ⁶² / ₆₄ 152	1 ³⁷ / ₆₄ 40	1 ³ / ₁₆ 24	2 ¹¹ / ₁₆ 68	2 ²⁹ / ₃₂ 23	3 ¹⁷ / ₃₂ 89.3	3 ¹¹ / ₁₆ 94.0	3.2520 82.6	1.3110 33.3	20	3/4	UC X15 X15-48	F X15	8.4
UCF X16		80	8 ⁷ / ₁₆ 214	6 ⁴⁷ / ₆₄ 171	1 ³⁷ / ₆₄ 40	1 ³ / ₁₆ 24	2 ³ / ₄ 70	2 ²⁹ / ₃₂ 23	3 ¹⁹ / ₃₂ 91.6	3 ²⁵ / ₃₂ 96.0	3.3740 85.7	1.3425 34.1	20	3/4	UC X16	F X16	9.4
UCF X17		85	8 ⁷ / ₁₆ 214	6 ⁴⁷ / ₆₄ 171	1 ³⁷ / ₆₄ 40	1 ³ / ₁₆ 24	2 ³ / ₄ 70	2 ²⁹ / ₃₂ 23	3 ²⁵ / ₃₂ 96.3	3 ³¹ / ₃₂ 101.0	3.7795 96.0	1.5630 39.7	20	3/4	UC X17	F X17	10.8
UCF X18-56 X18	3 ¹ / ₂	90	8 ⁷ / ₁₆ 214	6 ⁴⁷ / ₆₄ 171	1 ⁴⁹ / ₆₄ 45	1 ⁵ / ₁₆ 24	3 76	2 ²⁹ / ₃₂ 23	4 ³ / ₁₆ 106.1	C. 125 D. 117	4.0945 104.0	1.6890 42.9	20	3/4	UC X18-56 X18	F X18	11.9
UCF X20 X20-64	4	100	10 ⁰ / ₁₆ 268	8 ⁵ / ₁₆ 211	2 ²¹ / ₆₄ 59	1 ³ / ₃₂ 28	3 ¹³ / ₁₆ 97	1 ¹ / ₃₂ 31	4 ⁵ / ₈ 117.3	C. 153 D. 138	4.6260 117.5	1.9370 49.2	27	1	UC X20 X20-64	F X20	19.4

SQUARE FLANGE BALL BEARING UNITS

UKFX

(WITH ADAPTER LOCKING, MEDIUM DUTY)

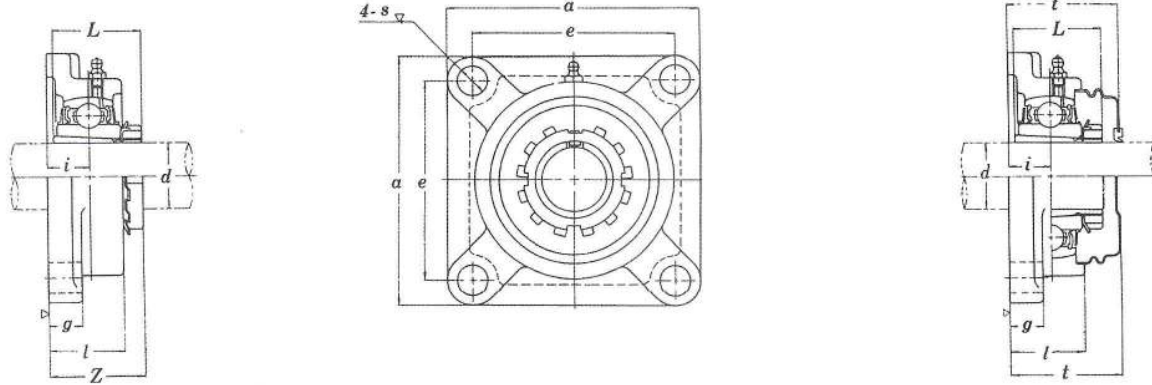


SL TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKFX-C... WITH OPEN COVER

UKFX-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.) (mm)										Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d (in.)	d (mm)	a	e	i	g	l	s	Z	t	L	V	(mm)	(in.)				
UKF X05 X05	3/4	20	4 1/4 108	3 17/64 83	4 5/64 18	1/2 13	1 3/16 30	1 5/32 12	1 1/2 37.7	1 23/32 44	1 1/8 35	2 5/32 19.7	10	3/8	UK X05	F X05	HE 2305 H 2305	1.2
UKF X06 X06 X06 X06	7/8 1 1/16 1	25	4 19/32 117	3 5/8 92	3 1/4 19	9/16 14	1 11/32 34	5/8 16	1 19/32 40.2	1 15/16 49	1 1/2 38	2 7/32 21.2	14	1/2	UK X06	F X06	HS 2306 HA 2306 H 2306 HE 2306	1.6
UKF X07 X07 X07	1 1/8 1 3/10	30	5 1/8 130	4 1/64 102	5 3/64 21	9/16 14	1 1/2 38	5/8 16	1 20/32 43.7	2 5/32 55.0	1 11/16 43	2 9/32 22.7	14	1/2	UK X07	F X07	HS 2307 H 2307 HA 2307	2.0
UKF X08 X08 X08	1 1/4 1 5/8	35	5 13/32 137	4 9/64 105	5 5/64 22	9/16 14	1 9/16 40	3/4 19	1 13/16 46.2	2 7/32 56.0	1 13/16 46	3 1/32 24.7	16	5/8	UK X08	F X08	HE 2308 HS 2308 H 2308	2.3
UKF X09 X09 X09 X09	1 7/10 1 1/2 1 5/8	40	5 5/8 143	4 3/8 111	2 9/32 23	9/16 14	1 9/16 40	3/4 19	1 29/32 48.7	2 11/32 60	1 31/32 50	1 25.7	16	5/8	UK X09	F X09	HA 2309 HE 2309 H 2309 HS 2309	2.7
UKF X10 X10 X10	1 11/10 1 3/4	45	6 3/8 162	5 1/8 130	1 1/32 26	2 5/32 20	1 23/32 44	3/4 19	2 1/8 53.7	2 7/2 64	2 5/32 55	1 9/32 27.7	16	5/8	UK X10	F X10	HA 2310 HE 2310 H 2310	3.6
UKF X11 X11 X11 X11	1 7/8 1 15/16 2	50	6 7/8 175	5 5/8 143	1 9/64 29	2 5/32 20	1 15/16 49	3/4 19	2 9/32 57.7	2 7/8 73.0	2 5/16 59	1 1/8 28.7	16	5/8	UK X11	F X11	HS 2311 HA 2311 H 2311 HE 2311	4.6
UKF X12 X12	2 1/8	55	7 3/8 187	5 55/64 149	1 11/32 34	1 3/16 21	2 5/16 59	3/4 19	2 17/32 64.5	3 1/16 78.0	2 7/16 62	1 3/16 30.5	16	5/8	UK X12	F X12	HS 2312 H 2312	5.5
UKF X13 X13 X13 X13	2 3/16 2 1/4 2 3/8	60	7 3/8 187	5 55/64 149	1 11/32 34	1 3/16 21	2 5/16 59	3/4 19	2 21/32 67.5	3 9/32 83.0	2 9/16 65	1 5/16 33.5	16	5/8	UK X13	F X13	HA 2313 HE 2313 H 2313 HS 2313	6.0
UKF X15 X15 X15	2 1/2 2 5/8	65	7 3/4 197	5 63/64 152	1 37/64 40	1 5/16 24	2 11/16 68	2 9/32 23	2 31/32 75.5	3 11/16 94.0	2 7/8 73	1 13/32 35.5	20	3/4	UK X15	F X15	HE 2315 H 2315 HS 2315	8.1
UKF X16 X16	2 3/4	70	8 1/16 214	6 47/64 171	1 37/64 40	1 5/16 24	2 3/4 70	2 9/32 23	3 3/32 78.8	3 25/32 96.0	3 1/16 78	1 17/32 38.8	20	3/4	UK X16	F X16	HE 2316 H 2316	9.5
UKF X17 X17 X17 X17	2 7/8 2 15/16 3	75	8 1/16 214	6 47/64 171	1 37/64 40	1 5/16 24	2 3/4 70	2 9/32 23	3 7/32 81.8	3 31/32 101.0	3 3/32 82	1 21/32 41.8	20	3/4	UK X17	F X17	HS 2317 HA 2317 H 2317 HE 2317	10.4
UKF X18		80	8 7/16 214	6 47/64 171	1 49/64 45	1 5/16 24	3 76	2 9/32 23	3 19/32 87.8	C 125 D 117	3 7/8 86	1 11/16 42.8	20	3/4	UK X18	F X18	H 2318	11.4
UKF X20 X20	3 1/2	90	10 7/16 268	8 9/16 211	2 21/64 59	1 3/32 28	3 13/16 97	1 7/32 31	4 7/32 105.8	C 153 D 138	3 13/16 97	1 27/32 46.8	27	1	UK X20	F X20	HE 2320 H 2320	18.4

SQUARE FLANGE BALL BEARING UNITS

UCF3

(HEAVY DUTY)



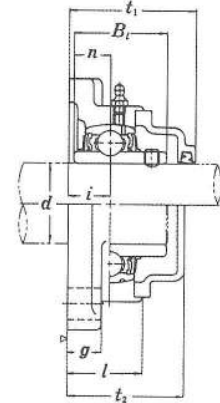
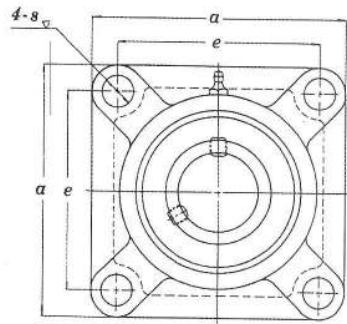
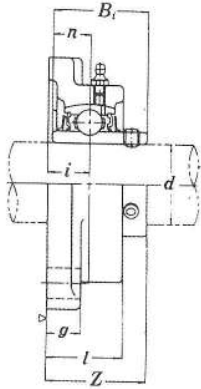
SL TYPE SEAL

L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)

UCF3-GC...WITH OPEN COVER

UCF3-GD...WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in./mm)										Bolt Used		Bearing No.	Housing No.	Weight (kgf)	
	(in.)	(mm)	a	e	i	g	l	s	Z	t ₁	t ₂	Bi	n	(mm)				(in.)
UCF 305 305-16	1	25	4 ^{11/32} 110	3 ^{5/32} 80	5/8 16	1/2 13	1 ^{5/32} 29	5/8 16	1 ^{17/32} 39	2 ^{1/8} 54	1 ^{15/16} 49	1.4961 38	0.5906 15	14	1/2	UC 305 305-16	F 305	1.3
UCF 306-18 306	1 ^{1/8}	30	4 ^{29/32} 125	3 ^{47/64} 95	4 ^{5/64} 18	1 ^{9/32} 15	1 ^{1/4} 32	5/8 16	1 ^{23/32} 44	2 ^{5/16} 59	2 ^{1/8} 54	1.6929 43	0.6693 17	14	1/2	UC 306-18 306	F 306	1.9
UCF 307-20 307-22 307 307-23	1 ^{1/4} 1 ^{3/8} 1 ^{7/16}	35	5 ^{5/16} 135	3 ^{15/16} 100	2 ^{5/32} 20	5/8 16	1 ^{13/32} 36	3/4 19	1 ^{15/16} 49	2 ^{17/32} 64	2 ^{5/16} 59	1.8897 48	0.7480 19	16	5/8	UC 307-20 307-22 307 307-23	F 307	2.3
UCF 308-24 308	1 ^{1/2}	40	5 ^{29/32} 150	4 ^{13/32} 112	2 ^{9/32} 23	2 ^{1/32} 17	1 ^{9/16} 40	3/4 19	2 ^{7/32} 56	2 ^{25/32} 71	2 ^{19/32} 66	2.0472 52	0.7480 19	16	5/8	UC 308-24 308	F 308	3.1
UCF 309-28 309	1 ^{3/4}	45	6 ^{5/16} 160	4 ^{59/64} 125	6 ^{3/64} 25	2 ^{9/32} 18	2 ^{3/32} 44	3/4 19	2 ^{9/8} 60	3 76	2 ^{3/4} 70	2.2441 57	0.8661 22	16	5/8	UC 309-28 309	F 309	4.0
UCF 310-31 310	1 ^{15/16}	50	6 ^{7/8} 175	5 ^{13/64} 132	1 ^{7/64} 28	3/4 19	1 ^{7/8} 48	2 ^{9/32} 23	2 ^{5/8} 67	3 ^{9/32} 83	3 ^{1/32} 77	2.4015 61	0.8661 22	20	3/4	UC 310-31 310	F 310	5.1
UCF 311-32 311	2 55	60 185	7 ^{9/32} 185	5 ^{33/64} 140	1 ^{3/16} 30	2 ^{5/32} 20	2 ^{1/16} 52	2 ^{9/32} 23	2 ^{25/32} 71	3 ^{7/16} 87	3 ^{3/16} 81	2.5984 66	0.9842 25	20	3/4	UC 311-32 311	F 311	5.6
UCF 312	60	195	7 ^{11/16} 195	5 ^{29/32} 150	1 ^{19/64} 33	7/8 22	2 ^{1/32} 56	2 ^{9/32} 23	3 ^{1/16} 78	3 ^{3/4} 95	3 ^{15/32} 88	2.7953 71	1.0236 26	20	3/4	UC 312	F 312	6.9
UCF 313-40 313	2 ^{1/2}	65	8 ^{3/16} 208	6 ^{17/32} 166	1 ^{19/64} 33	7/8 22	2 ^{29/32} 58	2 ^{9/32} 23	3 ^{1/16} 78	3 ^{11/16} 94	3 ^{15/32} 88	2.9528 75	1.1811 30	20	3/4	UC 313-40 313	F 313	7.8
UCF 314-44 314	2 ^{5/4}	70	8 ^{29/32} 226	7 ^{1/64} 178	1 ^{27/64} 36	1 25	2 ^{19/32} 61	2 ^{9/32} 25	3 ^{9/16} 81	3 ^{27/32} 98	3 ^{19/32} 91	3.0709 78	1.2992 33	22	7/8	UC 314-44 314	F 314	10.1
UCF 315 315-48	3	75	9 ^{9/32} 236	7 ^{1/4} 184	1 ^{17/32} 39	1 25	2 ^{19/32} 66	2 ^{9/32} 25	3 ^{1/2} 89	4 ^{9/16} 106	3 ^{29/32} 99	3.2283 82	1.2598 32	22	7/8	UC 315 315-48	F 315	11.6
UCF 316	80	250	9 ^{27/32} 250	7 ^{23/64} 196	1 ^{11/2} 38	1 ^{11/16} 27	2 ^{11/16} 68	1 ^{7/32} 31	3 ^{17/32} 90	4 ^{7/32} 107	3 ^{15/16} 100	3.3858 86	1.3386 34	27	1	UC 316	F 316	12.8
UCF 317	85	260	10 ^{1/4} 260	8 ^{1/32} 204	1 ^{47/64} 44	1 ^{11/16} 27	2 ^{29/32} 74	1 ^{7/32} 31	3 ^{9/16} 100	4 ^{19/32} 117	4 ^{11/32} 110	3.7795 96	1.5748 40	27	1	UC 317	F 317	15.3
UCF 318-56 318	3 ^{1/2}	90	11 ^{1/32} 280	8 ^{1/2} 216	1 ^{47/64} 44	1 ^{9/16} 30	3 76	1 ^{9/16} 35	3 ^{15/16} 100	4 ^{11/16} 119	4 ^{3/8} 111	3.7795 96	1.5748 40	30	1 ^{1/8}	UC 318-56 318	F 318	18.9
UCF 319	95	290	11 ^{13/32} 290	8 ^{31/32} 228	2 ^{21/64} 59	1 ^{3/16} 30	3 ^{11/16} 94	1 ^{9/16} 35	4 ^{3/4} 121	5 ^{1/2} 140	5 ^{3/16} 132	4.0551 103	1.6142 41	30	1 ^{1/8}	UC 319	F 319	21.6
UCF 320 320-64	4	100	12 ^{27/32} 310	9 ^{17/32} 242	2 ^{21/64} 59	1 ^{1/4} 32	3 ^{11/16} 94	1 ^{1/2} 38	4 ^{29/32} 125	5 ^{3/4} 146	5 ^{11/32} 136	4.2519 108	1.6535 42	33	1 ^{1/4}	UC 320 320-64	F 320	25.8
UCF 321	105	310	12 ^{7/32} 310	9 ^{17/32} 242	2 ^{21/64} 59	1 ^{1/4} 32	3 ^{11/16} 94	1 ^{1/2} 38	5 ^{19/16} 127	6 ^{5/16} 148	5 ^{7/16} 138	4.4094 112	1.7323 44	33	1 ^{1/4}	UC 321	F 321	30.2
UCF 322	110	340	13 ^{3/8} 340	10 ^{15/32} 266	2 ^{29/64} 60	1 ^{3/8} 35	3 ^{25/32} 96	1 ^{39/64} 41	5 ^{5/32} 131	6 ^{1/16} 154	5 ^{9/32} 142	4.6063 117	1.8110 46	36	1 ^{3/8}	UC 322	F 322	35.3
UCF 324	120	370	14 ^{9/16} 370	11 ^{27/64} 290	2 ^{9/16} 55	1 ^{9/16} 40	4 ^{11/32} 110	1 ^{39/64} 41	5 ^{1/2} 140	6 ^{7/16} 163	5 ^{15/16} 151	4.9606 126	2.0079 51	36	1 ^{3/8}	UC 324	F 324	47.3
UCF 326	130	410	16 ^{9/32} 410	12 ^{19/32} 320	2 ^{9/16} 65	1 ^{25/32} 45	4 ^{17/32} 115	1 ^{39/64} 41	5 ^{3/4} 146	6 ^{25/32} 172	6 ^{5/16} 160	5.3150 135	2.1260 54	36	1 ^{3/8}	UC 326	F 326	65.5
UCF 328	140	450	17 ^{25/32} 450	13 ^{25/32} 350	2 ^{61/64} 75	2 ^{5/32} 55	4 ^{29/32} 125	1 ^{39/64} 41	6 ^{11/32} 161	7 ^{5/16} 186	6 ^{15/16} 176	5.7086 145	2.3228 59	36	1 ^{3/8}	UC 328	F 328	93.4

SQUARE FLANGE BALL BEARING UNITS

UKF3

(WITH ADAPTER LOCKING, HEAVY DUTY)



SL TYPE SEAL

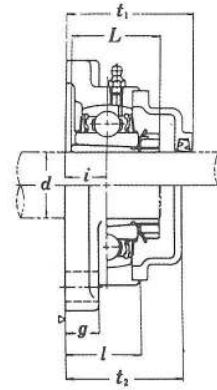
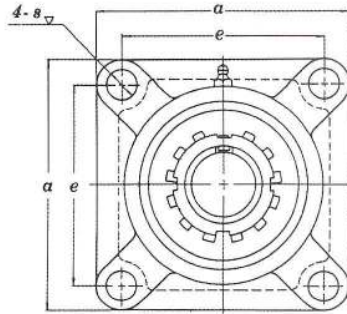
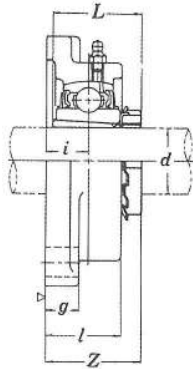


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)

UKF3-GC... WITH OPEN COVER

UKF3-GD... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.) (mm)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d (in.)	d (mm)	a	e	i	g	t	s	t ₁	t ₂	Z	L	V	(mm)	(in.)				
UKF 305 305	3/4	20	4 11/32 110	3 5/32 80	3/8 16	1/2 13	1 5/32 29	5/8 16	2 1/8 54	1 13/16 49	1 1/2 37.7	1 3/8 35	2 7/32 21.7	14	1/2	UK 305	F 305	HE 2305 H 2305	1.4
UKF 306 306 306 306	7/8 15/16 1	25	4 29/32 125	3 47/64 95	4 5/64 18	1 9/32 15	1 1/4 32	5/8 16	2 5/16 59	2 1/8 54	1 5/8 41.2	1 1/2 38	2 9/32 23.2	14	1/2	UK 306	F 306	HS 2306 HA 2306 H 2306 HE 2306	1.9
UKF 307 307 307	1 1/8 1 3/16	30	5 5/16 135	3 15/16 100	2 5/32 20	5/8 16	1 13/32 36	3/4 19	2 17/32 64	2 5/16 59	1 25/32 45.7	1 11/16 43	1 25.7	16	5/8	UK 307	F 307	HS 2307 H 2307 HA 2307	2.3
UKF 308 308 308	1 1/4 1 3/8	35	5 29/32 150	4 13/32 112	2 9/32 23	2 1/32 17	1 9/16 40	3/4 19	2 25/32 71	2 19/32 66	2 50.7	1 13/16 46	1 3/32 27.7	16	5/8	UK 308	F 308	HE 2308 HS 2308 H 2308	3.1
UKF 309 309 309 309	1 7/16 1 1/2 1 5/8	40	6 5/16 160	4 59/64 125	6 3/64 25	2 3/32 18	1 23/32 44	3/4 19	3 76	2 3/4 70	2 3/16 55.2	1 31/32 50	1 3/16 30.2	16	5/8	UK 309	F 309	HA 2309 HE 2309 H 2309 HS 2309	4.1
UKF 310 310 310	1 11/16 1 3/4	45	6 7/8 175	5 13/64 132	1 7/64 28	3/4 19	1 7/8 48	2 9/32 23	3 3/32 83	3 1/32 77	2 3/8 60.2	2 5/32 55	1 9/32 32.2	20	3/4	UK 310	F 310	HA 2310 HE 2310 H 2310	5.1
UKF 311 311 311 311	1 7/8 1 15/16 2	50	7 9/32 185	5 33/64 140	1 3/16 30	2 5/32 20	2 1/16 52	2 9/32 23	3 7/16 87	3 1/8 81	2 1/2 63.7	2 5/16 59	1 5/16 33.7	20	3/4	UK 311	F 311	HS 2311 HA 2311 H 2311 HE 2311	5.9
UKF 312 312	2 1/8	55	7 11/16 195	5 29/32 150	1 19/64 33	7/8 22	2 7/32 56	2 9/32 23	3 3/4 95	3 15/32 88	2 23/32 69.0	2 7/16 62	1 13/32 36.0	20	3/4	UK 312	F 312	HS 2312 H 2312	6.8
UKF 313 313 313 313	2 3/16 2 1/4 2 3/8	60	8 3/16 208	6 17/32 166	1 19/64 33	7/8 22	2 9/32 58	2 9/32 23	3 11/16 94	3 15/32 88	2 13/16 71.0	2 9/16 65	1 1/2 38.0	20	3/4	UK 313	F 313	HA 2313 HE 2313 H 2313 HS 2313	7.9
UKF 315 315	2 1/2	65	9 9/32 236	7 1/4 184	1 17/32 39	1 25	2 19/32 66	6 3/64 25	4 3/16 106	3 29/32 99	3 3/16 81.0	2 7/8 73	1 21/32 42.0	22	7/8	UK 315	F 315	HE 2315 H 2315	11.7
UKF 316 316	2 3/4	70	9 27/32 250	7 23/32 196	1 1/2 38	1 1/16 27	2 11/16 68	1 7/32 31	4 7/32 107	3 15/16 100	3 1/4 82.3	3 1/16 78	1 3/4 44.3	27	1	UK 316	F 316	HE 2316 H 2316	12.9
UKF 317 317	3	75	10 1/4 260	8 1/32 204	1 47/64 44	1 1/16 27	2 29/32 74	1 7/32 31	4 19/32 117	4 11/32 110	3 5/8 91.8	3 7/32 82	1 7/8 47.8	27	1	UK 317	F 317	H 2317 HE 2317	15.2
UKF 318	80	11 1/32 280	8 1/2 216	1 47/64 44	1 3/16 30	3 76	1 3/8 35	4 11/16 119	4 7/8 111	3 5/8 91.8	3 3/8 86	1 7/8 47.8	30	1 1/8	UK 318	F 318	H 2318	19.0	
UKF 319 319	3 1/4	85	11 13/32 290	8 31/32 228	2 21/64 59	1 3/16 30	3 11/16 94	1 3/8 35	5 1/2 140	5 15/16 132	4 7/8 110.8	3 7/32 90	2 1/32 51.8	30	1 1/8	UK 319	F 319	HE 2319 H 2319	21.9
UKF 320 320	3 1/2	90	12 7/32 310	9 17/32 242	2 21/64 59	1 1/4 32	3 11/16 94	1 3/8 38	5 3/4 146	5 11/32 136	4 7/8 112.8	3 7/32 97	2 1/8 53.8	33	1 1/4	UK 320	F 320	HE 2320 H 2320	25.4
UKF 322 322	4	100	13 5/8 340	10 13/32 260	2 23/64 60	1 3/8 35	3 25/32 96	1 39/64 41	5 21/32 154	5 19/32 142	4 23/32 119.8	4 1/8 105	2 11/32 59.8	36	1 3/8	UK 322	F 322	H 2322 HE 2322	35.2
UKF 324 324	4 1/16	110	14 9/10 370	12 7/64 290	2 1/16 65	1 9/16 40	4 11/16 110	1 39/64 41	6 3/8 163	5 15/16 151	5 1/8 130.5	4 13/32 112	2 19/32 65.5	36	1 3/8	UK 324	F 324	H 2324 HA 2324	47.6
UKF 326 326	4 1/2	115	16 5/32 410	12 19/32 320	2 9/16 65	1 25/32 45	4 17/32 115	1 39/64 41	6 11/16 172	5 15/16 160	5 3/16 131.5	4 7/8 121	2 5/8 66.5	36	1 3/8	UK 326	F 326	HE 2326 H 2326	65.3
UKF 328 328	4 15/16	125	17 23/32 450	13 25/32 350	2 21/64 75	2 5/32 55	4 29/32 125	1 39/64 41	7 3/16 186	6 15/16 176	5 13/16 147.5	5 3/32 131	2 27/32 72.5	36	1 3/8	UK 328	F 328	H 2328 HA 2328	93.4

FLANGE CARTRIDGE BALL BEARING UNITS

UKFC2

(WITH ADAPTER LOCKING, NORMAL DUTY)



SL TYPE SEAL,

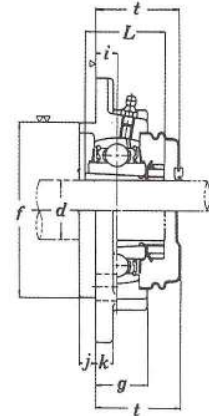
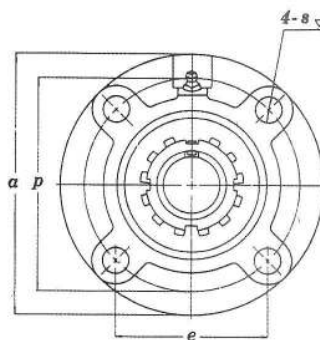
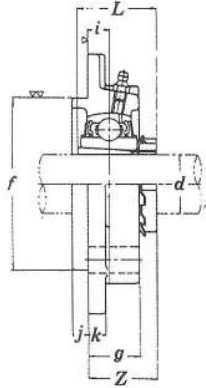


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKFC2-C... WITH OPEN COVER

UKFC2-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in./mm)													Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	p	e	i	s	j	k	g	f	Z	t	L	V	(mm)	(in.)				
	(in.)	(mm)																			
UKFC 205 205	3/4	20	4 ¹⁷ / ₃₂ 115	3 ³⁵ / ₆₄ 90	2 ¹ / ₂ 63.6	2 ⁵ / ₆₄ 10	1 ⁵ / ₃₂ 12	1 ⁵ / ₆₄ 6	9 ³ / ₃₂ 7	1 ³ / ₁₆ 21	2.7559 70	1 ¹ / ₈ 28.7	1 ¹¹ / ₃₂ 34	1 ⁵ / ₃₂ 29	3/4 18.7	10	4/8	UK 205	FC 205	HE2305 H 2305	0.99
UKFC 206 206 206 206	7/8 1 ⁵ / ₁₆ 1	25	4 ²⁹ / ₃₂ 125	3 ¹⁵ / ₁₆ 100	2 ²⁵ / ₃₂ 70.7	2 ⁵ / ₆₄ 10	1 ⁵ / ₃₂ 12	5/16 8	5/16 8	2 ⁹ / ₃₂ 23	3.1496 80	1 ⁵ / ₃₂ 29.7	1 ¹³ / ₃₂ 36.0	1 ⁷ / ₃₂ 31	2 ⁵ / ₃₂ 19.7	10	3/8	UK 206	FC 206	HS2306 HA2306 H 2306 HE2306	1.3
UKFC 207 207 207	1 ¹ / ₈ 1 ³ / ₁₆	30	5 ⁵ / ₁₆ 135	4 ²¹ / ₆₄ 110	3 ¹ / ₁₆ 77.8	7/16 11	3 ⁵ / ₆₄ 14	5/16 8	1 ¹ / ₃₂ 9	1 ¹ / ₃₂ 26	3.5433 90	1 ⁵ / ₁₆ 33.2	1 ⁵ / ₈ 41	1 ³ / ₈ 35	7/8 22.2	12	7/16	UK 207	FC 207	HS2307 H 2307 HA2307	1.7
UKFC 208 208 208	1 ¹ / ₄ 1 ³ / ₈	35	5 ²³ / ₃₂ 145	4 ²³ / ₃₂ 120	3 ¹¹ / ₃₂ 84.8	7/16 11	3 ⁵ / ₆₄ 14	2 ⁵ / ₆₄ 10	1 ¹ / ₃₂ 9	1 ¹ / ₃₂ 26	3.9370 100	1 ³ / ₈ 34.7	1 ²⁵ / ₃₂ 45.0	1 ¹³ / ₃₂ 36	1 ⁵ / ₁₆ 23.7	12	7/16	UK 208	FC 208	HE2308 HS2308 H 2308	2.0
UKFC 209 209 209 209	1 ⁷ / ₁₆ 1 ¹ / ₂ 1 ⁵ / ₈	40	6 ⁵ / ₁₆ 160	5 ¹³ / ₆₄ 132	3 ⁴³ / ₆₄ 93.3	2 ⁵ / ₆₄ 10	5/8 16	1 ⁵ / ₃₂ 12	9/16 14	1 ¹ / ₃₂ 26	4.1339 105	1 ³ / ₈ 35.2	1 ²³ / ₃₂ 44.0	1 ¹⁷ / ₃₂ 39	1 25.7	14	1/2	UK 209	FC 209	HA2309 HE2309 H 2309 HS2309	2.7
UKFC 210 210 210	1 ¹¹ / ₁₆ 1 ³ / ₄	45	6 ¹ / ₂ 165	5 ⁷ / ₁₆ 138	3 ²⁷ / ₃₂ 97.6	2 ⁵ / ₆₄ 10	5/8 16	1 ⁵ / ₃₂ 12	9/16 14	1 ³ / ₃₂ 28	4.3307 110	1 ⁷ / ₁₆ 36.7	1 ²⁷ / ₃₂ 47	1 ²¹ / ₃₂ 42	1 ¹ / ₁₆ 26.7	14	1/2	UK 210	FC 210	HA2310 HE2310 H 2310	3.0
UKFC 211 211 211 211	1 ⁷ / ₈ 1 ¹⁵ / ₁₆ 2	50	7 ⁹ / ₃₂ 185	5 ²⁹ / ₃₂ 150	4 ¹¹ / ₆₄ 106.1	3 ³ / ₆₄ 13	3/4 19	1 ⁵ / ₃₂ 12	1 ⁹ / ₃₂ 15	1 ⁷ / ₃₂ 31	4.9213 125	1 ¹⁹ / ₃₂ 40.7	1 ³¹ / ₃₂ 50.5	1 ²⁵ / ₃₂ 45	1 ³ / ₃₂ 27.7	16	5/8	UK 211	FC 211	HS2311 HA2311 H 2311 HE2311	4.3
UKFC 212 212	2 ¹ / ₈	55	7 ¹¹ / ₁₆ 195	6 ¹⁹ / ₆₄ 160	4 ²⁹ / ₆₄ 113.1	4 ³ / ₆₄ 17	3/4 19	1 ⁵ / ₃₂ 12	1 ⁹ / ₃₂ 15	1 ¹³ / ₃₂ 36	5.3150 135	1 ¹³ / ₁₆ 46.0	2 ¹³ / ₃₂ 61.0	1 ²⁷ / ₃₂ 47	1 ⁵ / ₃₂ 29	16	5/8	UK 212	FC 212	HS2312 H 2312	4.9
UKFC 213 213 213 213	2 ³ / ₁₆ 2 ¹ / ₄ 2 ³ / ₈	60	8 ¹ / ₁₆ 205	6 ¹¹ / ₁₆ 170	4 ⁴⁷ / ₆₄ 120.2	5/8 16	3/4 19	3 ⁵ / ₆₄ 14	1 ⁹ / ₃₂ 15	1 ¹³ / ₃₂ 36	5.7087 145	1 ⁷ / ₈ 47.5	2 ³ / ₈ 60	1 ³¹ / ₃₂ 50	1 ¹ / ₄ 31.5	16	5/8	UK 213	FC 213	HA2313 HE2313 H 2313 HS2313	5.5
UKFC 215 215 215	2 ⁷ / ₁₆ 2 ¹ / ₂	65	8 ² / ₃₂ 220	7 ¹ / ₄ 184	5 ¹ / ₈ 130.1	4 ⁵ / ₆₄ 18	3/4 19	5/8 16	2 ³ / ₃₂ 18	1 ⁹ / ₁₆ 40	6.2992 160	2 ¹ / ₁₆ 52.5	2 ⁵ / ₈ 67.0	2 ⁵ / ₃₂ 55	1 ¹¹ / ₃₂ 34.5	16	5/8	UK 215	FC 215	HA2315 HE2315 H 2315	7.4
UKFC 216 216 216	2 ¹¹ / ₁₆ 2 ³ / ₄	70	9 ⁷ / ₁₆ 240	7 ⁷ / ₈ 200	5 ⁹ / ₁₆ 141.4	4 ⁵ / ₆₄ 18	2 ⁹ / ₃₂ 23	5/8 16	2 ³ / ₃₂ 18	1 ²¹ / ₃₂ 42	6.6929 170	2 ³ / ₁₆ 55.8	2 ²⁷ / ₃₂ 72.0	2 ⁵ / ₁₆ 59	1 ¹ / ₂ 37.8	20	3/4	UK 216	FC 216	HA2316 HE2316 H 2316	9.0
UKFC 217 217 217	2 ¹⁵ / ₁₆ 3	75	9 ²⁷ / ₃₂ 250	8 ³ / ₁₆ 208	5 ⁵¹ / ₆₄ 147.1	4 ⁵ / ₆₄ 18	2 ⁹ / ₃₂ 23	4 ⁵ / ₆₄ 18	2 ⁵ / ₃₂ 20	1 ²⁵ / ₃₂ 45	7.0866 180	2 ⁹ / ₃₂ 57.8	2 ²⁹ / ₃₂ 74.0	2 ¹⁵ / ₃₂ 63	1 ⁹ / ₁₆ 39.8	20	3/4	UK 217	FC 217	HA2317 H 2317 HE2317	10.4
UKFC 218		80	10 ⁷ / ₁₆ 265	8 ² / ₃₂ 220	6 ¹ / ₈ 155.5	5 ⁵ / ₆₄ 22	2 ⁹ / ₃₂ 23	4 ⁵ / ₆₄ 18	2 ⁵ / ₃₂ 20	1 ³¹ / ₃₂ 50	7.4803 190	2 ¹ / ₂ 63.8	3 ⁹ / ₃₂ 83.0	2 ⁹ / ₁₆ 65	1 ²¹ / ₃₂ 41.8	20	3/4	UK 218	FC 218	H 2318	13.3

FLANGE CARTRIDGE BALL BEARING UNITS

UCFCX

(NORMAL DUTY)



SL TYPE SEAL

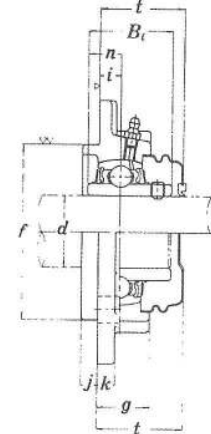
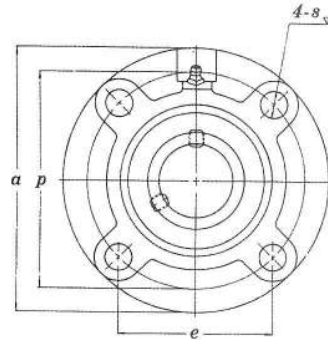
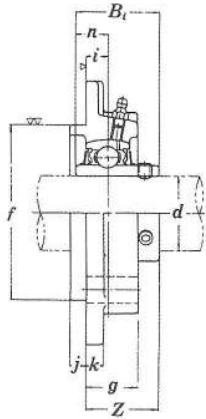


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCFCX-C.....WITH OPEN COVER

UCFCX-D.....WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.)													Bolt Used		Bearing No.	Housing No.	Weight (kgf)
	d		a	p	e	i	s	j	k	g	f	Z	t	Bi	n	(mm)	(in.)			
	(in.)	(mm)																		
UCFC X05 X05-16	1	25	4 ³ / ₈ 111	3 ⁵ / ₈ 92	2 ⁹ / ₁₆ 65.0	2 ⁵ / ₆₄ 10	3 ³ / ₈ 9.5	1 ⁵ / ₆₄ 6.0	3 ³ / ₈ 9.5	1 ⁵ / ₁₆ 24.0	2.9921 76	1 ³ / ₃₂ 32.2	1 ³ / ₃₂ 36.0	1.5000 38.1	0.6260 15.9	8	5/16	UC X05 X05-16	FC X05	1.2
UCFC X06 X06-19 X06-20	1 ³ / ₁₆ 1 ¹ / ₄	30	5 127	4 ⁹ / ₆₄ 105	2 ⁵⁹ / ₆₄ 74.2	5 ¹ / ₁₆ 8	1 ⁵ / ₃₂ 12.0	3 ³ / ₈ 9.5	3 ³ / ₈ 9.5	7 ² / ₈ 22.5	3.3465 85	1 ¹ / ₂ 38	1 ¹ / ₂ 38	1.6890 42.9	0.6890 17.5	10	3/8	UC X06 X06-19 X06-20	FC X06	1.5
UCFC X07-22 X07 X07-23	1 ³ / ₈ 1 ⁷ / ₁₆	35	5 ¹ / ₄ 133	4 ³ / ₈ 111	3 ³ / ₃₂ 78.5	2 ³ / ₆₄ 9	1 ⁵ / ₃₂ 12.0	7 ¹ / ₁₆ 11.0	7 ¹ / ₁₆ 11.0	1 ¹ / ₃₂ 26.0	3.6220 92	1 ¹⁷ / ₃₂ 39.2	1 ¹¹ / ₁₆ 43.0	1.9370 49.2	0.7480 19.0	10	3/8	UC X07-22 X07 X07-23	FC X07	1.9
UCFC X08-24 X08	1 ¹ / ₂	40	5 ¹ / ₄ 133	4 ³ / ₈ 111	3 ³ / ₃₂ 78.5	2 ³ / ₆₄ 9	1 ⁵ / ₃₂ 12.0	7 ¹ / ₁₆ 11.0	7 ¹ / ₁₆ 11.0	1 ¹ / ₃₂ 26.0	3.6220 92	1 ¹⁷ / ₃₂ 39.2	1 ¹¹ / ₁₆ 43.0	1.9370 49.2	0.7480 19.0	10	3/8	UC X08-24 X08	FC X08	2.0
UCFC X09-27 X09-28 X09	1 ¹¹ / ₁₆ 1 ³ / ₄	45	6 ³ / ₃₂ 155	5 ¹ / ₈ 130	3 ⁵ / ₈ 91.9	5 ¹ / ₁₆ 8	3 ⁵ / ₆₄ 14.0	1 ⁵ / ₃₂ 12.0	7 ¹ / ₁₆ 11.0	1 25.0	4.2520 108	1 ¹¹ / ₃₂ 40.6	1 ²⁵ / ₃₂ 45	2.0315 51.6	0.7480 19.0	12	7/16	UC X09-27 X09-28 X09	FC X09	2.6
UCFC X10-31 X10 X10-32	1 ¹⁵ / ₁₆ 2	50	6 ³ / ₈ 162	5 ²³ / ₆₄ 136	3 ²⁵ / ₃₂ 96.2	9 ¹ / ₃₂ 7	3 ⁵ / ₆₄ 14.0	5 ⁸ / ₁₆ 16.0	7 ¹ / ₁₆ 11.0	1 25.0	4.6457 118	1 ¹⁹ / ₃₂ 40.4	1 ²⁵ / ₃₂ 45	2.1890 55.6	0.8740 22.2	12	7/16	UC X10-31 X10 X10-32	FC X10	3.2
UCFC X11 X11-35 X11-36	2 ³ / ₁₆ 2 ¹ / ₄	55	7 ³ / ₃₂ 180	5 ⁶³ / ₆₄ 152	4 ¹⁵ / ₆₄ 107.5	5 ¹ / ₃₂ 4	5 ⁸ / ₁₆ 16.0	5 ⁵ / ₆₄ 22.0	1 ¹ / ₂ 13.0	1 ¹ / ₃₂ 26.0	5.0000 127	1 ²³ / ₃₂ 43.7	1 ⁷ / ₈ 48.0	2.5630 65.1	1.0000 25.4	14	1/2	UC X11 X11-35 X11-36	FC X11	4.3
UCFC X12 X12-38 X12-39	2 ³ / ₈ 2 ⁷ / ₁₆	60	7 ⁵ / ₈ 194	6 ¹ / ₂ 165	4 ¹⁹ / ₃₂ 116.7	7 ¹ / ₁₆ 11	5 ⁸ / ₁₆ 16.0	2 ⁵ / ₃₂ 20.0	9 ¹ / ₁₆ 14.0	1 ⁵ / ₁₆ 33.0	5.5118 140	2 50.7	2 ⁵ / ₃₂ 55.0	2.5630 65.1	1.0000 25.4	14	1/2	UC X12 X12-38 X12-39	FC X12	5.3
UCFC X13-40 X13	2 ¹ / ₂	65	7 ⁵ / ₈ 194	6 ¹ / ₂ 165	4 ¹⁹ / ₃₂ 116.7	7 ¹ / ₁₆ 11	5 ⁸ / ₁₆ 16.0	2 ⁵ / ₃₂ 20.0	9 ¹ / ₁₆ 14.0	1 ⁵ / ₁₆ 33.0	5.5118 140	2 ³ / ₁₆ 55.4	2 ³ / ₈ 60.0	2.9370 74.6	1.1890 30.2	14	1/2	UC X13-40 X13	FC X13	5.7
UCFC X14-44 X14	2 ³ / ₄	70	8 ³ / ₄ 222	7 ³¹ / ₆₄ 190	5 ⁹ / ₃₂ 134.4	3 ⁵ / ₆₄ 14	3 ³ / ₄ 19.0	2 ⁵ / ₃₂ 20.0	9 ¹ / ₁₆ 14.0	1 ¹³ / ₃₂ 36.0	6.4567 164	2 ⁵ / ₁₆ 58.5	2 ¹⁵ / ₃₂ 63.0	3.0630 77.8	1.3110 33.3	16	5/8	UC X14-44 X14	FC X14	7.3
UCFC X15 X15-48	3	75	8 ³ / ₄ 222	7 ³¹ / ₆₄ 190	5 ⁹ / ₃₂ 134.3	1 ⁵ / ₃₂ 12	3 ³ / ₄ 19.0	2 ⁵ / ₃₂ 22.0	5 ⁸ / ₁₆ 16.0	1 ⁹ / ₈ 35.0	6.4567 164	2 ¹³ / ₃₂ 61.3	2 ¹⁹ / ₃₂ 66.0	3.2520 82.6	1.3110 33.3	16	5/8	UC X15 X15-48	FC X15	8
UCFC X16		80	10 ¹ / ₄ 260	8 ⁵ / ₈ 219	6 ³ / ₃₂ 154.8	2 ⁵ / ₆₄ 10	2 ⁹ / ₃₂ 23.0	2 ⁵ / ₆₄ 25.0	3 ³ / ₄ 19.0	1 ¹³ / ₃₂ 36.0	7.3228 186	2 ⁷ / ₁₆ 61.6	2 ¹⁹ / ₃₂ 66.0	3.3740 85.7	1.3425 34.1	20	3/4	UC X16	FC X16	11.3
UCFC X17		85	10 ¹ / ₄ 260	8 ⁵ / ₈ 219	6 ³ / ₃₂ 154.8	2 ⁵ / ₆₄ 10	2 ⁹ / ₃₂ 23.0	2 ⁵ / ₆₄ 25.0	3 ³ / ₄ 19.0	1 ¹³ / ₃₂ 36.0	7.3228 186	2 ⁷ / ₁₆ 66.3	2 ²⁵ / ₃₂ 71.0	3.7795 96.0	1.5630 39.7	20	3/4	UC X17	FC X17	12.9
UCFC X18-56 X18	3 ¹ / ₂	90	10 ¹ / ₄ 260	8 ⁵ / ₈ 219	6 ³ / ₃₂ 154.8	1 ⁵ / ₃₂ 12	2 ⁹ / ₃₂ 23.0	1 ⁹ / ₃₂ 28	3 ³ / ₄ 19.0	1 ¹¹ / ₁₆ 43	7.3228 186	2 ⁷ / ₁₆ 73.1	3 ⁵ / ₈ 92	4.0945 104	1.7000 42.9	20	3/4	UC X18	FC X18	13.5
UCFC X20 X20-64	4	100	10 ⁷ / ₈ 276	9 ³ / ₈ 238	6 ⁵ / ₈ 168.3	7 ¹ / ₈ 22	2 ⁹ / ₃₂ 23.0	1 ³ / ₃₂ 28	7 ¹ / ₈ 22.0	2 ¹⁹ / ₃₂ 66	8.1102 206	3 ⁹ / ₁₆ 90.3	4 ⁹ / ₁₆ 116	4.6260 117.5	1.9370 49.2	20	3/4	UC X20 X20-64	FC X20	18.2

FLANGE CARTRIDGE BALL BEARING UNITS

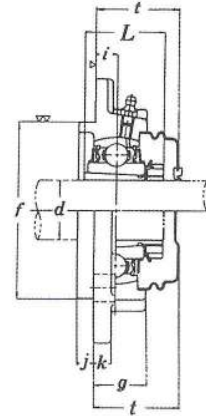
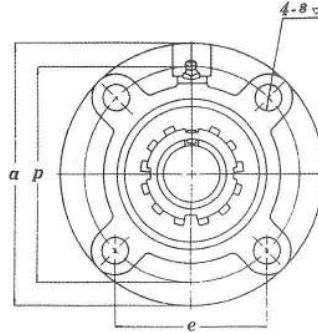
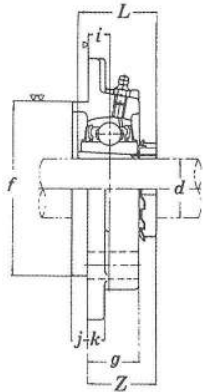
UKFCX

(WITH ADAPTER LOCKING, MEDIUM DUTY)



SL TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)
 UKFCX-C... WITH OPEN COVER
 UKFCX-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.) (mm)													Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	p	e	i	s	j	k	g	f	Z	t	L	V	(mm)	(in.)				
	(in.)	(mm)																			
UKFC X05 X05	3/4	20	4 ³ / ₈ 111	3 ⁵ / ₈ 92	2 ⁹ / ₁₆ 65.0	2 ⁵ / ₆₄ 10	3/8 9.5	1 ⁵ / ₆₄ 6.0	3/8 9.5	1 ⁵ / ₁₆ 24.0	2.9921 76	1 ⁵ / ₃₂ 29.7	1 ¹³ / ₃₂ 36.0	1 ³ / ₈ 35	2 ⁵ / ₃₂ 19.7	8	5/16	UK X05	FC X05	HE2305 H 2305	1.2
UKFC X06 X06 X06 X06	7/8 1 ⁵ / ₁₆ 1	25	5 127	4 ⁹ / ₆₄ 105	2 ⁵⁹ / ₆₄ 74.2	5/16 8	1 ⁵ / ₃₂ 12	3/8 9.5	3/8 9.5	7/8 22.5	3.3465 85	1 ⁵ / ₃₂ 29.2	1 ¹ / ₂ 38	1 ¹ / ₂ 38	2 ⁷ / ₃₂ 21.2	10	3/8	UK X06	FC X06	HS2306 HA2306 H 2306 HE2306	1.5
UKFC X07 X07 X07	1 ¹ / ₈ 1 ³ / ₁₆	30	5 ¹ / ₄ 133	4 ³ / ₈ 111	3 ³ / ₃₂ 78.5	2 ³ / ₆₄ 9	1 ⁵ / ₃₂ 12	7/16 11.0	7/16 11.0	1 ¹ / ₃₂ 26.0	3.6220 92	1 ¹ / ₄ 31.7	1 ¹¹ / ₁₆ 43.0	1 ¹¹ / ₁₆ 43	2 ⁹ / ₃₂ 22.7	10	3/8	UK X07	FC X07	HS2307 H 2307 HA2307	1.9
UKFC X08 X08 X08	1 ¹ / ₄ 1 ³ / ₈	35	5 ¹ / ₄ 133	4 ³ / ₈ 111	3 ³ / ₃₂ 78.5	2 ³ / ₆₄ 9	1 ⁵ / ₃₂ 12	7/16 11.0	7/16 11.0	1 ¹ / ₃₂ 26.0	3.6220 92	1 ⁵ / ₁₆ 33.2	1 ¹¹ / ₁₆ 43.0	1 ¹³ / ₁₆ 46	3 ¹ / ₃₂ 24.7	10	3/8	UK X08	FC X08	HE2308 HS2308 H 2308	1.9
UKFC X09 X09 X09 X09	1 ⁷ / ₁₆ 1 ¹ / ₂ 1 ⁵ / ₈	40	6 ³ / ₃₂ 155	5 ¹ / ₈ 130	3 ⁵ / ₈ 91.9	5/16 8	3 ⁵ / ₆₄ 14	1 ⁵ / ₃₂ 12.0	7/16 11.0	1 25.0	4.2520 108	1 ⁵ / ₁₆ 33.7	1 ²⁵ / ₃₂ 45	1 ³¹ / ₃₂ 50	1 25.7	12	7/16	UK X09	FC X09	HA2309 HE2309 H 2309 HS2309	2.6
UKFC X10 X10 X10	1 ¹¹ / ₁₆ 1 ³ / ₄	45	6 ³ / ₈ 162	5 ²³ / ₆₄ 136	3 ²⁵ / ₃₂ 96.2	9/32 7	3 ⁵ / ₆₄ 14	5/8 16.0	7/16 11.0	1 25.0	4.6457 118	1 ³ / ₈ 34.7	1 ²⁵ / ₃₂ 45	2 ⁵ / ₃₂ 55	1 ³ / ₃₂ 27.7	12	7/16	UK X10	FC X10	HA2310 HE2310 H 2310	3.1
UKFC X11 X11 X11 X11	1 ⁷ / ₈ 1 ¹⁵ / ₁₆ 2	50	7 ³ / ₃₂ 180	5 ⁶³ / ₆₄ 152	4 ¹⁵ / ₆₄ 107.5	5/32 4	5/8 16	5 ⁵ / ₆₄ 22.0	1/2 13.0	1 ¹ / ₃₂ 26.0	5.0000 127	1 ⁹ / ₃₂ 32.7	1 ⁷ / ₈ 48.0	2 ⁵ / ₁₆ 59	1 ¹ / ₈ 28.7	14	1/2	UK X11	FC X11	HS2311 HA2311 H 2311 HE2311	4.0
UKFC X12 X12	2 ¹ / ₈	55	7 ⁵ / ₈ 194	6 ¹ / ₂ 165	4 ¹⁹ / ₃₂ 116.7	7/16 11	5/8 16	2 ⁵ / ₃₂ 20.0	9/16 14.0	1 ⁵ / ₁₆ 33.0	5.5118 140	1 ⁵ / ₈ 41.5	2 ⁹ / ₃₂ 55.0	2 ⁷ / ₁₆ 62	1 ³ / ₁₆ 30.5	14	1/2	UK X12	FC X12	HS2312 H 2312	5.1
UKFC X13 X13 X13 X13	2 ⁹ / ₁₆ 2 ¹ / ₄ 2 ³ / ₈	60	7 ⁵ / ₈ 194	6 ¹ / ₂ 165	4 ¹⁹ / ₃₂ 116.7	7/16 11	5/8 16	2 ⁵ / ₃₂ 20.0	9/16 14.0	5/16 33.0	5.5118 140	1 ³ / ₄ 44.5	2 ⁹ / ₈ 60.0	2 ⁹ / ₁₆ 65	1 ⁵ / ₁₆ 33.5	14	1/2	UK X13	FC X13	HA2313 HE2313 H 2313 HS2313	5.3
UKFC X15 X15 X15	2 ¹ / ₂ 2 ⁵ / ₈	65	8 ³ / ₄ 222	7 ³¹ / ₆₄ 190	5 ⁹ / ₃₂ 134.3	1 ⁵ / ₃₂ 12	3/4 19	5 ⁵ / ₆₄ 22.0	5/8 16.0	1 ³ / ₈ 35.0	6.4567 164	1 ⁷ / ₈ 47.5	2 ¹⁹ / ₃₂ 66.0	2 ⁷ / ₈ 73	1 ¹³ / ₃₂ 35.5	16	5/8	UK X15	FC X15	HE2315 H 2315 HS2315	7.7
UKFC X16 X16	2 ³ / ₄	70	10 ¹ / ₄ 260	8 ⁵ / ₈ 219	6 ³ / ₃₂ 154.8	2 ³ / ₆₄ 10	2 ⁹ / ₃₂ 23	6 ³ / ₆₄ 25.0	3/4 19.0	1 ¹³ / ₃₂ 36.0	7.3228 186	1 ²⁹ / ₃₂ 48.8	2 ¹⁹ / ₃₂ 66.0	3 ¹ / ₁₆ 78	1 ¹⁷ / ₃₂ 38.8	20	3/4	UK X16	FC X16	HE2316 H 2316	11.4
UKFC X17 X17 X17 X17	2 ⁷ / ₈ 2 ¹⁵ / ₁₆ 3	75	10 ¹ / ₄ 260	8 ⁵ / ₈ 219	6 ³ / ₃₂ 154.8	2 ⁵ / ₆₄ 10	2 ⁹ / ₃₂ 23	6 ³ / ₆₄ 25.0	3/4 19.0	1 ¹³ / ₃₂ 36.0	7.3228 186	2 ¹ / ₃₂ 51.8	2 ²⁵ / ₃₂ 71.0	3 ⁷ / ₃₂ 82	1 ²¹ / ₃₂ 41.8	20	3/4	UK X17	FC X17	HS2317 HA2317 H 2317 HE2317	12.6
UKFC X18		80	10 ¹ / ₄ 260	8 ⁵ / ₈ 219	6 ³ / ₃₂ 154.8	1 ⁵ / ₃₂ 12	2 ⁹ / ₃₂ 23	1 ³ / ₃₂ 28	3/4 19.0	1 ¹¹ / ₁₆ 43	7.3228 186	2 ¹ / ₄ 57	3 ⁵ / ₈ 92	3 ³ / ₈ 86	1 ¹¹ / ₁₆ 42.8	20	3/4	UK X18	FC X18	H 2318	14.0
UKFC X20 X20	3 ¹ / ₂	90	10 ⁷ / ₈ 276	9 ³ / ₈ 238	6 ⁵ / ₈ 168.3	7/8 22	2 ⁹ / ₃₂ 23	1 ³ / ₃₂ 28	7/8 22	2 ¹⁹ / ₃₂ 66	8.1102 206	2 ⁵ / ₁₆ 71	4 ⁹ / ₁₆ 116	3 ¹³ / ₁₆ 97	1 ²⁷ / ₃₂ 46.8	20	3/4	UK X20	FC X20	HE2320 H 2320	15.0

FLANGE CARTRIDGE

UCFS3

(HEAVY DUTY)



SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)

UCFS3-GC... WITH OPEN COVER

UCFS3-GD... WITH CLOSED COVER

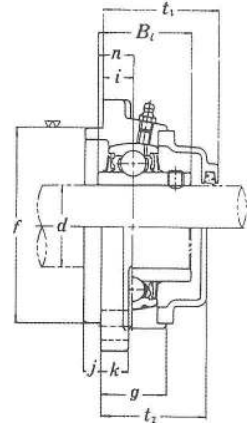
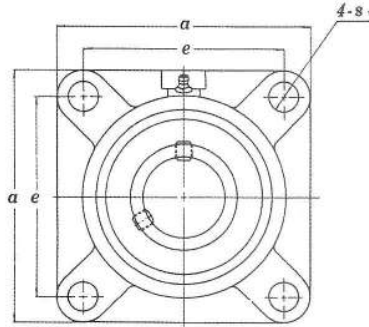
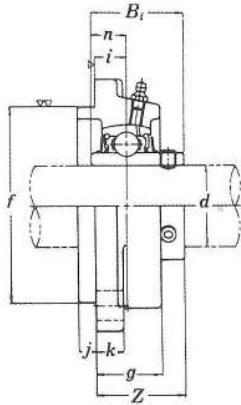


Table with columns: Unit No., Shaft Dia. (d), Dimensions (in./mm) (a, e, i, s, j, k, g, f, Z, t1, t2, Bf, n), Bolt Used (mm, in.), Bearing No., Housing No., Weight (kgf). Rows include units 305-328.

FLANGE CARTRIDGE BALL BEARING UNITS

UKFS3

(WITH ADAPTER LOCKING. HEAVY DUTY)



SL TYPE SEAL,

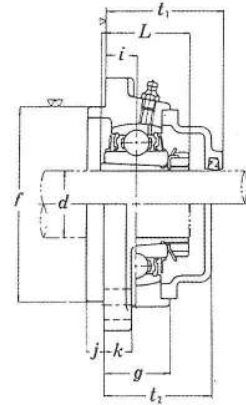
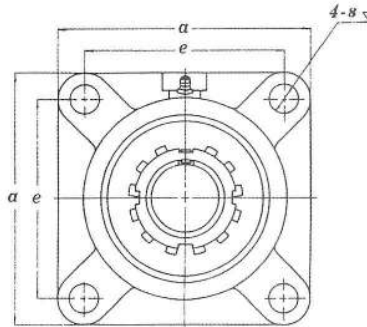
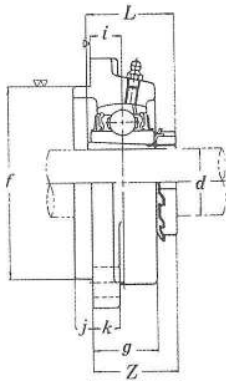


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)

UKFS3-GC... WITH OPEN COVER

UKFS3-GD... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.)													Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		(mm)													(mm)	(in.)				
	(in.)	(mm)	a	e	i	s	j	k	g	f	Z	t ₁	t ₂	L							
UKFS 305	3/4	20	4 11/32	3 5/32	2 3/64	5/8	9/32	1/2	7/8	3.1496	1.2008	1.8504	1.6535	1.3780	14	1/2	UK 305	FS 305	HE2305 H 2305	1.4	
UKFS 306	7/8	25	4 23/32	3 47/64	2 5/64	5/8	5/16	1 19/32	1 5/16	3.5433	1.2992	2.0079	1.8110	1.4961	14	1/2	UK 306	FS 306	HS2306 H 2306 HE2306	1.9	
UKFS 307	1 1/8	30	5 5/16	3 15/16	7/16	3/4	2 3/64	5/8	1 1/16	3.9370	1.4370	2.1654	1.9685	1.6929	16	5/8	UK 307	FS 307	HS2307 H 2307 HA2307	2.3	
UKFS 308	1 1/4	35	5 23/32	4 13/32	3 3/64	3/4	2 5/64	2 1/32	1 9/16	4.5276	1.5945	2.4016	2.2047	1.8110	16	5/8	UK 308	FS 308	HE2308 HS2308 H 2308	3.4	
UKFS 309	1 1/2	40	6 5/16	4 59/64	3 5/64	3/4	7/16	2 3/32	1 5/16	4.9213	1.7323	2.5591	2.3228	1.9685	16	5/8	UK 309	FS 309	HE2309 H 2309 HS2309	4.4	
UKFS 310	1 11/16	45	6 7/8	5 13/64	5/8	2 9/32	1 5/32	3/4	1 13/32	5.5119	1.8898	2.7953	2.5591	2.1654	20	3/4	UK 310	FS 310	HA2310 HE2310 H 2310	5.3	
UKFS 311	1 7/8	50	7 9/32	5 33/64	4 3/64	2 9/32	3 3/64	2 5/32	1 17/32	5.9055	1.9882	2.9134	2.6772	2.3228	20	3/4	UK 311	FS 311	HS2311 H 2311 HE2311	6.1	
UKFS 312	2 1/8	55	7 11/16	5 29/32	3 1/4	2 9/32	3 5/64	7/8	1 21/32	6.2992	2.1850	3.1890	2.9134	2.4409	20	3/4	UK 312	FS 312	HS2312 H 2312	7.4	
UKFS 313	2 1/4	60	8 1/16	6 17/32	1 9/32	2 9/32	4 5/64	2 1/2	1 9/16	6.8898	2.1063	2.9921	2.7559	2.5591	20	3/4	UK 313	FS 313	HE2313 H 2313 HS2313	8.8	
UKFS 315	2 1/2	65	9 9/32	7 1/4	5 3/64	6 3/64	4 5/64	1	1 7/8	7.8740	2.5	3.4646	3.1890	2.8740	22	7/8	UK 315	FS 315	HE2315 H 2315	13.7	
UKFS 316	2 3/4	70	9 27/32	7 23/32	4 5/64	1 7/32	2 5/32	2 1/16	1 7/8	8.2677	2.4606	3.4252	3.1496	3.0709	27	1	UK 316	FS 316	HE2316 H 2316	15.1	
UKFS 317	3	75	10 1/4	8 1/32	1 5/16	1 7/32	2 5/32	1 1/16	2 1/8	8.6614	2.8346	3.8189	3.5433	3.2283	27	1	UK 317	FS 317	H 2317 HE2317	17.3	
UKFS 318		80	11 1/32	8 1/2	1 5/16	1 3/8	2 5/32	1 3/16	2 7/32	9.4488	2.8346	3.8976	3.5827	3.3858	30	1 1/8	UK 318	FS 318	H 2318	21.3	
UKFS 319	3 1/4	85	11 13/32	8 31/32	1 17/32	1 3/8	2 5/32	1 3/16	2 29/32	9.8425	3.5827	4.7244	4.4094	3.5433	30	1 1/8	UK 319	FS 319	HE2319 H 2319	24.5	
UKFS 320	3 1/2	90	12 7/32	9 17/32	1 17/32	1 1/2	2 5/32	1 3/4	2 29/32	10.2362	3.6614	4.9606	4.5669	3.8189	33	1 1/4	UK 320	FS 320	HE2320 H 2320	29.5	
UKFS 322	4	100	13 3/8	10 15/32	1 3/8	1 39/64	6 3/64	1 3/8	2 25/32	11.8110	3.7402	5.0787	4.6063	4.1339	36	1 3/8	UK 322	FS 322	H 2322 HE2322	39	
UKFS 324	4 7/16	110	14 3/16	11 27/64	1 3/8	1 39/64	6 3/64	1 3/8	3 3/32	12.9921	3.9567	5.2362	4.7638	4.4094	36	1 3/8	UK 324	FS 324	H 2324 HA2324	50.6	
UKFS 326	4 1/2	115	16 5/16	12 19/32	1 3/8	1 39/64	6 3/64	1 3/16	3 11/32	14.1732	3.9961	5.5906	5.1181	4.7638	36	1 3/8	UK 326	FS 326	HE2326 H 2326	67.7	
UKFS 328	4 15/16	125	17 23/32	13 25/32	1 49/64	1 39/64	6 3/64	1 3/16	3 3/4	15.7480	4.6260	6.1417	5.7480	5.1575	36	1 3/8	UK 328	FS 328	H 2328 HA2328	94	

OVAL FLANGE BALL BEARING UNITS

UCFL2

(NORMAL DUTY)



SL TYPE SEAL

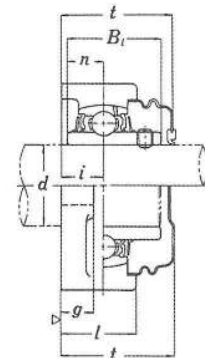
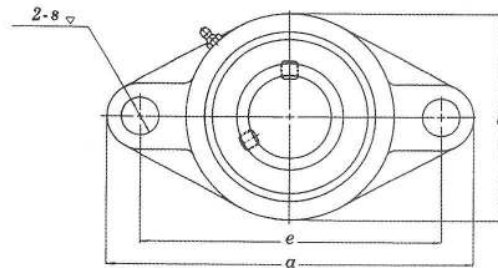
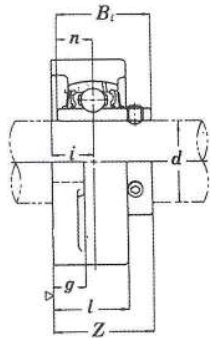


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCFL2-C... WITH OPEN COVER

UCFL2-D... WITH CLOSED COVER



Unit No.	Shaft		Dimensions (in./mm)											Bolt Used		Bearing No.	Housing No.	Weight (kgf)		
	d		a	e	i	g	l	s	b	Z	t	Bi	n	(mm)	(in.)					
	(in.)	(mm)																		
UCFL 201 201-8 202 202-10 203 204-12 204	1/2 5/8 3/4	12 15 17 20																UC 201 201-8 202 202-10 203 204-12 204	FL 204	0.50 0.48 0.47 0.45
UCFL 205-14 205-15 205 205-16	7/8 15/16 1	25	51/8 130	357/64 99	5/8 16	1/2 13	1 1/16 27	5/8 16	2 11/16 68	1 13/32 35.7	19/16 40	1.3425 34.1	0.5630 14.3	14	1/2		UC 205-14 205-15 205 205-16	FL 205	0.64	
UCFL 206-18 206 206-19	1 1/8 1 3/16	30	5 13/16 148	4 39/64 117	45/64 18	1/2 13	1 7/32 31	5/8 16	3 5/32 80	1 19/32 40.2	1 23/32 44.0	1.5000 38.1	0.6260 15.9	14	1/2		UC 206-18 206 206-19	FL 206	0.93	
UCFL 207-20 207-21 207-22 207 207-23	1 1/4 1 5/16 1 3/8 1 7/16	35	6 11/32 161	5 1/8 130	3/4 19	9/16 14	1 11/32 34	5/8 16	3 17/32 90	1 3/4 44.4	1 15/16 49	1.6890 42.9	0.6890 17.5	14	1/2		UC 207-20 207-21 207-22 207 207-23	FL 207	1.2	
UCFL 208-24 208-25 208	1 1/2 1 9/16	40	6 7/8 175	5 43/64 144	53/64 21	9/16 14	1 13/32 36	5/8 16	3 15/16 100	2 1/32 51.2	2 5/32 55.0	1.9370 49.2	0.7480 19.0	14	1/2		UC 208-24 208-25 208	FL 208	1.6	
UCFL 209-26 209-27 209-28 209	1 5/8 1 11/16 1 3/4	45	7 13/32 188	5 53/64 148	55/64 22	19/32 15	1 1/2 38	3/4 19	4 1/4 108	2 1/16 52.2	2 7/32 56.0	1.9370 49.2	0.7480 19.0	16	5/8		UC 209-26 209-27 209-28 209	FL 209	1.9	
UCFL 210-30 210-31 210 210-32	1 7/8 1 15/16 2	50	7 3/4 197	6 3/16 157	55/64 22	19/32 15	1 9/16 40	3/4 19	4 17/32 115	2 5/32 54.6	2 5/16 59	2.0315 51.6	0.7480 19.0	16	5/8		UC 210-30 210-31 210 210-32	FL 210	2.2	
UCFL 211-32 211-34 211 211-35	2 2 1/8 2 3/16	55	8 13/16 224	7 1/4 184	63/64 25	23/32 18	1 11/16 43	3/4 19	5 1/8 130	2 5/16 58.4	2 15/32 63	2.1890 55.6	0.8740 22.2	16	5/8		UC 211-32 211-34 211 211-35	FL 211	3.3	
UCFL 212-36 212 212-38 212-39	2 1/4 2 3/16 2 7/16	60	9 27/32 250	7 61/64 202	19/64 29	23/32 18	1 7/8 48	29/32 23	5 1/2 140	5 23/32 68.7	2 7/8 73.0	2.5630 65.1	1.0000 25.4	20	3/4		UC 212-36 212 212-38 212-39	FL 212	4.2	
UCFL 213-40 213	2 1/2	65	10 5/32 258	8 17/64 210	13/16 30	25/32 20	1 31/32 50	1 29/32 23	6 3/32 155	2 3/4 69.7	2 29/32 74	2.5630 65.1	1.0000 25.4	20	3/4		UC 213-40 213	FL 213	5.1	
UCFL 214-44 214	2 3/4	70	10 7/16 265	8 1/2 216	17/32 31	25/32 20	2 1/8 54	29/32 23	6 5/16 160	2 31/32 75.4	3 5/32 80.0	2.9370 74.6	1.1890 30.2	20	3/4		UC 214-44 214	FL 214	5.7	
UCFL 215 215-48	3	75	10 13/16 275	8 55/64 225	1 11/32 31	25/32 20	2 7/32 56	29/32 23	6 1/2 105	3 3/32 83.3	3 9/32 83.0	3.0630 77.8	1.3110 33.3	20	3/4		UC 215 215-48	FL 215	6.4	
UCFL 216		80	11 13/32 290	9 11/64 233	1 11/32 34	25/32 20	2 9/32 58	63/64 25	7 3/32 180	3 9/32 83.3	3 15/32 88.0	3.2520 82.6	1.3110 33.3	22	7/8		UC 216	FL 216	7.8	
UCFL 217-52 217	3 1/4	85	12 305	9 49/64 248	1 27/64 36	7/8 22	2 15/32 63	63/64 25	7 15/32 190	3 7/16 87.6	3 5/8 92.0	3.3740 85.7	1.3425 34.1	22	7/8		UC 217-52 217	FL 217	9.8	
UCFL 218-56 218	3 1/2	90	12 19/32 320	10 7/16 265	1 37/64 40	29/32 23	2 11/16 68	63/64 25	8 1/16 205	3 25/32 96.3	3 31/32 101.0	3.7795 96.0	1.5630 39.7	22	7/8		UC 218-56 218	FL 218	12.3	

OVAL FLANGE BALL BEARING UNITS

UKFL2

(NORMAL DUTY)



SL TYPE SEAL

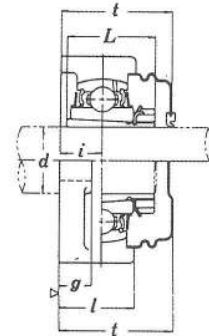
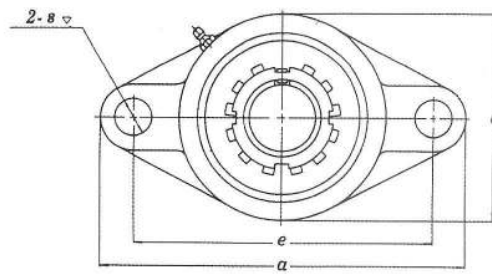
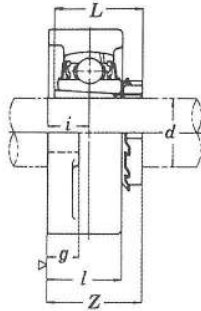


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED COVER)

UKFL2-GC WITH OPEN COVER

UKFL2-GD WITH CLOSED COVER



Unit No.	Shaft		Dimensions (in./mm)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d	(mm)	a	e	i	g	l	s	b	Z	t	L	V	(mm)	(in.)				
UKFL 205 205	3/4	20	5 1/8 130	3 57/64 99	5/8 16	1/2 13	1 11/16 27	5/8 16	2 11/16 68	1 3/8 34.7	1 9/16 40	1 5/32 29	3/4 18.7	14	1/2	UK 205	FL 205	HE2305 H 2305	0.68
UKFL 206 206 206 206	7/8 1 5/16 1	25	5 13/16 148	4 39/64 117	4 5/8 18	1/2 13	1 7/32 31	5/8 16	3 5/32 80	1 1/2 37.7	1 23/32 44.0	1 7/32 31	2 5/32 19.7	14	1/2	UK 206	FL 206	HS2306 HA2306 H 2306 HE2306	0.97
UKFL 207 207 207	1 1/8 1 3/16	30	6 11/32 161	5 1/8 130	3/4 19	9/16 14	1 11/32 34	5/8 16	3 17/32 90	1 5/8 41.2	1 15/16 49	1 3/8 35	7/8 22.2	14	1/2	UK 207	FL 207	HS2307 H 2307 HA2307	1.3
UKFL 208 208 208	1 1/4 1 3/8	35	6 7/8 175	5 49/64 144	5 3/8 21	9/16 14	1 13/32 36	5/8 16	3 15/16 100	1 3/4 44.7	2 5/32 55.0	1 13/32 36	1 5/16 23.7	14	1/2	UK 208	FL 208	HE2308 HS2308 H 2308	1.6
UKFL 209 209 209 209	1 7/16 1 1/2 1 5/8	40	7 13/32 188	5 59/64 148	5 5/8 22	1 9/32 15	1 1/2 38	3/4 19	4 1/4 108	1 7/8 47.2	2 7/32 56.0	1 17/32 39	1 25.7	16	5/8	UK 209	FL 209	HA2309 HE2309 H 2309 HS2309	2.0
UKFL 210 210 210	1 11/16 1 3/4	45	7 3/4 197	6 3/16 157	5 5/8 22	1 9/32 15	1 9/16 40	3/4 19	4 17/32 115	1 29/32 48.7	2 5/16 59	1 21/32 42	1 1/16 26.7	16	5/8	UK 210	FL 210	HA2310 HE2310 H 2310	2.3
UKFL 211 211 211 211	1 7/8 1 15/16 2	50	8 13/16 224	7 1/4 184	6 3/8 25	2 3/32 18	1 11/16 43	3/4 19	5 1/8 130	2 1/16 52.7	2 15/32 63	1 25/32 45	1 3/32 27.7	16	5/8	UK 211	FL 211	HS2311 HA2311 H 2311 HE2311	3.3
UKFL 212 212	2 1/8	55	9 27/32 250	7 61/64 202	6 9/16 29	2 3/32 18	1 7/8 48	2 9/32 23	5 1/2 140	2 9/32 58	2 7/8 73.0	1 27/32 47	1 5/32 29	20	3/4	UK 212	FL 212	HS2312 H 2312	4.1
UKFL 213 213 213 213	2 5/16 2 1/4 2 3/8	60	10 5/32 258	8 17/64 210	7 1/16 30	2 5/32 20	1 31/32 50	2 9/32 23	6 3/32 155	2 13/32 61.5	2 29/32 74	1 31/32 50	1 1/4 31.5	20	3/4	UK 213	FL 213	HA2313 HE2313 H 2313 HS2313	5.0
UKFL 215 215 215	2 7/16 2 1/2	65	10 13/16 275	8 55/64 225	7 11/32 34	2 5/32 20	2 7/32 56	2 9/32 23	6 1/2 165	2 11/16 68.5	3 9/32 83.0	2 5/32 55	1 11/32 34.5	20	3/4	UK 215	FL 215	HA2315 HE2315 H 2315	6.6
UKFL 216 216 216	2 11/16 2 3/4	70	11 13/32 290	9 11/64 233	8 11/32 34	2 5/32 20	2 9/32 58	6 3/8 25	7 9/32 180	2 13/16 71.8	3 15/32 88.0	2 5/16 59	1 1/2 37.8	22	7/8	UK 216	FL 216	HA2316 HE2316 H 2316	8.1
UKFL 217 217 217	2 15/16 3	75	12 305	9 49/64 248	8 27/64 36	7/8 22	2 15/32 63	6 3/8 25	7 15/32 190	2 31/32 75.8	3 9/8 92.0	2 15/32 63	1 9/16 39.8	22	7/8	UK 217	FL 217	HA2317 H 2317 HE2317	9.9
UKFL 218		80	12 19/32 320	10 7/16 265	9 37/64 40	2 9/32 23	2 11/16 68	6 3/8 25	8 1/16 205	3 7/32 81.8	3 31/32 101.0	2 9/16 65	1 21/32 41.8	22	7/8	UK 218	FL 218	H 2318	12.2

OVAL FLANGE BALL BEARING UNITS

UCFLX

(MEDIUM DUTY)



SL TYPE SEAL

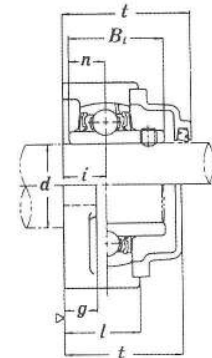
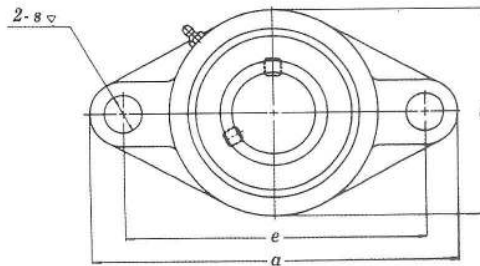
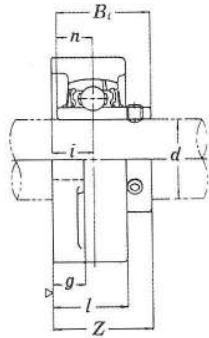


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCFLX-C . . . WITH OPEN COVER

UCFLX-D . . . WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in./mm)													Bolt Used		Bearing No.	Housing No.	Weight (kgf)
	d		a	e	i	g	l	s	b	Z	t	Bt	n	(mm)	(in.)					
	(in.)	(mm)																		
UCFL X05 X05-16	1	25	5 ⁹ / ₁₆	4 ³⁹ / ₆₄	4 ⁵ / ₆₄	1/2	1 ³ / ₁₆	1 ⁵ / ₃₂	3 ⁹ / ₃₂	1 ¹⁹ / ₃₂	1 ²³ / ₃₂	1.5000	0.6260	10	3/8	UC X05 X05-16	FL X05	1.1		
UCFL X06 X06-19 X06-20	1 ³ / ₁₆ 1 ¹ / ₄	30	6 ⁵ / ₃₂	5 ¹ / ₈	3/4	9/16	1 ¹¹ / ₃₂	5/8	3 ³ / ₄	1 ⁹ / ₄	1 ¹⁵ / ₁₆	1.6890	0.6890	14	1/2	UC X06 X06-19 X06-20	FL X06	1.5		
UCFL X07-22 X07 X07-23	1 ³ / ₈ 1 ⁷ / ₁₆	35	6 ²³ / ₃₂	5 ⁴³ / ₆₄	5 ³ / ₆₄	9/16	1 ¹ / ₂	5/8	4 ¹ / ₈	2 ¹ / ₃₂	2 ⁵ / ₃₂	1.9370	0.7480	14	1/2	UC X07-22 X07 X07-23	FL X07	1.9		
UCFL X08-24 X08	1 ¹ / ₂	40	7 ¹ / ₁₆	5 ⁵³ / ₆₄	5 ⁵ / ₆₄	9/16	1 ⁹ / ₁₆	5/8	4 ³ / ₈	2 ¹ / ₁₆	2 ⁷ / ₃₂	1.9370	0.7480	14	1/2	UC X08-24 X08	FL X08	2.1		
UCFL X09-27 X09-28 X09	1 ¹¹ / ₁₆ 1 ³ / ₄	45	7 ¹ / ₁₆	6 ³ / ₁₆	2 ⁹ / ₃₂	9/16	1 ⁹ / ₁₆	5/8	4 ⁹ / ₁₆	2 ² / ₁₆	2 ¹¹ / ₃₂	2.0315	0.7480	14	1/2	UC X09-27 X09-28 X09	FL X09	2.4		
UCFL X10-31 X10 X10-32	1 ¹⁵ / ₁₆	50	8 ¹ / ₂	7 ¹ / ₄	1 ¹ / ₃₂	2 ⁵ / ₃₂	1 ²³ / ₃₂	3/4	5 ¹ / ₄	2 ¹¹ / ₃₂	2 ¹ / ₂	2.1890	0.8740	16	5/8	UC X10-31 X10 X10-32	FL X10	3.8		

OVAL FLANGE BALL BEARING UNITS

UKFLX

(WITH ADAPTER LOCKING MEDIUM DUTY)

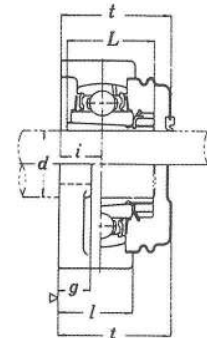
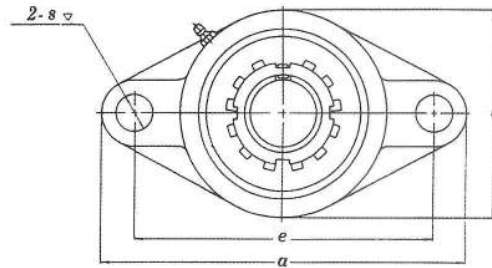
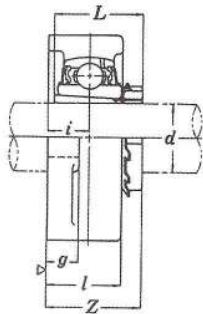


SL TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKFLX-C... WITH OPEN COVER

UKFLX-D... WITH CLOSED COVER



Unit No.	Shaft Dia.		Dimensions (in.) (mm)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	e	i	g	l	s	b	Z	t	L	V	(mm)	(in.)				
	(in.)	(mm)																	
UKFL X05 X05	3/4	20	5 ⁹ / ₁₆ 141	4 ³⁹ / ₆₄ 117	4 ⁵ / ₆₄ 18	1/2 13	1 ³ / ₁₆ 30	1 ⁵ / ₃₂ 12	3 ⁹ / ₃₂ 83	1 1/2 37.7	1 ²³ / ₃₂ 44.0	1 ³ / ₈ 35	2 ⁵ / ₃₂ 19.7	10	3/8	UK X05	FL X05	HE 2305 H 2305	1.0
UKFL X06 X06 X06	7/8 15/16 1	25	6 ⁵ / ₃₂ 156	5 ¹ / ₈ 130	3/4 19	9/16 14	1 ¹¹ / ₃₂ 34	5/8 16	3 ³ / ₄ 95	1 ¹⁹ / ₃₂ 40.2	1 ¹⁵ / ₁₆ 49	1 1/2 38	2 ⁷ / ₃₂ 21.2	14	1/2	UK X06	FL X06	HS 2306 HA 2306 H 2306 HE 2306	1.5
UKFL X07 X07 X07	1 1/8 1 1/8 1 3/16	30	6 ²⁹ / ₃₂ 171	5 ⁴⁹ / ₆₄ 144	5 ⁹ / ₆₄ 21	9/16 14	1 1/2 38	3/8 16	4 1/8 105	1 ²⁹ / ₃₂ 43.7	2 ⁹ / ₃₂ 55.0	1 ¹¹ / ₁₆ 43	2 ⁹ / ₃₂ 22.7	14	1/2	UK X07	FL X07	HS 2307 H 2307 HA 2307	1.8
UKFL X08 X08 X08	1 1/4 1 3/8 1 3/8	35	7 ¹ / ₁₆ 179	5 ⁵³ / ₆₄ 148	5 ⁵ / ₆₄ 22	9/16 14	1 ⁹ / ₁₆ 40	5/8 16	4 ³ / ₈ 111	1 ¹³ / ₁₆ 46.2	2 ⁷ / ₃₂ 56.0	1 ¹³ / ₁₆ 46	3 ¹ / ₃₂ 24.7	14	1/2	UK X08	FL X08	HE 2308 HS 2308 H 2308	2.1
UKFL X09 X09 X09 X09	1 ⁷ / ₁₆ 1 1/2 1 1/2 1 5/8	40	7 ⁷ / ₁₆ 189	6 ³ / ₁₆ 157	2 ⁹ / ₃₂ 23	9/16 14	1 ⁹ / ₁₆ 40	5/8 16	4 ⁹ / ₁₆ 116	1 ²⁹ / ₃₂ 48.7	2 ¹¹ / ₃₂ 60	1 ³¹ / ₃₂ 50	1 25.7	14	1/2	UK X09	FL X09	HA 2309 HE 2309 H 2309 HS 2309	2.5
UKFL X10 X10 X10	1 ¹¹ / ₁₆ 1 3/4 1 3/4	45	8 ¹ / ₂ 216	7 ¹ / ₄ 184	1 ¹ / ₃₂ 26	2 ⁹ / ₃₂ 20	1 ²⁹ / ₃₂ 44	3/4 19	5 1/4 133	2 ¹ / ₈ 53.7	2 ¹ / ₂ 64	2 ⁵ / ₃₂ 55	1 ⁹ / ₃₂ 27.7	16	5/8	UK X10	FL X10	HA 2310 HE 2310 H 2310	3.7

OVAL FLANGE BALL BEARING UNITS

UKFL3

(WITH ADAPTER LOCKING, HEAVY DUTY)



SL TYPE SEAL

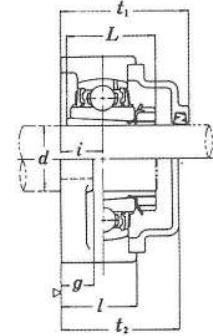
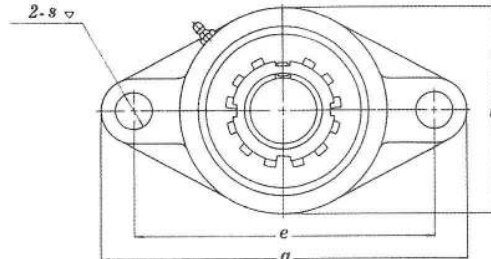
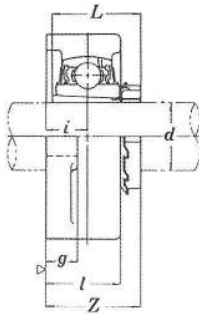


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)

UKFL3-GC . . . WITH OPEN COVER

UKFL3-GD . . . WITH CLOSED COVER



Unit No.	Shaft Dia		Dimensions (in./mm)											Bolt Used		Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	e	i	g	l	s	b	Z	t ₁	t ₂	L	(mm)	(in.)				
	(in.)	(mm)																	
UKFL 305 305	3/4	20	5 ²⁹ / ₃₂ 150	4 ²⁹ / ₆₄ 113	5/8 16	1/2 13	1 ⁹ / ₃₂ 29	3/4 19	3 ⁵ / ₃₂ 80	1.4764 37.5	2.1260 54	1.9291 49	1.3780 35	16	5/8	UK 305	FL 305	HE2305 H 2305	1.1
UKFL 306 306 306	7/8 1	25	7 ³ / ₃₂ 180	5 ⁹ / ₃₂ 134	4 ⁵ / ₆₄ 18	1 ⁹ / ₃₂ 15	1 1/4 32	2 ⁹ / ₃₂ 23	3 ¹⁷ / ₃₂ 90	1.6142 41	2.3223 59	2.1260 54	1.4961 38	20	3/4	UK 306	FL 306	HS2306 H 2306 HE2306	1.5
UKFL 307 307 307	1 1/8 1 1/16	30	7 ⁹ / ₃₂ 185	5 ³⁵ / ₆₄ 141	2 ⁵ / ₃₂ 20	5/8 16	1 13/32 36	2 ⁹ / ₃₂ 23	3 15/16 100	1.7913 45.5	2.5197 64	2.3228 59	1.6929 43	20	3/4	UK 307	FL 307	HS2307 H 2307 HA2307	1.8
UKFL 308 308 308	1 1/4 1 3/8	35	7 7/8 200	6 7/32 158	2 ⁹ / ₃₂ 23	2 1/2 17	1 9/16 40	2 ⁹ / ₃₂ 23	4 13/32 112	1.9882 50.5	2.7953 71	2.5984 66	1.8110 46	20	3/4	UK 308	FL 308	HE2308 HS2308 H 2308	2.5
UKFL 309 309 309	1 1/2 1 5/8	40	9 1/16 230	6 31/32 177	2 ⁵ / ₃₂ 25	2 3/32 18	1 23/32 44	6 3/64 25	4 29/32 125	2.1654 55	2.9921 76	2.7559 70	1.9685 50	22	7/8	UK 309	FL 309	HE2309 H 2309 HS2309	3.5
UKFL 310 310 310	1 11/16 1 3/4	45	9 7/16 240	7 23/64 187	1 7/64 28	3/4 19	1 7/8 48	6 3/64 25	5 1/2 140	2.3622 60	3.2677 83	3.0315 77	2.1654 55	22	7/8	UK 310	FL 310	HA2310 HE2310 H 2310	4.4
UKFL 311 311 311	1 7/8 2	50	9 27/32 250	7 51/64 198	1 3/16 30	2 ⁵ / ₃₂ 20	2 1/16 52	6 3/64 25	5 29/32 150	2.5000 63.5	3.4252 87	3.1890 81	2.3228 59	22	7/8	UK 311	FL 311	HS2311 H 2311 HE2311	5.3
UKFL 312 312	2 1/8	55	10 5/8 270	8 1/32 212	1 19/64 33	7/8 22	2 1/32 56	1 1/32 31	6 5/16 160	2.7362 69.5	3.7402 95	3.4646 88	2.4409 62	27	1	UK 312	FL 312	HS2312 H 2312	6.5
UKFL 313 313 313	2 1/4 2 3/8	60	11 5/8 295	9 29/64 240	1 19/64 33	1 25	2 9/32 58	1 7/32 31	6 7/8 175	2.8150 71.5	3.7008 94	3.4646 88	2.5591 65	27	1	UK 313	FL 313	HE2313 H 2313 HS2313	8.5
UKFL 315 315	2 1/2	65	12 19/32 320	10 19/64 260	1 17/32 39	1 9/16 30	2 19/32 66	1 9/8 35	7 11/16 195	3.2087 81.5	4.1732 106	3.8976 99	2.8740 73	30	1 1/8	UK 315	FL 315	HE2315 H 2315	11.3
UKFL 316 316	2 3/4	70	13 31/32 355	11 7/32 285	1 1/2 38	1 1/4 32	2 11/16 68	1 1/2 38	8 9/32 210	3.2480 82.5	4.2126 107	3.9370 100	3.0709 78	33	1 1/4	UK 316	FL 316	HE2316 H 2316	14.4
UKFL 317 317	3	75	14 9/16 370	11 13/16 300	1 47/64 44	1 1/4 32	2 29/32 74	1 1/2 38	8 21/32 220	3.6220 92	4.6063 117	4.3307 110	3.2283 82	33	1 1/4	UK 317	FL 317	H 2317 HE2317	16.0
UKFL 318		80	15 5/32 385	12 13/32 315	1 47/64 44	1 13/32 36	3 76	1 1/2 38	9 1/4 235	3.6220 92	4.6850 119	4.3701 111	3.3858 86	33	1 1/4	UK 318	FL 318	H 2318	19.0
UKFL 319 319	3 1/4	85	15 15/16 405	13 330	2 21/64 59	1 9/16 40	3 11/16 94	1 39/64 41	9 27/32 250	4.3701 111	5.5118 140	5.1969 132	3.5433 90	36	1 3/8	UK 319	FL 319	HE2319 H 2319	24.6
UKFL 320 320	3 1/2	90	17 5/16 440	14 11/64 360	2 21/64 59	1 9/16 40	3 11/16 94	1 47/64 44	10 9/8 270	4.4488 113	5.7480 146	5.3543 136	3.8189 97	39	1 1/2	UK 320	FL 320	HE2320 H 2320	29.4
UKFL 322 322	4	100	18 1/2 470	15 23/64 390	2 23/64 60	1 21/32 42	3 25/32 96	1 47/64 44	11 13/16 300	4.7244 120	6.0630 154	5.5906 142	4.1339 105	39	1 1/2	UK 322	FL 322	H 2322 HE2322	36.2
UKFL 324 324	4 7/16	110	20 15/32 520	16 59/64 430	2 9/16 65	1 7/8 48	4 11/32 110	1 27/32 47	13 330	5.1378 130.5	6.4173 163	5.9449 151	4.4094 112	42	1 5/8	UK 324	FL 324	H 2324 HA2324	51.6
UKFL 326 326	4 1/2	115	21 21/32 550	18 7/64 460	2 9/16 65	1 31/32 50	4 11/32 115	1 27/32 47	14 31/16 360	5.1792 131.5	6.7717 172	6.2992 160	4.7638 121	42	1 5/8	UK 326	FL 326	HE2326 H 2326	61.6
UKFL 328 328	4 15/16	125	23 3/8 600	19 11/16 500	2 61/64 75	2 3/8 60	4 29/32 125	2 51	15 3/4 400	5.8071 147.5	7.3228 186	6.9291 176	5.1575 131	45	1 3/4	UK 328	FL 328	H 2328 HA2328	68.4

TAKE-UP BALL BEARING UNITS

UCT2

(NORMAL DUTY)



SL TYPE SEAL,

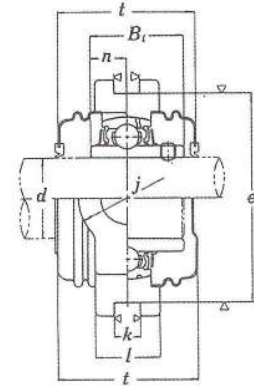
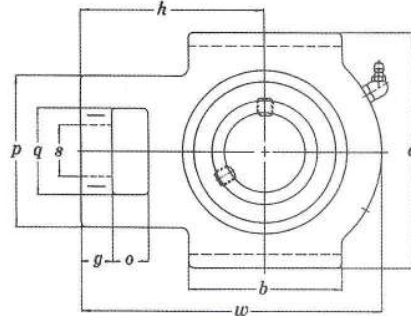
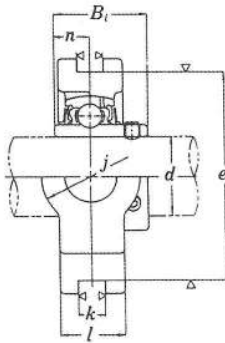


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UCT2-C... WITH COVER, BOTH SIDES OPEN

UCT2-CD... WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft d		Dimensions (in./mm)															Bearing No.	Housing No.	Weight (kgf)	
	(in.)	(mm)	o	g	p	q	s	b	K	e	a	w	j	l	h	t	Bi				n
	UCT 201 201-8 202 202-10 203 204-12 204	1/2 5/8 3/4	12 15 17 20																		
UCT 205-14 205-15 205 205-16	7/8 15/16 1	25	5/8	13/32	2	1/4	3/4	2	15/32	263/64	3/2	313/16	11/4	15/16	27/16	17/8	1.3425	0.5630	UC 205-14 205-15 205 205-16	T 205	0.84
UCT 206-18 206 206-19	1 1/8 1 3/16	30	5/8	13/32	2 7/32	1 15/32	5 5/64	2 1/4	1 5/32	3 1/2	4 1/32	4 7/16	1 5/32	1 3/32	2 3/4	2 1/16	1.5000	0.6260	UC 206-18 206 206-19	T 206	1.3
UCT 207-20 207-21 207-22 207 207-23	1 1/4 1 5/16 1 3/8 1 7/16	35	5/8	1/2	2 17/32	1 15/32	5 5/64	2 17/32	1 5/32	3 1/2	4 1/32	5 3/32	1 5/32	1 3/16	3 1/16	2 5/16	1.6890	1.6890	UC 207-20 207-21 207-22 207 207-23	T 207	1.6
UCT 208-24 208-25 208	1 1/2 1 9/16	40	3/4	5/8	3 9/32	1 15/16	1 9/64	3 9/32	5/8	4 1/64	4 1/2	5 21/32	1 15/16	1 5/16	3 15/32	2 11/16	1.9370	0.7480	UC 208-24 208-25 208	T 208	2.5
UCT 209-26 209-27 209-28 209	1 5/8 1 11/16 1 3/4	45	3/4	5/8	3 9/32	1 15/16	1 9/64	3 9/32	5/8	4 1/64	4 19/32	5 21/32	1 15/16	1 3/8	3 7/16	2 11/16	1.9370	0.7480	UC 209-26 209-27 209-28 209	T 209	2.4
UCT 210-30 210-31 210 210-32	1 7/8 1 15/16 2	50	3/4	5/8	3 9/32	1 15/16	1 9/64	3 3/8	5/8	4 1/64	4 19/32	5 7/8	1 15/16	1 5/32	3 17/32	2 7/8	2.0315	0.7480	UC 210-30 210-31 210 210-32	T 210	2.6
UCT 211-32 211-34 211 211-35	2 2 1/8 2 3/16	55	1	3/4	4 1/32	2 17/32	1 3/8	3 3/4	5 5/64	5 1/8	5 3/8	6 23/32	2 17/32	1 1/2	4 3/16	2 15/16	2.1890	0.8740	UC 211-32 211-34 211 211-35	T 211	4.0
UCT 212-36 212 212-38 212-39	2 1/4 2 3/8 2 7/16	60	1 1/4	3/4	4 1/32	2 17/32	1 3/8	4 1/32	5 5/64	5 1/8	5 3/4	7 5/8	2 17/32	1 21/32	4 11/16	3 15/32	2.5630	1.0000	UC 212-36 212 212-38 212-39	T 212	4.9
UCT 213-40 213	2 1/2	65	1 1/4	1 3/16	4 3/8	2 3/4	1 3 9/64	4 3/4	1 1/32	5 15/16	6 9/16	8 13/16	2 3/4	1 23/32	5 13/32	3 15/32	2.5630	1.0000	UC 213-40 213	T 213	6.9
UCT 214-44 214	2 3/4	70	1 1/4	1 3/16	4 3/8	2 3/4	1 3 9/64	4 3/4	1 1/32	5 15/16	6 9/16	8 13/16	2 3/4	1 11/16	5 13/32	3 27/32	2.9370	1.1890	UC 214-44 214	T 214	7.0
UCT 215 215-48	3	75	1 1/4	1 3/16	4 3/8	2 3/4	1 3 9/64	4 3/4	1 1/32	5 15/16	6 9/16	9 1/8	2 3/4	1 7/8	5 1/2	3 27/32	3.0630	1.3110	UC 215 215-48	T 215	7.3
UCT 216	3	80	1 1/4	1 3/16	4 3/8	2 3/4	1 3 9/64	4 3/4	1 1/32	6 1/2	7 1/4	9 1/4	2 3/4	2	5 1/2	4 1/4	3.2520	1.3110	UC 216	T 216	8.2
UCT 217-52 217	3 1/4	85	1 1/2	1 5/32	4 7/8	2 7/8	1 5 7/64	6 3/16	1 3/16	6 13/16	7 25/32	10 1/4	2 7/8	2 1/8	6 3/8	4 13/32	3.3740	1.3425	UC 217-52 217	T 217	11.0

TAKE-UP BALL BEARING UNITS

UKT2

(WITH ADAPTER LOCKING, NORMAL DUTY)



SL TYPE SEAL,

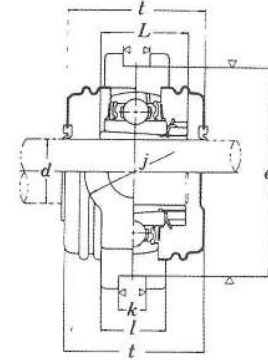
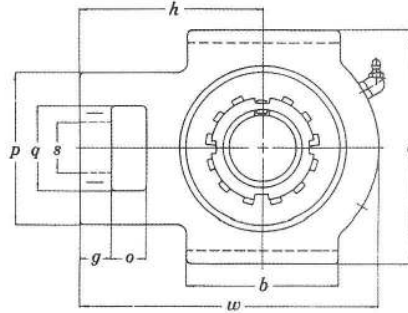
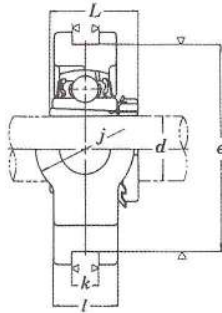


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)

UKT2-C ---- WITH COVER, BOTH SIDES OPEN

UKT2-CD ---- WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in.)															Bearing No.	Housing No.	Adapter Used	Weight (kgf)	
	d		(mm)																			
	(in.)	(mm)	o	g	p	q	s	b	K	e	a	w	j	l	h	t	L					V
UKT 205 205	3/4	20	5/8 16	13/32 10	2 51	1 1/4 32	3/4 19	2 51	15/32 12	2 3/16 76	3 1/2 89	3 13/16 97	1 1/4 32	15/16 24	2 7/16 62	1 7/8 48	1 5/32 29	3/4 18.7	UK 205	T 205	HE2305 H 2305	0.88
UKT 206 206 206 206	7/8 15/16 1	25	5/8 16	13/32 10	2 7/32 56	1 15/32 37	55/64 22	2 1/4 57	15/32 12	3 1/2 89	4 1/32 102	4 7/16 113	1 15/32 37	1 3/32 28	2 3/4 70	2 1/16 52	1 7/32 31	2 5/32 19.7	UK 206	T 206	HS2306 HA2306 H 2306 HE2306	1.3
UKT 207 207 207	1 1/8 1 3/16	30	5/8 16	1/2 13	2 17/32 64	1 15/32 37	55/64 22	2 17/32 64	15/32 12	3 1/2 89	4 1/32 102	5 3/32 129	1 15/32 37	1 3/16 30	3 1/8 78	2 5/16 59	1 3/8 35	7/8 22.2	UK 207	T 207	HS2307 H 2307 HA2307	1.7
UKT 208 208 208	1 1/4 1 3/8	35	3/4 19	5/8 16	3 3/32 83	1 15/16 49	1 9/64 29	3 3/32 83	5/8 16	4 1/64 102	4 1/2 114	5 21/32 144	1 15/16 49	1 5/16 33	3 15/32 88	2 11/16 68	1 13/32 36	1 5/16 23.7	UK 208	T 208	HE2308 HS2308 H 2308	2.5
UKT 209 209 209 209	1 7/16 1 1/2 1 5/8	40	3/4 19	5/8 16	3 3/32 83	1 15/16 49	1 9/64 29	3 3/32 83	5/8 16	4 1/64 102	4 19/32 117	5 21/32 144	1 15/16 49	1 3/8 35	3 7/16 87	2 11/16 68	1 17/32 39	1 25.7	UK 209	T 209	HA2309 HE2309 H 2309 HS2309	2.5
UKT 210 210 210	1 11/16 1 3/4	45	3/4 19	5/8 16	3 3/32 83	1 15/16 49	1 9/64 29	3 3/8 86	5/8 16	4 1/64 102	4 19/32 117	5 7/8 149	1 15/16 49	1 15/32 37	3 17/32 90	2 7/8 73	1 21/32 42	1 1/16 26.7	UK 210	T 210	HA2310 HE2310 H 2310	2.7
UKT 211 211 211 211	1 7/8 1 15/16 2	50	1 25	3/4 19	4 1/32 102	2 17/32 64	1 3/8 35	3 3/4 95	55/64 22	5 1/8 130	5 3/4 146	6 23/32 171	2 17/32 64	1 1/2 38	4 3/16 106	2 15/16 75	1 25/32 45	1 3/32 27.7	UK 211	T 211	HS2311 HA2311 H 2311 HE2311	4.1
UKT 212 212	2 1/8	55	1 1/4 32	3/4 19	4 1/32 102	2 17/32 64	1 3/8 35	4 1/32 102	55/64 22	5 1/8 130	5 3/4 146	7 7/8 194	2 17/32 64	1 21/32 42	4 11/16 119	3 15/32 88	1 27/32 47	1 5/32 29	UK 212	T 212	HS2312 H 2312	4.8
UKT 213 213 213 213	2 3/16 2 1/4 2 3/8	60	1 1/4 32	13/16 21	4 3/8 111	2 3/4 70	1 39/64 41	4 3/4 121	1 1/32 26	5 15/16 151	6 9/16 167	8 13/16 224	2 3/4 70	1 23/32 44	5 13/32 137	3 15/32 88	1 31/32 50	1 1/4 31.5	UK 213	T 213	HA2313 HE2313 H 2313 HS2313	6.8
UKT 215 215 215	2 7/16 2 1/2	65	1 1/4 32	13/16 21	4 3/8 111	2 3/4 70	1 39/64 41	4 3/4 121	1 1/32 26	5 15/16 151	6 9/16 167	9 1/8 232	2 3/4 70	1 7/8 48	5 1/2 140	3 27/32 98	2 5/32 55	1 11/32 34.5	UK 215	T 215	HA2315 HE2315 H 2315	7.4
UKT 216 216 216	2 11/16 2 3/4	70	1 1/4 32	13/16 21	4 3/8 111	2 3/4 70	1 39/64 41	4 3/4 121	1 1/32 26	6 1/2 165	7 1/4 184	9 1/4 235	2 3/4 70	2 51	5 1/2 140	4 1/4 108	2 5/16 59	1 1/2 37.8	UK 216	T 216	HA2316 HE2316 H 2316	8.5
UKT 217 217 217	2 5/16	75	1 1/2 38	1 5/32 29	4 7/8 124	2 7/8 73	1 57/64 48	6 3/16 157	1 3/16 30	6 13/16 173	7 25/32 198	10 1/4 260	2 7/8 73	2 1/8 54	6 3/8 162	4 13/32 112	2 15/32 63	1 9/16 39.8	UK 217	T 217	HA2317 HE2317 H 2317	11.2

TAKE-UP BALL BEARING UNITS

UCTX
(MEDIUM DUTY)

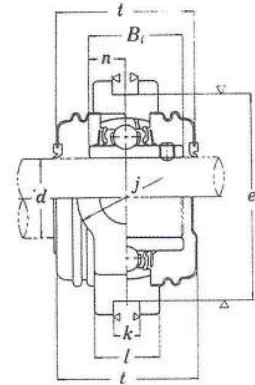
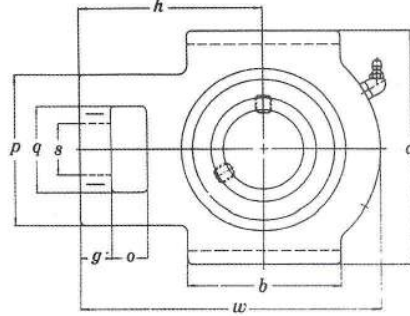
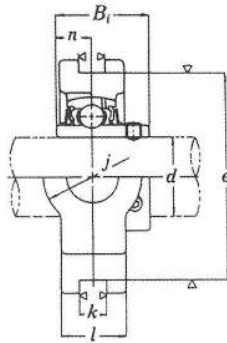


SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)
UCTX-C... WITH COVER, BOTH SIDES OPEN
UCTX-CD... WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in.)																Bearing No.	Housing No.	Weight (kgf)	
	d		(mm)																			
	(in.)	(mm)	o	g	p	q	s	b	K	e	a	w	j	l	h	t	B1	n				
UCT X05 X05-16	1	25	5/16	13/32	27/32	15/32	55/64	21/4	15/32	31/2	41/32	47/16	15/32	13/32	23/4	21/16	1.5000	0.6260	UC X05 X05-16	T X05	1.4	
UCT X06 X06-19 X06-20	1 3/16 1 1/4	30	5/8	1/2	217/32	15/32	55/64	217/32	15/32	31/2	41/32	53/32	15/32	13/16	31/16	25/16	1.6890	0.6890	UC X06 X06-19 X06-20	T X06	1.7	
UCT X07-22 X07 X07-23	1 3/8 1 7/16	35	3/4	19/32	39/32	15/16	19/64	39/32	5/8	41/64	41/2	521/32	15/16	113/32	315/32	211/16	1.9370	0.7480	UC X07-22 X07 X07-23	T X07	2.7	
UCT X08-24 X08	1 1/2	40	3/4	19/32	39/32	15/16	19/64	39/32	5/8	41/64	419/32	521/32	15/16	113/32	37/16	211/16	1.9370	0.7480	UC X08-24 X08	T X08	2.6	
UCT X09-27 X09-28 X09	1 11/16 1 3/4	45	3/4	5/8	39/32	15/16	19/64	39/32	5/8	41/64	419/32	57/8	15/16	11/2	317/32	27/8	2.0315	0.7480	UC X09-27 X09-28 X09	T X09	2.9	
UCT X10-31 X10 X10-32	1 15/16 2	50	1	25	3/4	41/32	217/32	15/8	33/4	55/64	51/8	53/4	623/32	217/32	121/32	43/16	215/16	2.1890	0.8740	UC X10-31 X10 X10-32	T X10	4.4
UCT X11 X11-35 X11-36	2 3/16 2 1/4	55	1 1/4	3/4	41/32	217/32	15/8	41/32	55/64	51/8	53/4	75/8	217/32	123/32	411/16	315/32	2.5630	1.0000	UC X11 X11-35 X11-36	T X11	5.3	
UCT X12 X12-38 X12-39	2 5/8 2 7/16	60	1 1/4	13/16	43/8	23/4	139/64	43/4	11/32	515/16	69/16	813/16	23/4	17/8	513/32	315/32	2.5630	1.0000	UC X12 X12-38 X12-39	T X12	7.4	
UCT X13-40 X13	2 1/2	65	1 1/4	13/16	43/8	23/4	139/64	43/4	11/32	515/16	69/16	813/16	23/4	17/8	513/32	327/32	2.9370	1.1890	UC X13-40 X13	T X13	7.6	
UCT X14-44 X14	2 3/4	70	1 1/4	13/16	43/8	23/4	139/64	43/4	11/32	515/16	69/16	91/8	23/4	17/8	51/2	327/32	3.0630	1.3110	UC X14-44 X14	T X14	7.9	
UCT X15 X15-48	3	75	1 1/4	13/16	43/8	23/4	139/64	43/4	17/64	61/2	71/4	91/4	23/4	17/8	51/2	41/4	3.2520	1.3110	UC X15 X15-48	T X15	8.7	
UCT X16		80	1 1/2	13/32	47/8	27/8	137/64	63/16	17/64	613/16	725/32	101/4	27/8	21/8	63/8	413/32	3.3740	1.3425	UC X16	T X16	11.7	
UCT X17		85	1 1/2	13/32	47/8	27/8	137/64	63/16	17/64	613/16	725/32	101/4	27/8	21/8	63/8	413/16	3.7795	1.5630	UC X17	T X17	11.7	

TAKE-UP BALL BEARING UNITS

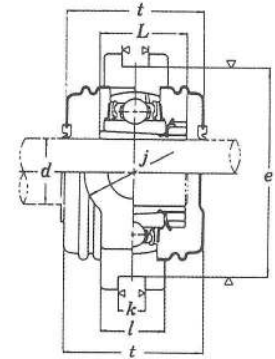
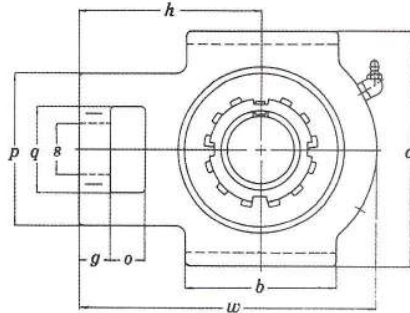
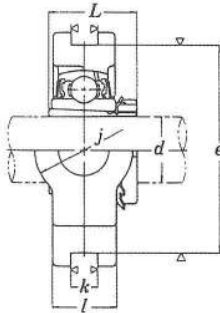
UKTX

(WITH ADAPTER LOCKING, MEDIUM DUTY)



SL TYPE SEAL,

DOUBLE PROTECTION METHOD (STAMPED STEEL COVER)
 UKTX-C WITH COVER, BOTH SIDES OPEN
 UKTX-CD WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in./mm)																	Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d																						
	(in.)	(mm)	o	g	p	q	s	b	K	e	a	w	j	l	h	t	L	V					
UKT X05 X05	3/4	20	5/8	13/32	27/32	115/32	55/64	21/4	15/32	31/2	41/32	47/16	115/32	13/32	23/4	21/16	13/8	25/32	UK X05	T X05	HE 2305 H 2305	1.3	
UKT X06 X06 X06 X06	7/8 1 1/16 1	25	5/8	1/2	217/32	115/32	55/64	217/32	15/32	31/2	41/32	53/32	115/32	13/16	31/16	25/16	11/2	27/32	UK X06	T X06	HS 2306 HA 2306 H 2306 HE 2306	1.7	
UKT X07 X07 X07	1 1/8 1 3/16	30	3/4	19/32	33/32	115/16	19/64	39/32	5/8	41/64	41/2	521/32	115/16	113/32	315/32	211/16	111/16	29/32	UK X07	T X07	HS 2307 H 2307 HA 2307	2.6	
UKT X08 X08 X08	1 1/4 1 3/8	35	3/4	19/32	33/32	115/16	19/64	39/32	5/8	41/64	419/32	521/32	115/16	113/32	31/16	211/16	113/16	31/32	UK X08	T X08	HE 2308 HS 2308 H 2308	2.6	
UKT X09 X09 X09 X09	1 7/16 1 1/2 1 5/8	40	3/4	5/8	33/32	115/16	19/64	39/32	5/8	41/64	419/32	527/32	115/16	11/2	317/32	27/8	131/32	1	UK X09	T X09	HA 2309 HE 2309 H 2309 HS 2309	2.9	
UKT X10 X10 X10	1 11/16 1 3/4	45	1	3/4	41/32	217/32	13/8	33/4	55/64	51/8	53/4	623/32	217/32	121/32	43/16	215/16	25/32	13/32	UK X10	T X10	HA 2310 HE 2310 H 2310	4.4	
UKT X11 X11 X11 X11	1 7/8 1 15/16 2	50	1 1/4	3/4	41/32	217/32	13/8	41/32	55/64	51/8	53/4	75/8	217/32	123/32	411/16	315/32	25/16	11/8	UK X11	T X11	HS 2311 HA 2311 H 2311 HE 2311	5.1	
UKT X12 X12	2 1/8	55	1 1/4	13/16	43/8	23/4	139/64	43/4	11/32	515/16	63/16	810/16	23/4	17/8	513/32	315/32	27/16	13/16	UK X12	T X12	HS 2312 H 2312	7.3	
UKT X13 X13 X13 X13	2 1/16 2 1/4 2 3/8	60	1 1/4	13/16	43/8	23/4	139/64	43/4	11/32	515/16	63/16	810/16	23/4	17/8	513/32	327/32	29/16	15/16	UK X13	T X13	HA 2313 HE 2313 H 2313 HS 2313	7.2	
UKT X15 X15 X15	2 1/2 2 5/8	65	1 1/4	13/16	43/8	23/4	139/64	43/4	17/64	61/2	71/4	91/4	23/4	17/8	51/2	41/4	27/8	113/32	UK X15	T X15	HE 2315 H 2315 HS 2315	8.4	
UKT X16 X16	2 3/4	70	1 1/2	13/32	47/8	27/8	137/64	63/16	17/64	613/16	723/32	101/4	27/8	21/8	63/8	413/32	31/16	117/32	UK X16	T X16	HE 2316 H 2316	11.8	
UKT X17 X17 X17 X17	2 7/8 2 15/16 3	75	1 1/2	13/32	47/8	27/8	137/64	63/16	17/64	613/16	723/32	101/4	27/8	21/8	63/8	413/16	37/32	127/32	UK X17	T X17	HS 2317 HA 2317 H 2317 HE 2317	11.4	

TAKE-UP BALL BEARING UNITS

UCT3

(HEAVY DUTY)

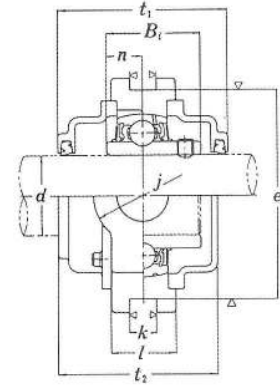
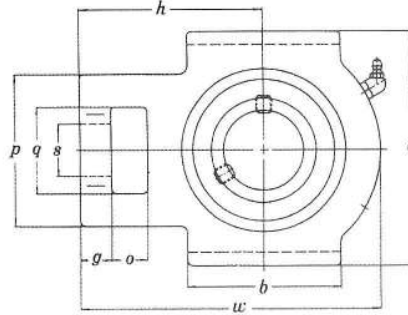
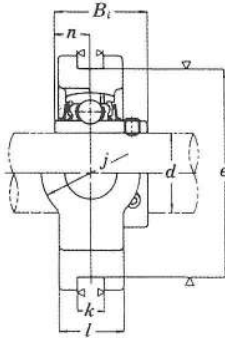


SL TYPE SEAL



L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)
 UCT3-GC WITH COVER, BOTH SIDES OPEN
 UCT3-GCD WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia.		Dimensions (in.)																	Bearing No.	Housing No.	Weight (kgf)
	d		(mm)																			
	(in.)	(mm)	o	g	p	q	s	b	K	e	a	w	j	l	h	t ₁	t ₂	B ₁	n			
UCT 305 305-16	1	25	5/16	15/32	27/16	113/32	11/32	29/16	15/32	33/32	31/2	413/16	113/32	11/32	3	3	225/32	1.4961	0.5906	UC 305 305-16	T 305	1.4
UCT 306-18 306	1 1/8	30	23/32	9/16	27/4	15/8	17/64	229/32	5/8	325/64	315/16	513/32	15/8	19/32	311/32	37/32	82	1.6929	0.6693	UC 306-18 306	T 306	1.8
UCT 307-20 307-22 307 307-23	1 1/4 1 3/8	35	25/32	19/32	215/16	125/32	13/16	35/32	5/8	315/16	43/8	529/32	125/32	11/4	311/16	315/32	83	1.8897	0.7480	UC 307-20 307-22 307 307-23	T 307	2.3
UCT 308-24 308	1 1/2	40	7/8	21/32	39/32	131/32	117/64	31/2	45/16	413/32	47/8	63/8	131/32	11/32	315/16	325/32	91	2.0472	0.7480	UC 308-24 308	T 308	3.0
UCT 309-28 309	1 3/4	45	15/16	23/32	317/32	25/32	111/32	313/16	45/64	429/64	57/16	7	25/32	11/2	411/32	41/32	325/32	2.2441	0.8661	UC 309-28 309	T 309	4.1
UCT 310-31 310	1 5/8	50	11/16	25/32	327/32	213/32	129/64	43/16	25/32	523/64	515/16	717/32	213/32	19/16	419/32	411/32	43/32	2.4015	0.8661	UC 310-31 310	T 310	4.9
UCT 311-32 311	2	55	13/32	13/16	47/8	219/32	117/32	417/32	35/64	529/32	613/32	85/32	219/32	123/32	5	41/2	41/4	2.5984	0.9842	UC 311-32 311	T 311	6.1
UCT 312	60	171/32	29/32	47/16	225/32	139/64	427/32	35/64	619/64	216	7	821/32	225/32	113/16	45	47/8	419/32	2.7953	1.0236	UC 312	T 312	7.6
UCT 313-40 313	2 1/2	65	11/4	23	49/16	3/4	111/16	57/32	11/32	611/16	715/32	238	35/32	131/32	53/4	413/16	47/16	2.9528	1.1811	UC 313-40 313	T 313	9.3
UCT 314-44 314	2 3/4	70	113/32	36	25	51/8	315/32	113/16	51/2	11/32	73/32	215	929/32	317/32	52	63/32	47/8	3.0709	1.2992	UC 314-44 314	T 314	11.1
UCT 315 315-48	3	75	113/32	36	25	53/16	311/32	113/16	529/32	11/32	79/16	81/2	105/16	317/32	29/32	65/16	59/32	3.2283	1.2598	UC 315 315-48	T 315	13
UCT 316	80	121/32	12/32	28	529/32	327/32	23/32	611/16	117/64	827/64	97/16	1129/32	41/32	217/32	77/32	53/4	515/32	3.7795	1.5748	UC 316	T 316	16.2
UCT 317	85	121/32	12/32	30	531/32	327/32	23/32	611/16	117/64	827/64	97/16	1129/32	41/32	217/32	77/32	53/4	515/32	3.7795	1.5748	UC 317	T 317	19
UCT 318-56 318	3 1/2	90	113/16	46	30	59/16	43/16	21/4	67/8	117/64	821/32	101/32	129/32	411/32	219/32	79/16	529/32	3.7795	1.5748	UC 318-56 318	T 318	21.6
UCT 319	95	113/16	46	31	165	43/16	21/4	73/32	13/8	929/64	105/8	121/16	411/32	227/32	73/4	63/8	61/16	4.0551	1.6142	UC 319	T 319	24.9
UCT 320 320-64	4	100	17/8	48	32	67/8	115	417/32	221/64	77/8	1015/64	290	1519/32	423/32	215/16	87/32	627/32	4.2519	1.6535	UC 320 320-64	T 320	30.7
UCT 321	105	17/8	48	32	175	67/8	115	417/32	221/64	77/8	1015/64	290	1519/32	423/32	215/16	87/32	627/32	4.2519	1.6535	UC 321	T 321	36.7
UCT 322	110	21/16	52	38	95	125	65	215	38	285	320	385	51/8	33/32	97/4	719/32	619/16	4.6063	1.8110	UC 322	T 322	39.7
UCT 324	120	27/8	60	42	210	140	70	230	45	320	355	432	140	90	101/2	733/32	71/4	4.9806	2.0079	UC 324	T 324	54.4
UCT 326	130	29/16	65	45	220	150	75	240	50	350	385	465	150	100	117/32	87/16	731/32	5.3150	2.1260	UC 326	T 326	69.3
UCT 328	140	29/4	70	50	230	160	80	255	50	380	415	515	155	100	1213/32	83/4	811/32	5.7086	2.3228	UC 328	T 328	85.1

TAKE-UP BALL BEARING UNITS

UKT3

(WITH ADAPTER LOCKING, HEAVY DUTY)



SL TYPE SEAL,

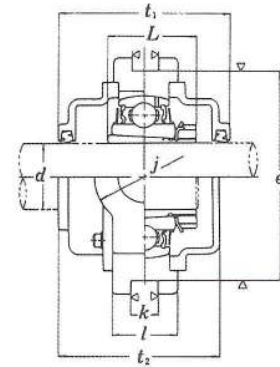
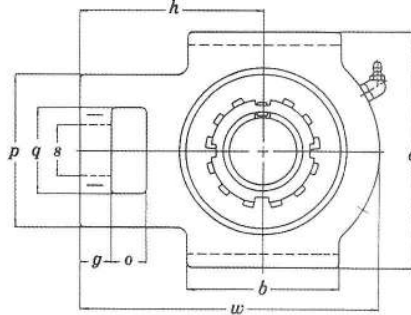
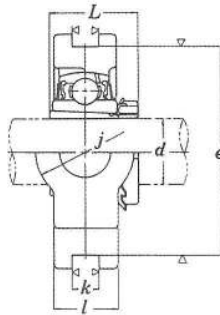


L3 TYPE SEAL

DOUBLE PROTECTION METHOD (CAST-IRON COVER)

UKT3-GC... WITH COVER, BOTH SIDES OPEN

UKT3-CCD... WITH COVER, ONE SIDE CLOSED



Unit No.	Shaft Dia		Dimensions (in./mm)															Bearing No.	Housing No.	Adapter Used	Weight (kgf)		
	d (in.)	d (mm)	o	g	p	q	s	b	K	e	a	w	j	l	h	t ₁	t ₂					L	
UKT 305	3/4	20	5/8	15/32	27/16	113/32	11/32	29/16	15/32	35/32	31/2	413/16	113/32	11/32	3	76	2.9921	2.7953	1.3780	UK 305	T 305	HE2305 H 2305	1.4
UKT 306	7/8	25	23/32	9/16	23/4	15/8	17/64	229/32	5/8	335/64	315/16	513/32	15/8	13/32	311/32	3.2283	3.0315	1.4961	UK 306	T 306	HS2306 H 2306 HE2306	1.8	
UKT 307	1 1/8	35	25/32	19/32	215/16	125/32	13/16	35/32	5/8	315/16	43/8	529/32	125/32	1 1/4	311/16	3.4646	3.2677	1.6929	UK 307	T 307	HS2307 H 2307 HA2307	2.3	
UKT 308	1 1/4	35	7/8	21/32	39/32	131/32	117/64	3 1/2	45/64	413/32	47/8	63/8	131/32	111/32	315/16	3.7795	3.5827	1.8110	UK 308	T 308	HE2308 HS2308 H 2308	3.0	
UKT 309	1 1/2	40	15/16	23/32	317/32	25/32	111/32	313/16	45/64	439/64	57/16	7	25/32	1 1/2	411/32	4.0157	3.7795	1.9685	UK 309	T 309	HE2309 H 2309 HS2309	4.1	
UKT 310	1 11/16	45	1 1/16	25/32	327/32	213/32	129/64	43/16	25/32	539/64	515/16	717/32	213/32	19/16	419/32	4.3307	4.0945	2.1654	UK 310	T 310	HA2310 HE2310 H 2310	4.9	
UKT 311	1 7/8	50	15/32	13/16	4 1/8	219/32	117/32	417/32	55/64	529/32	613/32	85/32	219/32	123/32	5	4.4882	4.2520	2.3228	UK 311	T 311	HS2311 H 2311 HE2311	6.1	
UKT 312	2 1/8	55	17/32	29/32	47/16	225/32	139/64	427/32	55/64	619/64	7	821/32	225/32	113/16	515/16	4.8819	4.6063	2.4409	UK 312	T 312	HS2312 H 2312	7.6	
UKT 313	2 1/4	60	1 1/4	1	49/16	3/4	111/16	59/32	11/32	611/16	715/32	93/8	39/32	131/32	53/4	4.8031	4.5669	2.5591	UK 313	T 313	HE2313 H 2313 HS2313	9.3	
UKT 315	2 1/2	65	113/32	1	53/16	311/32	113/16	529/32	11/32	79/16	8 1/2	105/16	317/32	25/32	65/16	5.2756	5	2.8740	UK 315	T 315	HE2315 H 2315	13	
UKT 316	2 3/4	70	121/32	13/32	529/32	327/32	29/32	65/16	19/16	81/32	91/16	113/32	41/32	29/8	627/32	5.4331	5.1575	3.0709	UK 316	T 316	HE2316 H 2316	16.2	
UKT 317	3	75	121/32	13/16	531/32	327/32	29/32	611/16	117/64	827/64	97/16	1129/32	41/32	217/32	77/32	5.7480	5.4724	3.2283	UK 317	T 317	H 2317 HE2317	19	
UKT 318	80	80	113/16	19/16	65/16	43/16	21/4	67/8	117/64	831/32	101/32	129/32	411/32	219/32	79/16	5.9055	5.5906	3.3858	UK 318	T 318	H 2318	21.6	
UKT 319	3 1/4	85	113/16	17/32	61/2	43/16	21/4	73/32	13/8	929/64	105/8	1211/16	411/32	227/32	73/4	6.3780	6.6030	3.5433	UK 319	T 319	HE2319 H 2319	24.9	
UKT 320	3 1/2	90	17/8	1 1/4	67/8	417/32	221/64	77/8	13/8	1015/64	1119/32	1319/32	423/32	215/16	89/32	6.8504	6.4567	3.8189	UK 320	T 320	HE2320 H 2320	30.7	
UKT 322	4	100	21/16	1 1/2	73/32	425/32	29/16	815/32	1 1/2	117/32	1219/32	153/8	51/8	35/32	91/4	7.4016	6.9291	4.1339	UK 322	T 322	H 2322 HE2322	39.7	
UKT 324	4 7/16	110	29/8	1 1/2	89/32	51/2	29/4	91/16	149/64	1219/32	1391/32	17	51/2	317/32	101/8	7.7165	7.2441	4.4094	UK 324	T 324	H 2324 HA2324	54.4	
UKT 326	4 1/2	115	29/16	1 1/2	821/32	529/32	261/64	91/16	240	1325/32	153/32	189/8	59/32	315/16	111/32	8.4252	7.9528	4.7638	UK 326	T 326	HE2326 H 2326	69.3	
UKT 328	4 13/16	125	29/4	1 3/4	91/16	65/8	35/32	101/32	131/32	1461/64	1611/32	209/32	63/32	315/16	1219/32	8.7402	8.3465	5.1575	UK 328	T 328	H 2328 HA2328	85.1	

CARTRIDGE BALL BEARING UNITS

UCC2

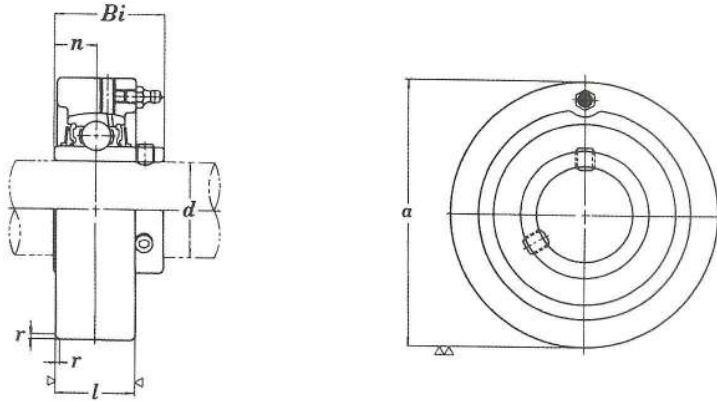
(NORMAL DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)				Bearing No.	Housing No.	Weight (kgf)
	d		o	l	Bi	n			
	(in.)	(mm)							
UCC 201 201-8 202 202-10 203 204-12 204	1/2 5/8 3/4	12 15 17 20	2.8346 72	25/32 20	1.2205 31.0	0.5000 12.7	UC 201 201-8 202 202-10 203 204-12 204	C 204	0.52 0.50 0.49 0.47
UCC 205-14 205-15 205 205-16	7/8 15/16 1	25	3.1496 80	55/64 22	1.3425 34.1	0.5630 14.3	UC 205-14 205-15 205 205-16	C 205	0.64
UCC 206-18 206 206-19	1 1/8 1 3/16	30	3.3465 85	1 1/16 27	1.5000 38.1	0.6260 15.9	UC 206-18 206 206-19	C 206	0.81
UCC 207-20 207-21 207-22 207 207-23	1 1/4 1 5/16 1 3/8 1 7/16	35	3.5433 90	1 7/64 28	1.6890 42.9	0.6890 17.5	UC 207-20 207-21 207-22 207 207-23	C 207	0.93
UCC 208-24 208-25 208	1 1/2 1 9/16	40	3.9370 100	1 3/16 30	1.9370 49.2	0.7480 19.0	UC 208-24 208-25 208	C 208	1.2
UCC 209-26 209-27 209-28 209	1 5/8 1 11/16 1 3/4	45	4.3307 110	1 7/32 31	1.9370 49.2	0.7480 19.0	UC 209-26 209-27 209-28 209	C 209	1.5
UCC 210-30 210-31 210 210-32	1 7/8 1 15/16 2	50	4.7244 120	1 9/64 33	2.0315 51.6	0.7480 19.0	UC 210-30 210-31 210 210-32	C 210	2.0
UCC 211-32 211-34 211 211-35	2 2 1/8 2 3/16	55	4.9213 125	1 3/8 35	2.1890 55.6	0.8740 22.2	UC 211-32 211-34 211 211-35	C 211	2.2
UCC 212-36 212 212-38 212-39	2 1/4 2 3/8 2 7/16	60	5.1181 130	1 1/2 38	2.5630 65.1	1.0000 25.4	UC 212-36 212 212-38 212-39	C 212	2.6
UCC 213-40 213	2 1/2	65	5.5118 140	1 37/64 40	2.5630 65.1	1.0000 25.4	UC 213-40 213	C 213	3.0

CARTRIDGE BALL BEARING UNITS

UKC2

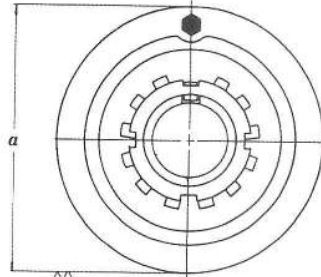
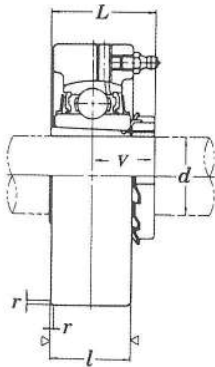
(WITH ADAPTER LOCKING, NORMAL DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)				Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	l	L	v				
	(in.)	(mm)								
UKC 205 205	3/4	20	3.1496 80	55/64 22	15/32 29	3/4 18.7	UK 205	C 205	HE2305 H 2305	0.68
UKC 206 206 206 206	7/8 15/16 1	25	3.3465 85	1 1/16 27	17/32 31	25/32 19.7	UK 206	C 206	HS2306 HA2306 H 2306 HE2306	0.85
UKC 207 207 207	1 1/8 1 3/16	30	3.5433 90	17/64 28	1 3/8 35	7/8 22.2	UK 207	C 207	HS2307 H 2307 HA2307	0.97
UKC 208 208 208	1 1/4 1 3/8	35	3.9370 100	1 3/16 30	1 13/32 36	15/16 23.7	UK 208	C 208	HE2308 HS2308 H 2308	1.3
UKC 209 209 209 209	1 7/16 1 1/2 1 5/8	40	4.3307 110	17/32 31	1 17/32 39	1 25.7	UK 209	C 209	HA2309 HE2309 H 2309 HS2309	1.6
UKC 210 210 210	1 11/16 1 3/4	45	4.7244 120	1 19/64 33	1 21/32 42	1 1/16 26.7	UK 210	C 210	HA2310 HE2310 H 2310	2.0
UKC 211 211 211 211	1 7/8 1 15/16 2	50	4.9213 125	1 3/8 35	1 25/32 45	1 3/32 27.7	UK 211	C 211	HS2311 HA2311 H 2311 HE2311	2.3
UKC 212 212	2 1/8	55	5.1181 130	1 1/2 38	1 27/32 47	1 5/32 29.0	UK 212	C 212	HS2312 H 2312	2.5
UKC 213 213 213 213	2 3/16 2 1/4 2 3/8	60	5.5118 140	1 37/64 40	1 31/32 50	1 1/4 31.5	UK 213	C 213	HA2313 HE2313 H 2313 HS2313	3.0

CARTRIDGE BALL BEARING UNITS

UCCX

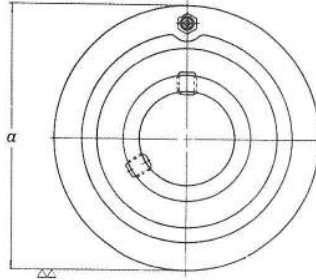
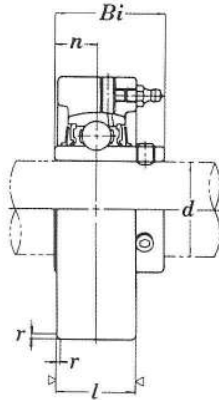
(MEDIUM DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)				Bearing No.	Housing No.	Weight (kgf)
	d		a	l	Bi	n			
	(in.)	(mm)							
UCC X05 X05-16	1	25	3.5433 90	1 ¹ / ₁₀ 27	1.5000 38.1	0.6260 15.9	UC X05 X05-16	C X05	1.0
UCC X06 X06-19 X06-20	1 ³ / ₁₆ 1 ¹ / ₄	30	3.9370 100	1 ³ / ₁₀ 30	1.6890 42.9	0.6890 17.5	UC X06 X06-19 X06-0.	C X06	1.3
UCC X07-22 X07 X07-23	1 ³ / ₈ 1 ⁷ / ₁₆	35	4.3307 110	1 ¹¹ / ₃₂ 34	1.9370 49.2	0.7480 19.0	UC X07-22 X07 X07-23	C X07	1.7
UCC X08-24 X08	1 ¹ / ₂	40	4.7244 120	1 ¹ / ₂ 38	1.9370 49.2	0.7480 19.0	UC X08-24 X08	C X08	2.1
UCC X09-27 X09-28 X09	1 ¹¹ / ₁₆ 1 ³ / ₄	45	4.7244 120	1 ¹ / ₂ 38	2.0315 51.6	0.7480 19.0	UC X09-27 X09-28 X09	C X09	2.2
UCC X10-31 X10 X10-32	1 ¹³ / ₁₆ 2	50	5.1181 130	1 ²⁷ / ₆₄ 40	2.1890 55.6	0.8740 22.2	UC X10-31 X10 X10-32	C X10	2.8
UCC X11 X11-35 X11-36	2 ³ / ₁₆ 2 ¹ / ₄	55	5.9055 150	1 ²¹ / ₃₂ 42	2.5630 65.1	1.0000 25.4	UC X11 X11-35 X11-36	C X11	4.0
UCC X12 X12-38 X12-39	2 ³ / ₈ 2 ⁷ / ₁₆	60	6.2992 160	1 ⁴⁷ / ₆₄ 44	2.5630 65.1	1.0000 25.4	UC X12 X12-38 X12-39	C X12	4.6

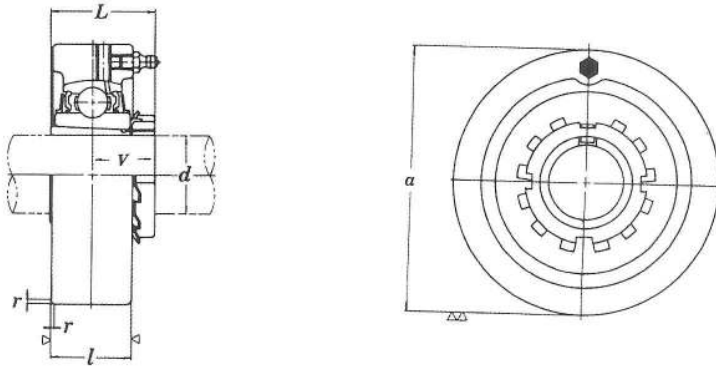
CARTRIDGE BALL BEARING UNITS

UKCX

(WITH ADAPTER LOCKING, MEDIUM DUTY)



SL TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in.) (mm)				Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	l	L	v				
	(in.)	(mm)								
UKC X05 X05	3/4	20	3.5433 90	1 1/16 27	1 3/8 35	25/32 19.7	UK X05	C X05	HE 2305 H 2305	0.99
UKC X06 X06 X06 X06	7/8 15/16 1	25	3.9370 100	1 3/16 30	1 1/2 38	27/32 21.2	UK X06	C X06	HS 2306 HA 2306 H 2306 HE 2306	1.3
UKC X07 X07 X07	1 1/8 1 3/16	30	4.3307 110	1 11/32 34	1 11/16 43	29/32 22.7	UK X07	C X07	HS 2307 H 2307 HA 2307	1.7
UKC X08 X08 X08	1 1/4 1 3/8	35	4.7244 120	1 1/2 38	1 13/16 46	31/32 24.7	UK X08	C X08	HE 2308 HS 2308 H 2308	2.3
UKC X09 X09 X09 X09	1 7/16 1 1/2 1 5/8	40	4.7244 120	1 1/2 38	1 31/32 50	1 25.7	UK X09	C X09	HA 2309 HE 2309 H 2309 HS 2309	2.3
UKC X10 X10 X10	1 11/16 1 3/4	45	5.1181 130	1 37/64 40	2 3/32 55	1 3/32 27.7	UK X10	C X10	HA 2310 HE 2310 H 2310	2.6
UKC X11 X11 X11 X11	1 7/8 1 15/16 2	50	5.9055 150	1 21/32 42	2 5/16 59	1 1/8 28.7	UK X11	C X11	HS 2311 HA 2311 H 2311 HE 2311	3.6
UKC X12 X12	2 1/8	55	6.2992 160	1 47/64 44	2 7/16 62	1 3/16 30.5	UK X12	C X12	HS 2312 H 2312	4.4

CARTRIDGE BALL BEARING UNITS

UCC3

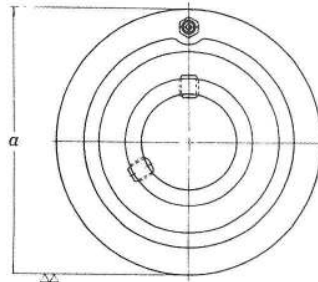
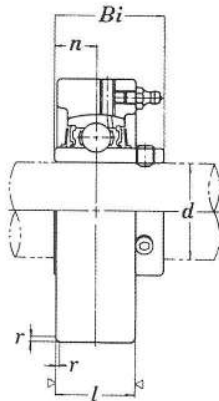
(HEAVY DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in.) (mm)				Bearing No.	Housing No.	Weight (kgf)
	d (in.)	d (mm)	a	l	Bi	n			
UCC 305 305-16	1	25	3.5433 90	1 ¹ / ₃₂ 26	1.4961 38	0.5906 15	UC 305 305-16	C 305	1.5
UCC 306-18 306	1 ¹ / ₈	30	3.9370 100	1 ⁷ / ₆₄ 28	1.6929 43	0.6693 17	UC 306-18 306	C 306	1.7
UCC 307-20 307-22 307 307-23	1 ¹ / ₄ 1 ³ / ₈ 1 ⁷ / ₁₆	35	4.3307 110	1 ¹⁷ / ₆₄ 32	1.8897 48	0.7480 19	UC 307-20 307-22 307 307-23	C 307	2.2
UCC 308-24 308	1 ¹ / ₂	40	4.7244 120	1 ¹¹ / ₃₂ 34	2.0472 52	0.7480 19	UC 308-24 308	C 308	2.2
UCC 309-28 309	1 ³ / ₄	45	5.1181 130	1 ¹ / ₂ 38	2.2441 57	0.8661 22	UC 309-28 309	C 309	2.8
UCC 310-31 310	1 ¹³ / ₁₆	50	5.5118 140	1 ³⁷ / ₆₄ 40	2.4015 61	0.8661 22	UC 310-31 310	C 310	3.2
UCC 311-32 311	2	55	5.9055 150	1 ⁴⁷ / ₆₄ 44	2.5984 66	0.9842 25	UC 311-32 311	C 311	3.9
UCC 312		60	6.2992 160	1 ¹³ / ₁₆ 46	2.7953 71	1.0236 26	UC 312	C 312	4.8
UCC 313-40 313	2 ¹ / ₂	65	6.6929 170	1 ³¹ / ₃₂ 50	2.9528 75	1.1811 30	UC 313-40 313	C 313	5.7
UCC 314-44 314	2 ³ / ₄	70	7.0866 180	2 ³ / ₆₄ 52	3.0709 78	1.2992 33	UC 314-44 314	C 314	6.7
UCC 315 315-48	3	75	7.4803 190	2 ¹¹ / ₆₄ 55	3.2283 82	1.2598 32	UC 315 315-48	C 315	7.8
UCC 316		80	7.8740 200	2 ²³ / ₆₄ 60	3.3858 86	1.3386 34	UC 316	C 316	9.2
UCC 317		85	8.4646 215	2 ³³ / ₆₄ 64	3.7795 96	1.5748 40	UC 317	C 317	11.7
UCC 318-56 318	3 ¹ / ₂	90	8.8583 225	2 ¹⁹ / ₃₂ 66	3.7795 96	1.5748 40	UC 318-56 318	C 318	13.1
UCC 319		95	9.4488 240	2 ⁵³ / ₆₄ 72	4.0551 103	1.6142 41	UC 319	C 319	15.8
UCC 320 320-64	4	100	10.2362 260	2 ⁶¹ / ₆₄ 75	4.2519 108	1.6535 42	UC 320 320-64	C 320	19.6
UCC 321		105	10.2362 260	2 ⁶¹ / ₆₄ 75	4.4094 112	1.7323 44	UC 321	C 321	27.0
UCC 322		110	11.8110 300	3 ⁵ / ₃₂ 80	4.6063 117	1.8110 46	UC 322	C 322	29.2
UCC 324		120	12.5984 320	3 ³³ / ₆₄ 90	4.9606 126	2.0079 51	UC 324	C 324	35.9
UCC 326		130	13.3858 340	3 ¹³ / ₁₆ 100	5.3150 135	2.1260 54	UC 326	C 326	43.0
UCC 328		140	14.1732 360	3 ¹³ / ₁₆ 100	5.7086 145	2.3228 59	UC 328	C 328	52.9

CARTRIDGE BALL BEARING UNITS

UKC3

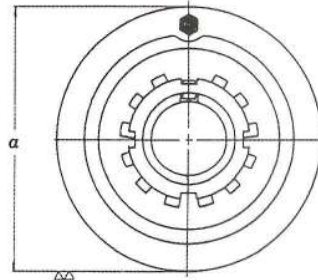
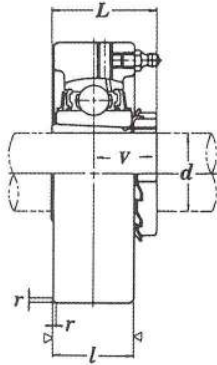
(WITH ADAPTER LOCKING, HEAVY DUTY)



SL TYPE SEAL,



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)				Bearing No.	Housing No.	Adapter Used	Weight (kgf)
	d		a	l	L	V				
	(in.)	(mm)								
UKC 305 305	3/4	20	3.5433 90	1 1/32 26	1.3780 35	27/32 21.7	UK 305	C 305	HE2305 H 2305	1.5
UKC 306 306 306	7/8 1	25	3.9370 100	1 7/64 28	1.4961 38	29/32 23.2	UK 306	C 306	HS2306 H 2306 HE2306	1.7
UKC 307 307 307	1 1/4 1 3/8 1 7/16	30	4.3307 110	1 17/64 32	1.6929 43	1 25.7	UK 307	C 307	HS2307 H 2307 HA2307	2.2
UKC 308 308 308	1 1/4 1 3/8	35	4.7244 120	1 11/32 34	1.8110 46	1 3/32 27.7	UK 308	C 308	HE2308 HS2308 H 2308	2.2
UKC 309 309 309	1 1/2 1 5/8	40	5.1181 130	1 1/2 38	1.9685 50	1 3/16 30.2	UK 309	C 309	HE2309 H 2309 HS2309	2.8
UKC 310 310 310	1 11/16 1 3/4	45	5.5118 140	1 37/64 40	2.1654 55	1 19/32 32.2	UK 310	C 310	HA2310 HE2310 H 2310	3.2
UKC 311 311 311	1 7/8 2	50	5.9055 150	1 47/64 44	2.3228 59	1 5/16 33.7	UK 311	C 311	HS2311 H 2311 HE2311	3.9
UKC 312 312	2 1/8	55	6.2992 160	1 13/16 46	2.4409 62	1 13/32 36.0	UK 312	C 312	HS2312 H 2312	4.8
UKC 313 313 313	2 1/4 2 3/8	60	6.6929 170	1 31/32 50	2.5591 65	1 1/2 38.0	UK 313	C 313	HE2313 H 2313 HS2313	5.7
UKC 315 315	2 1/2	65	7.4803 190	2 11/64 55	2.8740 73	1 21/32 42.0	UK 315	C 315	HE2315 H 2315	7.8
UKC 316 316	2 3/4	70	7.8740 200	2 23/64 60	3.0709 78	1 3/4 44.3	UK 316	C 316	HE2316 H 2316	9.2
UKC 317 317	3	75	8.4646 215	2 33/64 64	3.2283 82	1 7/8 47.8	UK 317	C 317	H 2317 HE2317	11.7
UKC 318		80	8.8583 225	2 19/32 66	3.3858 86	1 7/8 47.8	UK 318	C 318	H 2318	13.1
UKC 319 319	3 1/4	85	9.4488 240	2 53/64 72	3.5433 90	2 1/32 51.8	UK 319	C 319	HE2319 H 2319	15.8
UKC 320 320	3 1/2	90	10.2362 260	2 51/64 75	3.8189 97	2 1/8 53.8	UK 320	C 320	HE2320 H 2320	19.6
UKC 322 322	4	100	11.8110 300	3 5/32 80	4.1339 105	2 11/32 59.8	UK 322	C 322	H 2322 HE2322	29.2
UKC 324 324	4 7/16	110	12.5984 320	3 35/64 90	4.4094 112	2 19/32 65.5	UK 324	C 324	H 2324 HA2324	35.9
UKC 326 326	4 1/2	115	13.3858 340	3 15/16 100	4.7638 121	2 5/8 66.5	UK 326	C 326	HE2326 H 2326	43.0
UKC 328 328	4 15/16	125	14.1732 360	3 15/16 100	5.1575 131	2 27/32 72.5	UK 328	C 328	H 2328 HA2328	52.9

HIGH CENTER OF AXIS PILLOW BLOCK BALL BEARING UNITS

UCPH2

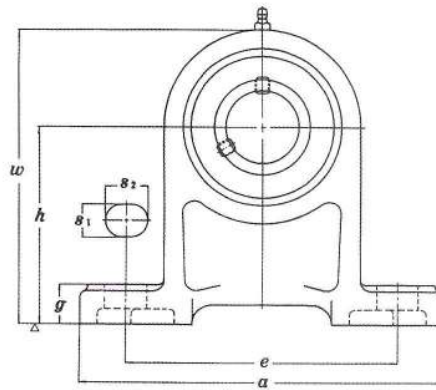
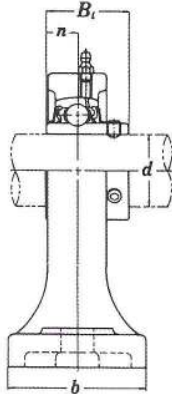
(NORMAL DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)										Bolt Used		Bearing No.	Housing No.	Weight (kgf)		
	d		h	a	e	b	s ₂	s ₁	g	w	Bi	n	(mm)	(in.)					
	(in.)	(mm)																	
UCPH 201 201-8 202 202-10 203 204-12 204	1/2	12													10	3/8	UC 201 201-8 202 202-10 203 204-12 204	PH 204	0.96 0.94 0.93 0.91
	5/8	15	2 3/4	5	3 3/4	1 9/16	3/4	1/2	1 9/32	3 31/32	1.2205	0.5000							
	3/4	17	70	127	95	40	19	13	15	101	31.0	12.7							
		20																	
UCPH 205-14 205-15 205 205-16	7/8														10	3/8	UC 205-14 205-15 205 205-16	PH 205	1.2
	15/16	25	3 5/32	5 1/2	4 1/8	1 31/32	3/4	1/2	5/8	4 1/2	1.3425	0.5630							
	1		80	140	105	50	19	13	16	114	34.1	14.3							
UCPH 206-18 206 206-19	1 1/8														14	1/2	UC 206-18 206 206-19	PH 206	1.6
	1 3/16	30	3 35/64	6 1/2	4 3/4	1 31/32	13/16	21/32	23/32	5 1/8	1.5000	0.6260							
UCPH 207-20 207-21 207-22 207 207-23	1 1/4														14	1/2	UC 207-20 207-21 207-22 207 207-23	PH 207	2.0
	1 5/16		3 47/64	6 9/16	5	2 3/8	13/16	21/32	23/32	5 1/2	1.6890	0.6890							
	1 3/8	35	95	167	127	60	21	17	18	140	42.9	17.5							
	1 7/16																		
UCPH 208-24 208-25 208	1 1/2														14	1/2	UC 208-24 208-25 208	PH 208	2.7
	1 9/16	40	3 15/16	7 1/4	5 13/32	2 3/4	13/16	21/32	25/32	5 29/32	1.9370	0.7480							
			100	184	137	70	21	17	20	150	49.2	19.0							
UCPH 209-26 209-27 209-28 209	1 5/8														14	1/2	UC 209-26 209-27 209-28 209	PH 209	3.0
	1 11/16		4 9/64	7 15/32	5 3/4	2 3/4	13/16	21/32	25/32	6 7/32	1.9370	0.7480							
	1 3/4	45	105	190	146	70	21	17	20	158	49.2	19.0							
UCPH 210-30 210-31 210 210-32	1 7/8														16	5/8	UC 210-30 210-31 210 210-32	PH 210	3.5
	1 15/16		4 21/64	8 1/8	6 1/4	2 3/4	7/8	25/32	7/8	6 1/2	2.0315	0.7480							
		50	110	206	159	70	22	20	22	165	51.6	19.0							
	2																		

NARROW BASE PILLOW BLOCK BALL BEARING UNITS

UCPA2

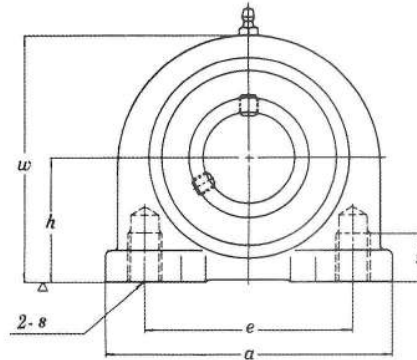
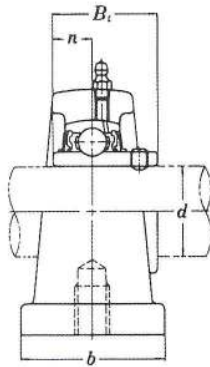
(NORMAL DUTY)



SL TYPE SEAL,



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)									Bolt Used (mm)	Bearing No.	Housing No.	Weight (kgf)						
	d		h	a	e	b	s(mm)	w	g	Bi	n										
	(in.)	(mm)																			
UCPA 201-8	1/2	12											UC 201-8 202-10 203-204-12 204	PA 204	0.64						
202	5/8	15	13/16	3	23/64	19/16	10	27/16	1/2	1,2205	0.5000	10				0.62					
203	3/4	17	30.2	76	52	40	10	62	13	31.0	12.7						0.61				
204-12																		0.59			
204		20																			
UCPA 205-14	7/8		17/16	35/16	213/64	125/32	10	227/32	1/2	1,3425	0.5630		10	UC 205-14 205-15 205-205-16	PA 205				0.83		
205-15	15/16	25	36.5	84	56	45	10	72	13	34.1	14.3	0.83									
205	1															1.2					
206-18	11/8	30	111/16	311/16	219/32	121/32	14	35/16	23/32	1,5000	0.6260						14	UC 206-18 206-206-19		PA 206	1.2
206	13/16		42.9	94	66	50	14	84	18	38.1	15.9										
207-20	11/8		17/8	411/32	35/32	25/32	14	33/4	25/32	1,6890	0.6890		14	UC 207-20 207-21 207-22 207-207-23	PA 207				1.7		
207-21	15/16	35	47.6	110	80	55	14	95	20	42.9	17.5	2.0									
207-22	13/8															2.0					
207																	2.2				
207-23	17/16																				
UCPA 208-24	11/2		115/16	49/16	35/16	29/32	14	315/16	25/32	1,9370	0,7480		14	UC 208-24 208-25 208	PA 208			2.0			
208-25	19/16	40	49.2	116	84	58	14	100	20	49.2	19.0	2.2									
208																2.2					
UCPA 209-26	15/8		29/64	423/32	335/64	23/8	14	41/4	1	1,9370	0,7480						14		UC 209-26 209-27 209-28 209	PA 209	2.2
209-27	111/16	45	54.2	120	90	60	14	108	25	49.2	19.0										
209-28	13/4												2.8								
209												2.8									
UCPA 210-30	17/8		21/4	51/8	345/64	217/32	16	49/16	1	2,0315	0,7480			16	UC 210-30 210-31 210-210-32	PA 210		2.8			
210-31	115/16	50	57.2	130	94	64	16	116	25	51.6	19.0						2.8				
210																			2.8		
210-32	2												2.8								

HIGH TEMPERATURE USE PILLOW BLOCK BALL BEARING UNITS

UCPE2

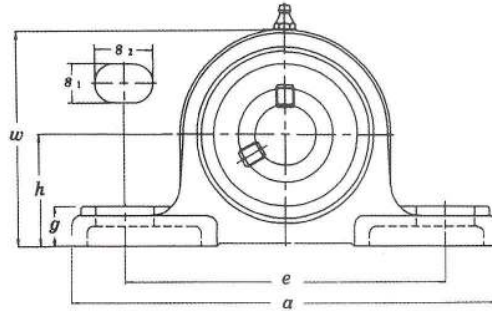
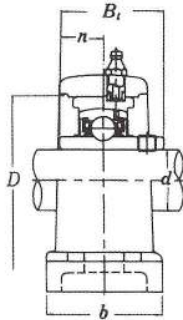
(NORMAL DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)										Bolt Used		Bearing No.	Housing No.	Weight (kgf)	E. Ring	
	d		h	a	e	b	s ₂	s ₁	g	w	B _i	n	(mm)	(in.)				O.D.	Width
	(in.)	(mm)																	
UCPE 201-8	1/2	12																	
202	5/8	15	17 ¹ / ₁₆	5 ¹ / ₂	4 ¹ / ₈	1 ¹ / ₂	3/4	1/2	1/2	2 ²⁵ / ₃₂	1.2205	0.5000	10	3/8	UC 201-8	PE 204	0.92	2 ¹¹ / ₆₄	5/8
202-10			36.5	140	105	38	19	13	13	71	31.0	12.7			202		0.90	55	16
203	3/4	17													203		0.89		
204-12															204-12		0.87		
204		20													204				
UCPE 205-14	7/8														UC 205-14	PE 205			
205-15	15/16	25	13/4	61/4	4 ¹¹ / ₁₆	2	1	2 ¹ / ₃₂	5/8	33/8	1.3425	0.5630	14	1/2	205-15		1.5	2 ⁷ / ₁₆	45/64
205			44.4	159	119	51	25	17	16	86	34.1	14.3			205			62	18
205-16	1														205-16				
UCPE 206-18	1 ¹ / ₈														UC 206-18	PE 206			
206		30	1 ⁷ / ₈	6 ⁷ / ₈	5	2 ¹ / ₄	1	2 ¹ / ₃₂	2 ¹ / ₃₂	3 ¹¹ / ₁₆	1.5000	0.6260	14	1/2	206		2.0	2 ⁵³ / ₆₄	25/32
206-19	1 ³ / ₁₆		47.6	175	127	57	25	17	17	94	38.1	15.9			206-19			72	20
UCPE 207-20	1 ¹ / ₄														UC 207-20	PE 207			
207-21	1 ⁵ / ₁₆														207-21				
207-22	1 ³ / ₈	35	2 ¹ / ₈	8	5 ²¹ / ₃₂	2 ¹ / ₄	1 ³ / ₁₆	2 ¹ / ₃₂	3/4	4 ¹ / ₈	1.6890	0.6890	14	1/2	207-22		2.7	3 ⁵ / ₃₂	29/32
207			54.0	203	144	57	30	17	19	105	42.9	17.5			207			80	23
207-23	1 ⁷ / ₁₆														207-23				
UCPE 208-24	1 ¹ / ₂														UC 208-24	PE 208			
208-25	1 ⁹ / ₁₆	40	2 ⁵ / ₁₆	8 ³ / ₄	6 ⁵ / ₃₂	2 ⁵ / ₈	1 ¹ / ₄	2 ⁵ / ₃₂	1 ³ / ₁₆	4 ¹ / ₂	1.9370	0.7480	16	5/8	208-25		3.3	3 ³⁵ / ₆₄	15/16
208			58.7	222	156	67	32	20	21	114	49.2	19.0			208			90	24
UCPE 209-26	1 ⁵ / ₈														UC 209-26	PE 209			
209-27	1 ¹¹ / ₁₆														209-27				
209-28	1 ³ / ₄	45	2 ⁵ / ₁₆	8 ³ / ₄	6 ⁵ / ₃₂	2 ⁵ / ₈	1 ⁵ / ₁₆	2 ⁵ / ₃₂	1 ³ / ₁₆	4 ⁹ / ₁₆	1.9370	0.7480	16	5/8	209-28		3.4	3 ⁴⁷ / ₆₄	63/64
209			58.7	222	156	67	33	20	21	116	49.2	19.0			209			95	25
UCPE 210-30	1 ⁷ / ₈														UC 210-30	PE 210			
210-31	1 ¹⁵ / ₁₆														210-31				
210		50	2 ¹ / ₂	9 ¹ / ₂	6 ²³ / ₃₂	2 ⁷ / ₈	1 ¹³ / ₃₂	2 ⁵ / ₃₂	7/8	4 ³¹ / ₃₂	2.0315	0.7480	16	5/8	210		4.3	3 ¹⁵ / ₁₆	1 ¹ / ₃₂
210-32	2		63.5	241	171	73	36	20	22	126	51.6	19.0			210-32			100	26
UCPE 211-32	2														UC 211-32	PE 211			
211-34	2 ¹ / ₈														211-34				
211		55	2 ³ / ₄	10 ¹ / ₄	7 ¹ / ₄	3 ¹ / ₈	1 ¹³ / ₃₂	1	1 ³ / ₃₂	5 ¹⁵ / ₃₂	2.1890	0.8740	20	3/4	211		6.2	4 ²¹ / ₆₄	9/64
211-35	2 ³ / ₁₆		69.8	260	184	79	36	25	28	139	55.6	22.2			211-35			110	29
UCPE 212-36	2 ¹ / ₄														UC 212-36	PE 212			
212		60	3	11 ¹ / ₄	8	3 ⁹ / ₃₂	1 ⁹ / ₁₆	1	1 ³ / ₃₂	5 ³¹ / ₃₂	2.5630	1.0000	20	3/4	212		7.6	4 ²³ / ₃₂	1 ³ / ₁₆
212-38	2 ³ / ₈		76.2	286	203	83	40	25	28	152	65.1	25.4			212-38			120	30
212-39	2 ⁷ / ₁₆														212-39				

ADJUSTABLE ANGLE FLANGE BALL BEARING UNITS

UCFA2

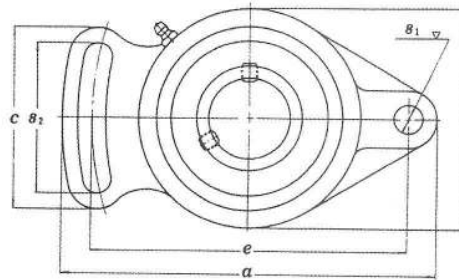
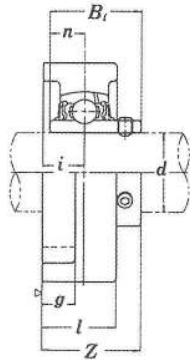
(NORMAL DUTY)



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)											Bolt Used		Bearing No.	Housing No.	Weight (kgf)		
	d		a	e	i	g	l	s ₁	b	Z	s ₂	Bi	n	(mm)	(in.)					
	(in.)	(mm)																		
UCFA 201-8	1/2	12																UC 201-8		0.47
202		15	3 ²¹ / ₃₂	3 ⁵ / ₆₄	3 ⁵ / ₆₄	7 ¹ / ₁₆	1 ⁵ / ₁₆	2 ⁵ / ₆₄	2 ⁵ / ₁₆	1 ¹ / ₄	1 ⁹ / ₁₆	1.2205	0.5000	8	5 ¹ / ₁₆			FA 204		0.45
202-10	5/8	17	98	78	13.8	11	24	10	59	32.1	40	31.0	12.7							0.44
203		20																		0.42
204-12	3/4																			
204																				
UCFA 205-14	7/8		4 ⁷ / ₈	3 ⁵ / ₆₄	5 ⁵ / ₈	1 ¹ / ₂	1 ¹ / ₁₆	7 ¹ / ₁₆	2 ³ / ₄	1 ¹ / ₃	1 ¹ / ₁₆	1.3425	0.5630	10	3 ³ / ₈			UC 205-14		0.68
205-15	15/16	25	124	98	16.0	13	27	11	70	35.7	49	34.1	14.3					FA 205		
205																				
205-16	1																			
UCFA 206-18	1 ¹ / ₆		5 ⁹ / ₁₆	4 ³ / ₆₄	4 ⁵ / ₆₄	1 ¹ / ₂	1 ³ / ₁₆	7 ¹ / ₁₆	3 ⁹ / ₃₂	1 ⁹ / ₁₅	2 ³ / ₁₆	1.5000	0.6260	10	3 ³ / ₈			UC 206-18		1.0
206		30	141	117	17.8	13	30	11	83	40.0	56	38.1	15.9					FA 206		
206-19	1 ¹ / ₈																			
UCFA 207-20	1 ¹ / ₄		6 ³ / ₃₂	5 ¹ / ₈	4 ⁷ / ₆₄	9 ¹ / ₁₆	1 ¹ / ₃₂	3 ³ / ₆₄	3 ²⁵ / ₃₂	1 ²³ / ₃₂	2 ¹⁵ / ₃₂	1.6890	0.6890	12	7 ¹ / ₁₆			UC 207-20		1.5
207-21	1 ⁵ / ₁₆		155	130	18.6	14	34	13	96	44.0	63	42.9	17.5					FA 207		
207-22	1 ³ / ₈	35																		
207																				
207-23	1 ⁷ / ₁₆																			
UCFA 208-24	1 ¹ / ₂		6 ²³ / ₃₂	5 ⁴³ / ₆₄	1 ³ / ₁₆	9 ¹ / ₁₆	1 ¹ / ₂	3 ² / ₆₄	4 ¹ / ₈	2	2 ³ / ₄	1.9370	0.7480	12	7 ¹ / ₁₆			UC 208-24		1.9
208-25	1 ⁹ / ₁₆	40	171	114	20.8	14	38	13	105	51.0	70	49.2	19.0					FA 208		
208																				
UCFA 209-26	1 ⁵ / ₈		7 ¹ / ₁₆	5 ⁵³ / ₆₄	5 ⁵ / ₆₄	9 ¹ / ₁₆	1 ⁹ / ₁₆	1 ⁹ / ₃₂	4 ³ / ₈	2 ¹ / ₁₆	2 ¹³ / ₁₆	1.9370	0.7480	14	1 ¹ / ₂			UC 209-26		1.7
209-27	1 ¹¹ / ₁₆		179	148	21.8	14	40	15	111	52.0	72	49.2	19.0					FA 209		
209-28	1 ³ / ₄	45																		
209																				
UCFA 210-30	1 ⁷ / ₈		7 ⁷ / ₁₆	6 ³ / ₁₆	5 ⁷ / ₆₄	9 ¹ / ₁₆	1 ⁹ / ₁₆	1 ⁹ / ₃₂	4 ⁹ / ₁₆	2 ⁵ / ₃₂	2 ¹⁵ / ₁₆	2.0315	0.7480	14	1 ¹ / ₂			UC 210-30		2.0
210-31	1 ¹⁵ / ₁₆		189	157	22.5	14	40	15	116	55.1	75	51.6	19.0					FA 210		
210		50																		
210-32	2																			
UCFA 211-32	2		8 ¹ / ₂	7 ¹ / ₄	1 ¹ / ₆₄	2 ⁵ / ₃₂	1 ²³ / ₃₂	5 ⁵ / ₈	5 ¹ / ₄	2 ⁵ / ₁₆	3 ³ / ₈	2.1890	0.8740	15	9 ¹ / ₁₆			UC 211-32		3.6
211-34	2 ¹ / ₈	55	216	184	25.7	20	44	16	133	59.1	86	55.6	22.2					FA 211		
211																				
211-35	2 ³ / ₁₆																			

ONE SIDE BRACKET FLANGE BALL BEARING UNITS

UCFB2

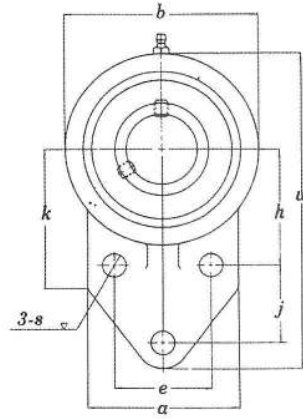
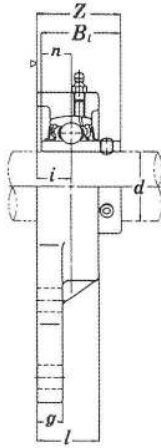
NORMAL DUTY



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)													Bolt Used		Bearing No.	Housing No.	Weight (kgf)		
	d (in.)	d (mm)	w	b	k	a	l	s	g	h	j	e	i	Z	Bi	n	(mm)				(in)	
UCFB 201 201-8 202 202-10 203 204-12 204	1/2	12																	UC 201-8 202 202-10 203 204-12 204	FB 204	0.64 0.62 0.61 0.59	
		15	4 ^{11/32}	2 ^{7/16}	2 ^{1/16}	2 ^{1/16}	1 ^{5/16}	3/8	1/2	1 ^{21/32}	1 ^{1/16}	1 ^{17/64}	1 ^{7/32}	1 ^{1/4}	1.2205	0.5000	8	5/16				
	5/8	17	110	62	52	52	24	9.5	13	42	27	32	13.5	31.8	31.0	12.7						
	3/4	20																				
UCFB 205-14 205-15 205 205-16	7/8																		UC 205-14 205-15 205 205-16	FB 205	0.68	
	15/16	25	4 ^{9/16}	2 ^{11/16}	2 ^{1/16}	2 ^{7/32}	1 ^{1/32}	3/8	1/2	1 ^{49/64}	1 ^{1/16}	1 ^{11/32}	1 ^{9/32}	1 ^{3/8}	1.3425	0.5630	8	5/16				
	1		116	68	52	56	26	9.5	13	45	27	34	15	34.7	34.1	14.3						
UCFB 206-18 206 206-19	1 ^{1/8}																		UC 206-18 206 206-19	FB 206	0.92	
	1 ^{3/16}	30	5 ^{1/8}	3 ^{1/16}	2 ^{5/32}	2 ^{9/16}	1 ^{5/32}	3/8	1/2	1 ^{31/32}	1 ^{9/64}	1 ^{37/64}	4 ^{3/64}	1 ^{17/32}	1.5000	0.6260	8	5/16				
			130	78	55	65	29	9.5	13	50	29	40	17	39.2	38.1	15.9						
UCFB 207-20 207-21 207-22 207 207-23	1 ^{1/4}																		UC 207-20 207-21 207-22 207 207-23	FB 207	1.3	
	1 ^{5/16}																					
	1 ^{3/8}	35	5 ^{21/32}	3 ^{17/32}	2 ^{7/16}	2 ^{3/4}	1 ^{5/16}	3/8	1/2	1 ^{19/32}	1 ^{17/64}	1 ^{11/16}	3/4	1 ^{3/4}	1.6890	1.6890	17.5	8				5/16
	1 ^{7/16}		144	90	62	70	33	9.5	15	55	32	46	19	44.4	42.9	17.5						
UCFB 208-24 208-25 208	1 ^{1/2}																		UC 208-24 208-25 208	FB 208	1.8	
	1 ^{9/16}	40	6 ^{15/32}	3 ^{15/16}	2 ^{27/32}	3 ^{1/16}	1 ^{11/32}	7/16	5/8	2 ^{23/64}	1 ^{39/64}	1 ^{31/32}	2 ^{5/32}	1 ^{31/32}	1.9370	0.7480	10	3/8				
UCFB 209-26 209-27 209-28 209	1 ^{5/8}																		UC 209-26 209-27 209-28 209	FB 209	2.0	
	1 ^{11/16}																					
	1 ^{3/4}	45	6 ^{27/32}	4 ^{3/16}	3	3 ^{5/32}	1 ^{11/32}	7/16	2 ^{3/32}	2 ^{9/16}	1 ^{11/16}	2 ^{1/8}	2 ^{5/32}	1 ^{31/32}	1.9370	0.7480	10	3/8				
UCFB 210-30 210-31 210 210-32	1 ^{7/8}																		UC 210-30 210-31 210 210-32	FB 210	2.3	
	1 ^{15/16}																					
	2	50	7 ^{1/4}	4 ^{13/32}	3 ^{7/32}	3 ^{3/8}	1 ^{3/8}	7/16	2 ^{3/32}	2 ^{43/64}	1 ^{13/16}	2 ^{9/32}	2 ^{5/32}	2 ^{1/16}	2.0315	0.7480	10	3/8				
			184	112	82	86	35	11.1	18	68	46	58	20	52.6	51.6	19.0						

HANGER BALL BEARING UNIT

UCHA2

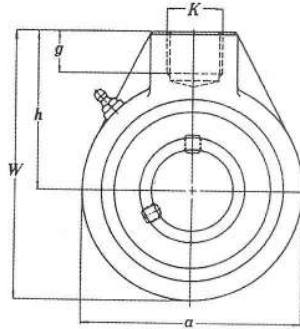
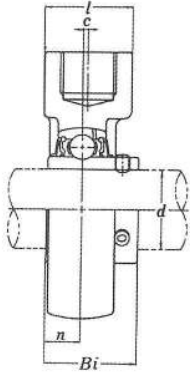
NORMAL DUTY



SL TYPE SEAL



L3 TYPE SEAL



Unit No.	Shaft Dia.		Dimensions (in./mm)									Bearing No.	Housing No.	Weight (kgf)
	d		q	w	c	h	l	g	k(in)	Bi	n			
	(in.)	(mm)												
UCHA 201-8	1/2	12										UC 201-8		0.77
202	5/8	15	2 17/32	3 25/32	0	2 33/64	1 9/16	3/4	PF 3/4	1.2205	0.5000	202	HA 204	0.75
202-10	5/8	15	64	96		64	40	19		31.0	12.7	202-10		
203	3/4	17										203		0.74
204-12	3/4	17										204-12		
204	3/4	20										204		0.72
UCHA 205-14	7/8		3 1/16	4 1/16	0	2 33/64	1 9/16	3/4	PF 3/4	1.3425	0.5630	UC 205-14		
205-15	15/16	25	78	103		64	40	19		34.1	14.3	205-15	HA 205	0.87
205												205		
205-16	1											205-16		
UCHA 206-18	1 1/8		3 1/16	4 1/16	0	2 33/64	1 9/16	3/4	PF 3/4	1.5000	0.6260	UC 206-18		
206		30	78	103		64	40	19		38.1	15.9	206	HA 206	0.83
206-19	1 3/16											206-19		
UCHA 207-20	1 1/4		3 5/8	4 9/16	0	2 3/4	1 9/16	3/4	PF 3/4	1.6890	0.6890	UC 207-20		
207-21	1 5/16		92	116		70	40	19		42.9	17.5	207-21	HA 207	1.2
207-22	1 3/8	35										207-22		
207												207		
207-23	1 7/16											207-23		
UCHA 208-24	1 1/2		3 25/32	4 3/4	5/64	2 7/8	1 9/16	3/4	PF 3/4	1.9370	0.7480	UC 208-24		
208-25	1 9/16	40	96	121	2	73	40	19		49.2	19.0	208-25	HA 208	1.3
208												208		
UCHA 209-26	1 5/8		4 1/4	5 11/32	13/64	3 15/64	1 7/8	13/16	PF 1	1.9370	0.7480	UC 209-26		
209-27	1 11/16		108	136	5	82	48	21		49.2	19.0	209-27	HA 209	1.7
209-28	1 3/4	45										209-28		
209												209		
UCHA 210-30	1 7/8		4 21/32	5 19/32	13/64	3 17/64	1 7/8	13/16	PF 1	2.0315	0.7480	UC 210-30		
210-31	1 15/16		118	142	5	83	48	21		51.6	19.0	210-31	HA 210	2.1
210		50										210		
210-32	2											210-32		
UCHA 211-32	2		4 31/32	5 29/32	9/32	3 27/64	2 3/8	1	PF1 1/4	2.1890	0.8740	UC 211-32		
211-34	2 1/8		126	150	7	87	60	25		55.6	22.2	211-34	HA 211	2.8
211		55										211		
211-35	2 3/16											211-35		
UCHA 212-36	2 1/4		5 19/32	6 13/16	23/64	4 1/64	2 3/8	1 3/32	PF1 1/4	2.5630	1.0000	UC 212-36		
212		60	142	173	9	102	60	28		65.1	25.4	212	HA 212	3.9
212-38	2 3/8											212-38		
212-39	2 7/16											212-39		
UCHA 213-40	2 1/2		6 17/32	7 7/8	3/8	4 39/64	2 3/4	1 1/4	PF1 1/2	2.5630	1.0000	UC 213-40		
213		65	166	200	9.5	117	70	32		65.1	25.4	213	HA 213	5.8
UCHA 214-44	2 3/4		6 17/32	7 7/8	3/8	4 39/64	2 3/4	1 1/4	PF1 1/2	2.9370	1.1890	UC 214-44		
214		70	166	200	9.5	117	70	32		74.6	30.2	214	HA 214	5.9
UCHA 215		75	6 17/32	7 7/8	3/8	4 39/64	2 3/4	1 1/4	PF1 1/2	3.0630	1.3110	UC 215		
215-48	3		166	200	9.5	117	70	32		77.8	33.3	215-48	HA 215	5.6

LIGHT WEIGHT PILLOW BLOCK BALL BEARING UNITS

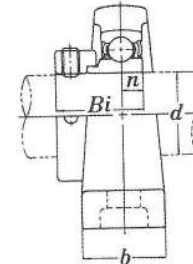
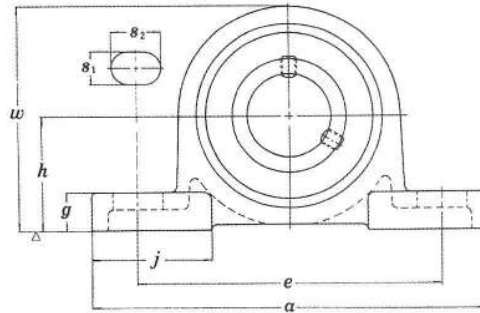
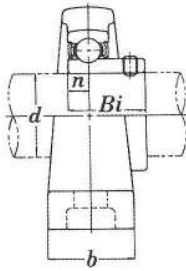
SALP2 SBLP2

(NORMAL DUTY)



L TYPE SEAL

SBLP2 (SET SCREW LOCKING),
SALP2 (WITH ECCENTRIC LOCKING COLLAR),



Unit NO.	Shaft Dia.		Dimensions (in.) (mm)										Bolt Used (in.)	S A L P				S B L P			Housing NO.
	d		h	a	e	b	s ₂	s ₁	g	w	n	B		K	Bearing No.	Weight (kgf)	B	Bearing No.	Weight (kgf)		
	(in.)	(mm)																			
SALP 201 SBLP 201-8 202 202-10 203	1/2	12	1 3/16	4 1/2	3 7/16	1	5/8	7/16	15/32	2 1/4	0.2362	3/8	1.1260	1.1260	SA 201 201-8	0.39	0.8661	SB 201 201-8	0.36	LP 203	
		15											202	202							
	3/8	30.2	114	87	25	16	11	12	57	6.0	28.6	28.6	202-10 203	22.0	202-10 203						
		17	203	203																	
SALP 204-12 SBLP 204	3/4	20	1 5/16	4 29/32	3 13/16	1 1/16	5/8	7/16	1/2	2 9/16	0.2756	3/8	1.2204	1.2598	SA 204-12 204	0.51	0.9843	SB 204-12 204	0.51	LP 204	
		33.3	125	97	27	16	11	13	65	7.0	31	32	204	25.0	204						
SALP 205-14 SBLP 205 205-16	7/8	25	1 7/16	5 1/8	3 15/16	1 5/32	5/8	7/16	1/2	2 25/32	0.2953	3/8	1.2204	1.5000	SA 205-14 205	0.61	1.0630	SB 205-14 205	0.57	LP 205	
		36.5	130	100	29	16	11	13	71	7.5	31	38.1	205-16	27.0	205-16						
	1	205-16	205-16																		
SALP 206-18 SBLP 206 206-19 SALP 206-20	1 1/8	30	1 11/16	6 5/32	4 29/32	1 5/16	13/16	9/16	9/16	3 9/32	0.3150	1/2	1.4055	1.7480	SA 206-18 206	0.72	1.1811	SB 206-18 206	0.69	LP 206	
		42.9	156	120	33	21	14	14	83	8.0	35.7	44.4	206-19 206-20	30.0	206-19						
	1 3/16 1 1/4	206-19 206-20	206-19 206-20																		
SALP 207-20 SBLP 207-22 207 207-23	1 1/4	35	1 7/8	6 1/2	5	1 3/8	13/16	9/16	5/8	3 21/32	0.3346	1/2	1.5315	2.1890	SA 207-20 207-22	1.02	1.2598	SB 207-20 207-22	0.94	LP 207	
		47.6	165	127	35	21	14	16	93	8.5	38.9	55.6	207 207-23	32.0	207 207-23						
	3/8 1 7/16	207 207-23	207 207-23																		
		207-23	207-23																		
SALP 208-24 SBLP 208	1 1/2	40	2	7 1/4	5 1/2	1 15/32	7/8	9/16	23/32	4 1/32	0.3543	1/2	1.7205	2.3740	SA 208-24 208	1.87	1.3386	SB 208-24 208	1.80	LP 208	
		50.8	184	140	37	22	14	18	102	9.0	43.7	60.3	208	34.0	208						

LIGHT WEIGHT OVAL FLANGE BALL BEARING UNITS

SALF2 SBLF2

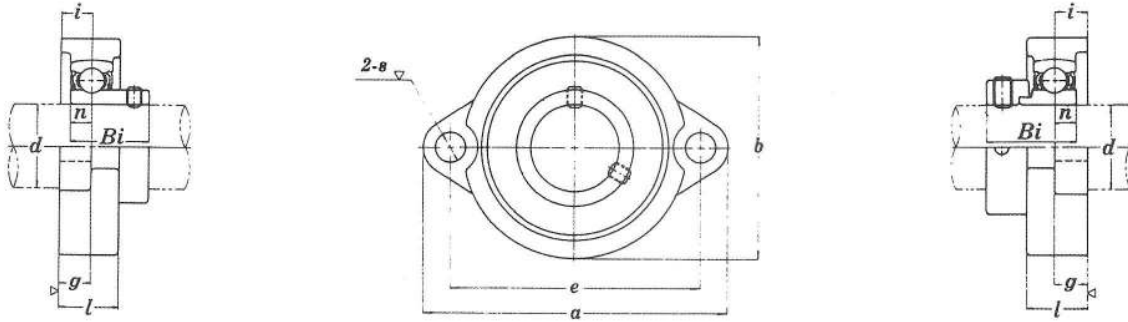
(NORMAL DUTY)



L TYPE SEAL

SBLF2(SET SCREW LOCKING)

SALF2(WITH ECCENTRIC LOCKING COLLAR)



Unit NO.	Shaft Dia.		Dimensions (in.) (mm)								Bolt Used (in.)	S A L F					S B L P				Housing NO
	d (in.)	d (mm)	a	e	i	g	l	s	b	n		Z	BI	K	Bearing No.	Weight (kgf)	Z	BI	Bearing No.	Weight (kgf)	
SALF 201		12												SA 201				SB 201			
SBLF 201-8	1/2		3 ³ / ₁₆	2 ¹ / ₂	3 ³ / ₈	3 ³ / ₈	2 ³ / ₃₂	5 ¹ / ₁₆	2 ¹ / ₁₆	0.2362	1/4	1/4	1.1260	1.1260	201-8	1	0.8661	201-8			
202		15	81	63.5	9.5	9.5	18.0	8	52	6.0		32.0	28.6	202	0.28	25.5	22	202	0.25	LF 203	
202-10	5/8													202-10				202-10			
203		17												203				203			
SALF 204-12	3/4		3 ¹⁷ / ₃₂	2 ¹³ / ₁₆	7 ¹ / ₁₆	7 ¹ / ₁₆	2 ⁵ / ₃₂	2 ⁵ / ₆₄	2 ¹³ / ₃₂	0.2756	5/16	1 ³ / ₈	1.2204	1.2598	SA 204-12	0.33	1 ⁵ / ₃₂	0.9843	SB 204-12	0.33	LF 204
SBLF 204		20	90	71.5	11	11	20.0	10	61	7.0		35	31	32	204		29.0	25	204		
SALF 205-14	7/8		3 ³ / ₄	2 ⁶³ / ₆₄	7 ¹ / ₁₆	7 ¹ / ₁₆	2 ⁵ / ₃₂	2 ⁵ / ₆₄	2 ¹⁷ / ₃₂	0.2953	5/16	1 ¹¹ / ₃₂	1.2204	1.5000	SA 205-14		1 ³ / ₁₆	1.0630	SB 205-14		LF 205
SBLF 205		25	95	76.0	11	11	20.0	10	64	7.5		34.5	31	38.1	205	0.42	30.5	27	205	0.38	
205-16	1													205-16				205-16			
SALF 206-18	1 ¹ / ₈		4 ⁷ / ₁₆	3 ⁹ / ₁₆	1 ⁵ / ₃₂	1 ⁵ / ₃₂	7 ¹ / ₈	1 ⁵ / ₃₂	3	0.3150	3/8	1 ⁹ / ₁₆	1.4055	1.7480	SA 206-18		1 ¹¹ / ₃₂	1.1811	SB 206-18		LF 206
SBLF 206		30	113	90.5	12	12	22.5	12	76	8.0		39.7	35.7	206	0.60	34.0	30	206	0.57		
206-19	1 ³ / ₁₆													206-19				206-19			
SALF 206-20	1 ¹ / ₄													206-20							
SBLF 207-20	1 ¹ / ₄		4 ¹³ / ₁₆	3 ¹⁵ / ₁₆	1/2	1/2	1 ⁵ / ₁₆	1 ⁵ / ₃₂	3 ¹ / ₂	0.3346	3/8	1 ¹¹ / ₁₆	1.5315	2.1890	SA 207-20		1 ⁷ / ₁₆	1.2598	SB 207-20		LF 207
SBLF 207-22		35	122	100.0	13	13	24.0	12.0	89	8.5		43.4	38.9	207-22	0.85	36.5	32	207-22	0.77		
207	1 ³ / ₈													207				207			
207-23	1 ⁷ / ₁₆													207-23				207-23			

PRESSED STEEL PILLOW BLOCK BALL BEARING UNITS

SAPP2 SBPP2

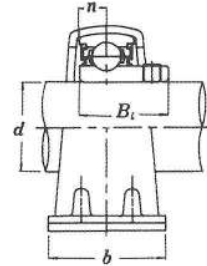
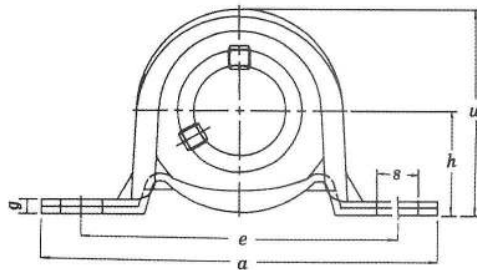
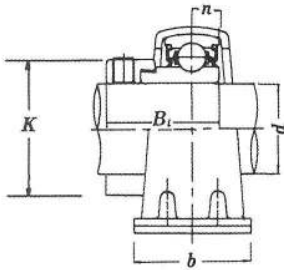
(NORMAL DUTY)



L TYPE SEAL

SBPP2(SET SCREW LOCKING)

SAPP2(WITH ECCENTRIC LOCKING COLLAR)



Unit No.	Shaft Dia.		Dimensions (in.) (mm)								Bolt Used (in.)	S A P P				S B P P			Housing NO
	d		h	a	e	b	s	g	w	n		Bi	K	Bearing No.	Weight (kgf)	Bi	Bearing No.	Weight (kgf)	
	(in.)	(mm)																	
SAPP SBPP 201 201-8	1/2	12											SA 201			SB 201			
202		15	7/8	3 3/8	2 23/32	63/64	3/8		1 23/32	0.2362	5/16	1.1260	1.1260	201-8	0.19	201-8			
202-10 203	5/8	17	22.2	86	68	25	9.5	3.2	43.8	6.0		28.6	28.6	202		202	0.16	PP 203	
SAPP SBPP 204-12 204	3/4	20	1	3 27/32	2 63/64	1 1/4	3/8		1 63/64	0.2756	5/16	1.2204	1.2598	SA 204-12 204	0.23	0.9843 25	SB 204-12 204	0.23	PP 204
SAPP SBPP 205-14 205 205-16	7/8	25	1 1/8	4 1/4	3 25/64	1 1/4	29/64		2 15/64	0.2953	3/8	1.2204	1.5000	SA 205-14 205 205-16	0.32	1.0630 27	SB 205-14 205 205-16	0.28	PP 205
SAPP SBPP 206-18 206 206-19 SAPP 206-20	1 1/8	30	1 5/16	4 21/32	3 47/64	1 1/2	29/64		2 39/64	0.3150	3/8	1.4055	1.7480	SA 206-18 206 206-19 206-20	0.50	1.1811 30	SB 206-18 206 206-19	0.47	PP 206
SAPP SBPP 207-20 207-22 207 207-23	1 1/4	35	1 9/16	5 5/64	4 5/32	1 21/32	29/64		3 1/8	0.3346	3/8	1.5315	2.1890	SA 207-20 207-22 207 207-23	0.71	1.2598 32	SB 207-20 207-22 207 207-23	0.57	PP 207

PRESSED STEEL FLANGE BALL BEARING UNITS

SAPF2 SBPF2

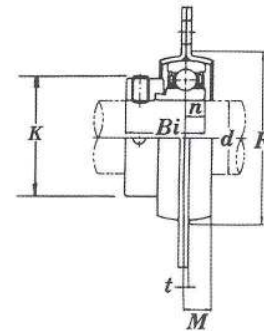
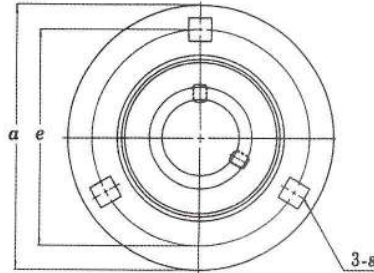
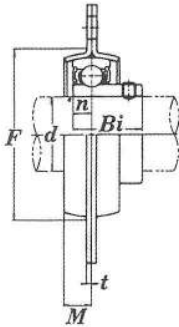
(NORMAL DUTY)



L TYPE SEAL

SBPF2 (SET SCREW LOCKING)

SAPF2 (WITH ECCENTRIC LOCKING COLLAR)



Unit No.	Shaft Dia.		Dimensions (in./mm)							Bolt Used (in.)	SAPF				SBPF			Housing No.
	d (in.)	d (mm)	a	e	M	t	s	n	F (min)		Bi	K	Bearing No.	Weight (kgf)	Bi	Bearing No.	Weight (kgf)	
SAPF SBPF 201-8	1/2	12																
202		33/16	2 1/2	9/32		9/32	0.2362	1.9291	1/4	1.1260	1.1260	SA 201-8			SB 201-8			
202-10	5/8	15	81	63.5	7.0	2	7.1	6.0	49	28.6	28.6	202	0.30	202	0.27		PF 203	
203		17										202-10		202-10				
SAPF SBPF 204-12	3/4	20	3 19/32	2 3/16	5/16		1 1/32	0.2756	2.1654	5/16	1.2204	1.2598	SA 204-12		SB 204-12			
204		91	71.5	8	2	8.7	7.0	55	31	32	204	0.33	204	0.33	204	0.33	PF 204	
SAPF SBPF 205-14	7/8	25	3 25/32	2 63/64	23/64		1 1/32	0.2953	2.3622	5/16	1.2204	1.5000	SA 205-14		SB 205-14			
205		96	76	9	2	8.7	7.5	60	31	38.1	205	0.42	205	0.38	205	0.38	PF 205	
205-16	1												27.0	205-16				
SAPF SBPF 206-18	1 1/8	30	4 7/16	3 9/16	25/64		1 3/32	0.3150	2.7953	3/8	1.4055	1.7480	SA 206-18		SB 206-18			
206		113	90.5	10	2.6	10.5	8.0	71	35.7	44.4	206	0.65	206	0.62	206	0.62	PF 206	
SAPF 206-19	1 3/16													206-19				
206-20	1 1/4													206-20				
SAPF SBPF 207-20	1 1/4	35	4 27/32	3 15/16	13/32		1 3/32	0.3346	3.190	3/8	1.5315	2.1890	SA 207-20		SB 207-20			
207-22		123	100	10.5	2.6	10.5	8.5	81	38.9	55.6	207-22	0.90	207-22	0.82	207-22	0.82	PF 207	
207	1 7/16													207				
207-23														32.0	207			
														207-23				

PRESSED STEEL OVAL FLANGE BALL BEARING UNITS

SAPFL2 SBPFL2

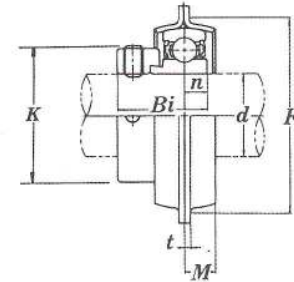
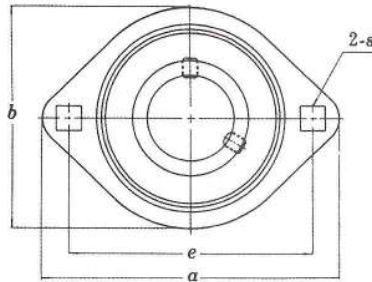
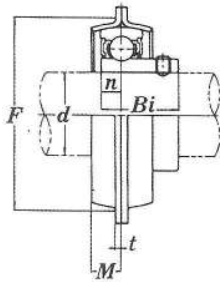
(NORMAL DUTY)



L TYPE SEAL

SBPFL2 (SET SCREW LOCKING)

SAPFL2 (WITH ECCENTRIC LOCKING COLLAR)

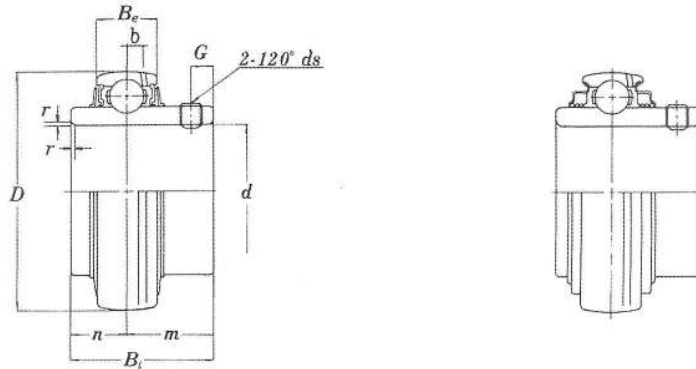


Unit No.	Shaft Dia.		Dimensions (in./mm)							Bolt Used (in.)	SAPFL				SBPFL			Housing No.			
	(in.)	(mm)	a	e	M	b	t	s	n		F _(min)	Bi	K	Bearing No.	Weight (kgf)	Bi	Bearing No.		Weight (kgf)		
SAPFL 201	1/2	12																			
SBPFL 201-8																					
202		15	3 3/16	2 1/2	9/32	2 5/16		9/32	0.2362	1.9291	1/4	1.1260	1.1260	SA 201-8							
202-10	5/8	17	81	63.5	7.0	59	2.0	7.1	6.0	49	6	28.6	28.6	202	0.22						
203														202-10							
SAPFL 204-12	3/4		3 19/32	2 13/16	5/16	2 5/8		1 11/32	0.2756	2.1654	5/16	1.2204	1.2598	SA 204-12							
SBPFL 204		20	91	71.5	8	67	2.0	8.7	7.0	55	6	31	32	204	0.24						
SAPFL 205-14	7/8		3 25/32	3	23/64	2 25/32		1 11/32	0.2953	2.3622	5/16	1.2204	1.5000	SA 205-14							
SBPFL 205	1	25	96	76.0	9	71	2.0	8.7	7.5	60	8	31	38.1	205	0.32						
205-16														205-16							
SAPFL 206-18	1 1/8		4 7/16	3 9/16	25/64	3 5/16		7/16	0.3150	2.7953	3/8	1.4055	1.7520	SA 206-18							
SBPFL 206	1 3/16	30	113	90.5	10	84	2.6	11	8.0	71	8	35.7	44.5	206	0.41						
206-19														206-19							
206-20														206-20							
SAPFL 207-20	1 1/4		4 27/32	3 15/16	13/32	3 11/16		1 3/32	0.3346	3.190	3/8	1.5315	2.1890	SA 207-20							
SBPFL 207-22	1 3/8	35	123	100	10.5	94	2.6	10.5	8.5	81	10	38.9	55.6	207	0.70						
207														207							
207-23														207-23							

INSERT BALL BEARINGS

UC2

(NORMAL DUTY)

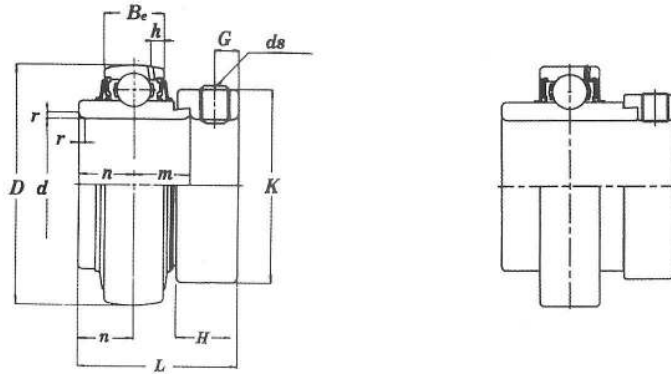


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)								Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d (in.)	d (mm)	D	Bi	Be	n	m	r	G	ds			
UC 201		12											0.21
201-8	1/2	15											0.21
202		15	1.8504	1.2205	0.6299	0.5000	0.7205	0.0397	0.1969	M6 × 0.75	1280	670	0.19
202-10	5/8	17	47	31.0	16	12.7	18.3	1.0	5	1/4-28UNF			0.19
203		17											0.18
204-12	3/4	20											0.16
204		20											0.16
UC 205-14	7/8		2.0472	1.3425	0.6693	0.5630	0.7795	0.0591	0.2165	M6 × 0.75	1400	790	0.23
205-15	15/16	25	52	34.1	17	14.3	19.8	1.5	5.5	1/4-28UNF			0.21
205		25											0.20
205-16	1												0.20
UC 206-18	1 1/8		2.4409	1.5000	0.7480	0.6260	0.8740	0.0591	0.2362	M6 × 0.75	1950	1130	0.34
206		30	62	38.1	19	15.9	22.2	1.5	6	1/4-28UNF			0.32
206-19	1 3/16												0.32
UC 207-20	1 1/4		2.8346	1.6890	0.7874	0.6890	1.0000	0.0787	0.2559	M8 × 1.0	2570	1540	0.54
207-21	1 5/16	35	72	42.9	20	17.5	25.4	2.0	6.5	5/16-24UNF			0.51
207-22	1 3/8												0.48
207		35											0.48
207-23	1 7/16												0.45
UC 208-24	1 1/2		3.1496	1.9370	0.8268	0.7480	1.1890	0.0787	0.3150	M8 × 1.0	2910	1790	0.68
208-25	1 9/16	40	80	49.2	21	19.0	30.2	2.0	8	5/16-24UNF			0.65
208		40											0.64
UC 209-26	1 5/8		3.3465	1.9370	0.8661	0.7480	1.1890	0.0787	0.3150	M8 × 1.0	3200	2040	0.78
209-27	1 11/16	45	85	49.2	22	19.0	30.2	2.0	8	5/16-24UNF			0.74
209-28	1 3/4												0.70
209		45											0.68
UC 210-30	1 7/8		3.5433	2.0315	0.9055	0.7480	1.2835	0.0787	0.3543	M10 × 1.25	3510	2320	0.87
210-31	1 15/16	50	90	51.6	23	19.0	32.6	2.0	9	3/8-24UNF			0.82
210		50											0.80
210-32	2												
UC 211-32	2		3.9370	2.1890	0.9843	0.8740	1.3150	0.0984	0.3543	M10 × 1.25	4330	2940	1.26
211-34	2 1/8	55	100	55.6	25	22.2	33.4	2.5	9	3/8-24UNF			1.15
211	2 3/16												1.11
211-35		55											1.09
UC 212-36	2 1/4		4.3307	2.5630	1.0630	1.0000	1.5630	0.0984	0.4134	M10 × 1.25	5240	3610	1.67
212		60	110	65.1	27	25.4	39.7	2.5	10.5	3/8-24UNF			1.54
212-38	2 3/8												1.52
212-39	2 7/16												1.45
UC 213-40	2 1/2		4.7244	2.5630	1.1417	1.0000	1.5630	0.0984	0.4724	M12 × 1.5	5720	4000	1.94
213		65	120	65.1	29	25.4	39.7	2.5	12	7/16-20UNF			1.85
UC 214-44	2 3/4		4.9213	2.9370	1.1417	1.1890	1.7480	0.0984	0.4724	M12 × 1.5	6220	4400	2.06
214		70	125	74.6	29	30.2	44.4	2.5	12	7/16-20UNF			2.05
UC 215		75	5.1181	3.0630	1.1811	1.3110	1.7520	0.0984	0.4724	M12 × 1.5	6740	4820	2.21
215-48	3		130	77.8	30	33.3	44.5	2.5	12	7/16-20UNF			2.12
UC 216		80	5.5118	3.2520	1.2598	1.3110	1.9410	0.1181	0.5512	M12 × 1.5	7260	5300	2.79
		80	140	82.6	32	33.3	49.3	3.0	14	7/16-20UNF			
UC 217-52	3 1/4		5.9055	3.3740	1.3386	1.3425	2.0315	0.1181	0.5512	M12 × 1.5	8390	6180	3.66
217		85	150	85.7	34	34.1	51.6	3.0	14	7/16-20UNF			3.45
UC 218-56	3 1/2		6.2992	3.7795	1.4173	1.5630	2.2165	0.1181	0.5909	M12 × 1.5	9600	7140	4.46
218		90	160	96.0	36	39.7	56.3	3.0	15	7/16-20UNF			4.35

INSERT BALL BEARINGS

HC2 CHC2

(WITH ECCENTRIC LOCKING COLLAR, NORMAL DUTY)

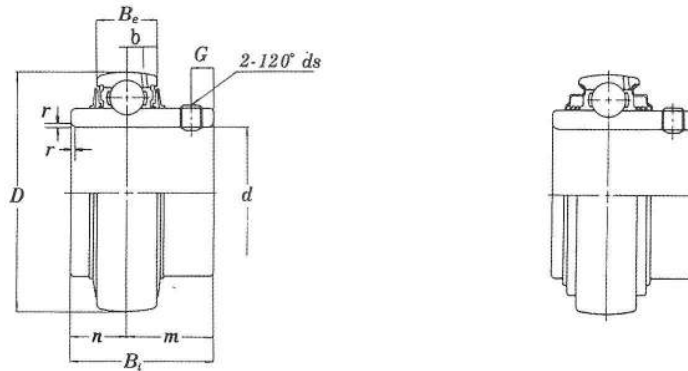


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)										Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)	
	d (in.)	d (mm)	D	L	Be	n	m	r	K	H	G	ds				
HC 201 CHC 201-8	1/2	12												1280	670	0.29
202		15	1.8504	1.7204	0.6299	0.6732	0.6693	0.0397	1.3110	0.5315	0.1890	M6 × 1 1/4-28UNF	0.29			
202-10		5/8	17	47	43.7	16	17.1	17.0	1.0	33.3	13.5		4.8			0.27
203		3/4	20													0.26
204-12 204														0.25		
204																0.23
204																0.22
HC 205-14 CHC 205-15	7/8	25	2.0472	1.7480	0.6693	0.6890	0.6850	0.0591	1.5000	0.5315	0.1890	M6 × 1 1/4-28UNF	1400	790	0.29	
205	15/16		52	44.4	17	17.5	17.4	1.5	38.1	13.5	4.8				0.27	
205-16	1															0.25
																0.25
HC 206-18 CHC 206	1 1/8	30	2.4409	1.9055	0.7480	0.7204	0.7165	0.0591	1.7520	0.6260	0.2362	M8 × 1 5/16-24UNF	1950	1130	0.43	
206-19	1 3/16		62	48.4	19	18.3	18.2	1.5	44.5	15.9	6.0				0.41	
206-20	1 1/4															0.41
																0.38
HC 207-20 CHC 207-22	1 1/4	35	2.8346	2.0157	0.7874	0.7402	0.7441	0.0787	2.1890	0.6890	0.2677	M8 × 1 5/16-24UNF	2570	1540	0.68	
207	1 3/8		72	51.2	20	18.8	18.9	2.0	55.6	17.5	6.8				0.61	
207-23	1 7/16															0.61
																0.58
HC 208-24 CHC 208	1 1/2	40	3.1496	2.2205	0.8268	0.8425	0.8465	0.0787	2.3740	0.7205	0.2677	M8 × 1 5/16-24UNF	2910	1790	0.83	
			80	56.4	21	21.4	21.5	2.0	60.3	18.3	6.8				0.79	
																0.78
HC 209-26 CHC 209-27	1 5/8	45	3.3465	2.2205	0.8661	0.8425	0.8465	0.0787	2.5000	0.7205	0.2677	M8 × 1 5/16-24UNF	3200	2040	0.96	
209-28	1 11/16		85	56.4	22	21.4	21.5	2.0	63.5	18.3	6.8				0.91	
209	1 3/4															0.87
																0.85
HC 210-31 CHC 210	1 5/8	50	3.5433	2.4685	0.9055	0.9685	0.9685	0.0787	2.7520	0.7205	0.2559	M8 × 1 5/16-24UNF	3510	2320	1.04	
210-32	2		90	62.7	23	24.6	24.6	2.0	69.9	18.3	6.5				1.01	
HC 211-32 CHC 211	2	55	3.9370	2.8110	0.9843	1.0945	1.0945	0.0984	3.0000	0.8189	0.3150	M12 × 1.5 7/16-20UNF	4330	2940	1.58	
211-35	2 3/16		100	71.4	25	27.8	27.8	2.5	76.2	20.8	8.0				1.39	
																1.36
HC 212-36 CHC 212	2 1/4	60	4.3307	3.0630	1.0630	1.2204	1.2165	0.0984	3.3150	0.8740	0.3150	M12 × 1.5 7/16-20UNF	5240	3610	2.03	
212-39	2 7/16		110	77.8	27	31	30.9	2.5	84.2	22.2	8.0				1.87	
																1.76
HC 213-40 CHC 213	2 1/2	65	4.7244	3.3740	1.1417	1.3425	1.3425	0.0984	3.3858	0.9252	0.3346	M12 × 1.5 7/16-20UNF	5720	4000	2.51	
213-44	2 5/8		120	85.7	29	34.1	34.1	2.5	86	23.5	8.5				2.51	
214	2 3/4															
HC 214-44 CHC 214	2 3/4	70	4.9213	3.3740	1.1417	1.3425	1.3425	0.0984	3.5433	0.9252	0.3346	M12 × 1.5 7/16-20UNF	6220	4400	2.65	
214	2 7/8		125	85.7	29	34.1	34.1	2.5	90	23.5	8.5				2.65	
HC 215-47 CHC 215	2 15/16	75	5.1181	3.6260	1.1811	1.4685	1.4685	0.0984	4.0157	0.9252	0.3346	M12 × 1.5 7/16-20UNF	6740	4820	2.74	
215	2 3/4		130	92.1	30	37.3	37.3	2.5	102	23.5	8.5				2.74	

INSERT BALL BEARINGS

UCX

(MEDIUM DUTY)

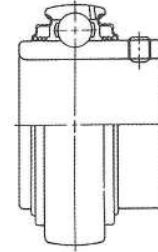
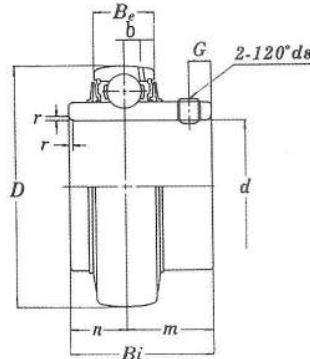


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)								Basic Load Rating (kgf)	Basic Static Load Rating (kgf)	Weight (kgf)
	d		D	Bi	Be	n	m	r	G	ds			
	(in.)	(mm)											
UCX 05 05-16	1	25	2.44409 62	1.5000 38.1	0.7480 19	0.6260 15.9	0.8740 22.2	0.0591 1.5	0.2362 6.0	M6 × 0.75 1/4-28UNF	1950	1130	0.39 0.38
UCX 06 X 06-19 X 06-02	1 3/16 1 1/4	30	2.8346 72	1.6890 42.9	0.7874 20	0.6860 17.5	1.0000 25.4	0.0591 1.5	0.2559 6.5	M8 × 1.0 5/16-24UNF	2570	1540	0.58 0.58 0.55
UCX 07-22 X 07 X 07-23	1 3/8 1 7/16	35	3.1496 80	1.9370 49.2	0.8268 21	0.7480 19.0	1.1890 30.2	0.0787 2.0	0.3150 8.0	M8 × 1.0 5/16-24UNF	2910	1790	0.75 0.75 0.72
UCX 08-24 X 08	1 1/2	40	3.3465 85	1.9370 49.2	0.8661 22	0.7480 19.0	1.1890 30.2	0.0787 2.0	0.3150 8.0	M8 × 1.0 5/16-24UNF	3200	2040	0.87 0.83
UCX 09-27 X 09-28 X 09	1 11/16 1 3/4	45	3.5433 90	2.0315 51.6	0.9055 23	0.7480 19.0	1.2835 32.6	0.0787 2.0	0.3543 9.0	M10 × 1.25 3/8-24UNF	3510	2320	0.01 0.97 0.95
UCX 10-31 X 10 X 10-32	1 15/16 2	50	3.9370 100	2.1890 55.6	0.9843 25	0.8740 22.2	1.3150 33.4	0.0787 2.0	0.3543 9.0	M10 × 1.25 3/8-24UNF	4330	2940	1.32 1.29 1.26
UCX 11 X 11-35 X 11-36	2 3/16 2 1/4	55	4.3307 110	2.5630 65.1	1.0630 27	1.0000 25.4	1.5630 39.7	0.0984 2.5	0.4134 10.5	M10 × 1.25 3/8-24UNF	5240	3610	1.80 1.78 1.70
UCX 12 X 12-38 X 12-39	2 3/8 2 7/16	60	4.7244 120	2.5630 65.1	1.1417 29	1.0000 25.4	1.5630 39.7	0.0984 2.5	0.4724 12.0	M12 × 1.5 7/16-20UNF	5720	4000	2.05 2.03 1.95
UCX 13-40 X 13	2 1/2	65	4.9213 125	2.9370 74.6	1.1417 29	1.1890 30.2	1.7480 44.4	0.0984 2.5	0.4724 12.0	M12 × 1.5 7/16-20UNF	6220	4400	2.61 2.52
UCX 14-44 X 14	2 3/4	70	5.1181 130	3.0630 77.8	1.1811 30	1.3110 33.3	1.7520 44.5	0.0984 2.5	0.4724 12.0	M12 × 1.5 7/16-20UNF	6740	4820	2.75 2.74
UCX 15 X 15-48	3	75	5.5118 140	3.2520 82.6	1.2598 32	1.3110 33.3	1.9410 49.3	0.0984 2.5	0.5512 14.0	M12 × 1.5 7/16-20UNF	7260	5300	3.41 3.32
UCX 16		80	5.9055 150	3.3740 85.7	1.3386 34	1.3425 34.1	2.0315 51.6	0.1181 3.0	0.5511 14.0	M12 × 1.5 7/16-20UNF	8390	6180	3.87
UCX 17		85	6.2992 160	3.7795 96.0	1.4173 36	1.5630 39.7	2.2165 56.3	0.1181 3.0	0.5906 15.0	M12 × 1.5 7/16-20UNF	9600	7140	5.05
X 18-56 UCX 18	3 1/2	90	6.6929 170	4.0944 104	1.5748 40	1.6900 42.9	2.4055 61.1	0.1181 3.0	0.6299 16	M14 × 1.5 9/16-18UNF	10900	8710	6.00
UCX 20 X 20-64	4	100	7.4803 190	4.6260 117.5	1.6929 43	1.9370 49.2	2.6890 68.3	0.1378 3.5	0.7087 18	M16 × 1.5 5/8-18UNF	13300	10500	8.56

INSERT BALL BEARINGS

UC3

(HEAVY DUTY)

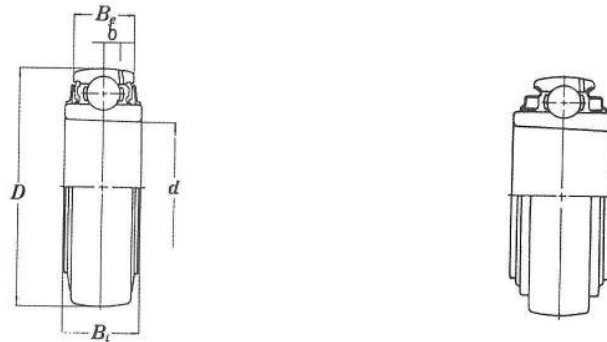


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)								Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d (in.)	d (mm)	D	Bi	Be	n	m	r	G	ds			
UC 305 305-16	1	25	2.4409 62	1.4961 38	0.8661 22	0.5906 15	0.9055 23	0.0787 2.0	0.2362 6	M6 × 0.75 1/4-28UNF	2100	1090	0.45 0.44
UC 306-18 306	1 1/16	30	2.8346 72	1.6929 43	0.9449 24	0.6693 17	1.0236 26	0.0787 2.0	0.2362 6	M6 × 0.75 1/4-28UNF	2660	1500	0.58 0.56
UC 307-20 307-22 307	1 1/4 1 3/8	35	3.1496 80	1.8897 48	1.0236 26	0.7480 19	1.1417 29	0.0984 2.5	0.3150 8	M8 × 1.0 5/16-28UNF	3330	1920	0.77 0.71 0.71
UC 308-24 308	1 1/2	40	3.5433 90	2.0472 52	1.1024 28	0.7480 19	1.2992 33	0.0984 2.5	0.3937 10	M10 × 1.25 3/8-24UNF	4070	2390	1.05 1.00
UC 309-28 309	1 3/4	45	3.9370 100	2.2441 57	1.1811 30	0.8661 22	1.3780 35	0.0984 2.5	0.3937 10	M10 × 1.25 3/8-24UNF	4890	2950	1.35 1.33
UC 310-31 310	1 5/16	50	4.3307 110	2.4015 61	1.2598 32	0.8661 22	1.5354 39	0.1181 3.0	0.4724 12	M12 × 1.5 7/16-20UNF	6200	3820	1.72 1.69
UC 311-32 311	2	55	4.7244 120	2.5984 66	1.3386 34	0.9842 25	1.6142 41	0.1181 3.0	0.4724 12	M12 × 1.5 7/16-20UNF	7160	4480	2.08 1.90
UC 312		60	5.1181 130	2.7953 71	1.4173 36	1.0236 26	1.7717 45	0.1378 3.5	0.4724 12	M12 × 1.5 7/16-20UNF	8180	5200	2.60
UC 313-40 313	2 1/2	65	5.5118 140	2.9528 75	1.4961 38	1.1811 30	1.7717 45	0.1378 3.5	0.4724 12	M12 × 1.5 7/16-20UNF	9270	5980	3.24 3.16
UC 314-44 314	2 3/4	70	5.9055 150	3.0709 78	1.5748 40	1.2992 33	1.7717 45	0.1378 3.5	0.4724 12	M12 × 1.5 7/16-20UNF	10400	6800	3.91 3.90
UC 315 315-48	3	75	6.2992 160	3.2283 82	1.6535 42	1.2598 32	1.9685 50	0.1378 3.5	0.5512 14	M14 × 1.5 9/16-18UNF	11300	7690	4.70 4.61
UC 316		80	6.6929 170	3.3858 86	1.7323 44	1.3386 34	2.0472 52	0.1378 3.5	0.5512 14	M14 × 1.5 9/16-18UNF	12300	8640	5.60
UC 317		85	7.0866 180	3.7795 96	1.8110 46	1.5748 40	2.2047 56	0.1575 4.0	0.6299 16	M16 × 1.5 5/8-18UNF	13300	9650	6.90
UC 318-56 318	3 1/2	90	7.4803 190	3.7795 96	1.8898 48	1.5748 40	2.2047 56	0.1575 4.0	0.6299 16	M16 × 1.5 5/8-18UNF	14300	10700	8.03 7.87
UC 319		95	7.8740 200	4.0551 103	1.9685 50	1.6142 41	2.4409 62	0.1575 4.0	0.7087 18	M16 × 1.5 5/8-18UNF	15300	11800	8.91
UC 320 320-64	4	100	8.4646 215	4.2519 108	2.2160 54	1.6535 42	2.5984 66	0.1575 4.0	0.7874 20	M18 × 1.5 5/8-18UNF	17300	14100	11.2 11.0
UC 321		105	8.8583 225	4.4094 112	2.2047 56	1.7322 44	2.6772 68	0.1575 4.0	0.7874 20	M18 × 1.5 5/8-18UNF	18400	15300	12.7
UC 322		110	9.4488 240	4.6063 117	2.3622 60	1.8110 46	2.7953 71	0.1575 4.0	0.7874 20	M18 × 1.5 5/8-18UNF	20500	17900	15.1
UC 324		120	10.2362 260	4.9606 126	2.5197 64	2.0079 51	2.9527 75	0.1575 4.0	0.7874 20	M18 × 1.5 5/8-18UNF	20700	18500	19.0
UC 326		130	11.0236 280	5.3150 135	2.6772 68	2.1260 54	3.1890 81	0.1969 5.0	0.7874 20	M20 × 1.5 3/4-16UNF	22900	21400	23.6
UC 328		140	11.8110 300	5.7086 145	2.8346 72	2.3228 59	3.3858 86	0.1969 5.0	0.7874 20	M20 × 1.5 3/4-16UNF	25300	24600	29.4

INSERT BALL BEARINGS

UK2

(WITH ADAPTER LOCKING, NORMAL DUTY)

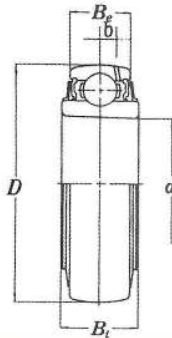


Bearing No.	Bore Dia. of Bearing	Dimensions (in./mm)			Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d(in./mm)	D	Bi	Be			
UK 205	0.9843 25	2.0472 52	0.8661 22	0.6693 17	1400	790	0.16
UK 206	1.1811 30	2.4409 62	0.9449 24	0.7480 19	1950	1130	0.25
UK 207	1.3780 35	2.8346 72	1.0236 26	0.7874 20	2570	1540	0.37
UK 208	1.5748 40	3.1496 80	1.0630 27	0.8268 21	2910	1790	0.47
UK 209	1.7717 45	3.3465 85	1.1024 28	0.8661 22	3200	2040	0.52
UK 210	1.9685 50	3.5433 90	1.1811 30	0.9055 23	3510	2320	0.59
UK 211	2.1654 55	3.9370 100	1.2598 32	0.9843 25	4330	2940	0.80
UK 212	2.3622 60	4.3307 110	1.3386 34	1.0630 27	5240	3610	1.02
UK 213	2.5591 65	4.7244 120	1.4567 37	1.1417 29	5720	4000	1.34
UK 215	2.9528 75	5.1181 130	1.4961 38	1.1811 30	6740	4820	1.50
UK 216	3.1496 80	5.5118 140	1.5748 40	1.2598 32	7260	5300	1.96
UK 217	3.3465 85	5.9055 150	1.6929 43	1.3386 34	8390	6180	2.42
UK 218	3.5433 90	6.2992 160	1.8110 46	1.4173 36	9600	7140	2.90

INSERT BALL BEARINGS

UKX

(WITH ADAPTER LOCKING, MEDIUM DUTY)

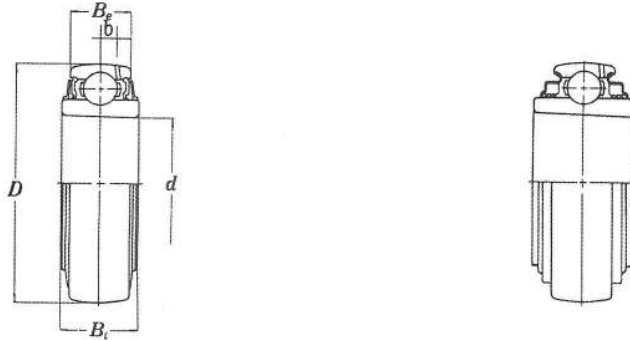


Bearing NO.	Bore Dia. of Bearing	Dimensions (in./mm)			Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d (in./mm)	D	B _i	B _e			
UK X 05	0.9843 25	2.44409 62	0.9449 24	0.7480 19	1950	1130	0.27
UK X 06	1.1811 30	2.8346 72	1.0236 26	0.7824 20	2570	1540	0.43
UK X 07	1.3780 35	3.1496 80	1.0630 27	0.8268 21	2910	1790	0.53
UK X 08	1.5748 40	3.3465 85	1.1024 28	0.8661 22	3200	2040	0.58
UK X 09	1.7717 45	3.5433 90	1.1811 30	0.9055 23	3510	2320	0.67
UK X 10	1.9685 50	3.9370 100	1.2598 32	0.9843 25	4330	2940	0.89
UK X 11	2.1654 55	4.3307 110	1.3386 34	1.0630 27	5240	3610	1.15
UK X 12	2.3622 60	4.7244 120	1.4567 37	1.1417 29	5720	4000	1.45
UK X 13	2.5591 65	4.9213 125	1.5748 40	1.1417 29	6220	4400	1.62
UK X 15	2.9528 75	5.5118 140	1.5748 40	1.2598 32	7260	5300	2.10
UK X 16	3.1496 80	5.9055 150	1.6929 43	1.3386 34	8390	6180	2.64
UK X 17	3.3465 85	6.2992 160	1.8110 46	1.4173 36	9600	7140	3.25
UK X 18	3.5433 90	6.6929 170	1.9685 50	1.5748 40	10900	8170	3.80
UK X 20	3.9370 100	7.4803 190	2.1260 54	1.6929 43	13300	10500	5.36

INSERT BALL BEARINGS

UK3

(WITH ADAPTER LOCKING, HEAVY DUTY)

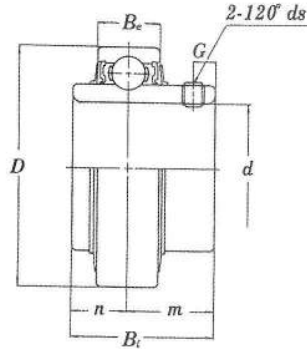


Unit No.	Shaft Dia.	Dimensions (in./mm)			Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d (in./mm)	D	Be	Bi			
UK 305	0.9843 25	2.4409 62	0.8661 22	1.0630 27	2100	1090	0.40
UK 306	1.1811 30	2.8346 72	0.9449 24	1.1811 30	2660	1500	0.47
UK 307	1.3780 35	3.1496 80	1.0236 26	1.2992 33	3330	1920	0.60
UK 308	1.5748 40	3.5433 90	1.1024 28	1.3780 35	4070	2390	0.80
UK 309	1.7717 45	3.9370 100	1.1811 30	1.4961 38	4890	2950	1.08
UK 310	1.9685 50	4.3307 110	1.2598 32	1.5748 40	6200	3820	1.38
UK 311	2.1654 55	4.7244 120	1.3386 34	1.6929 43	7160	4480	1.78
UK 312	2.3622 60	5.1181 130	1.4173 36	1.8110 46	8180	5200	2.06
UK 313	2.5591 65	5.5118 140	1.4961 38	1.8898 48	9270	5980	2.71
UK 315	2.9528 75	6.2992 160	1.6535 42	2.1260 54	11300	7690	3.80
UK 316	3.1496 80	6.6929 170	1.7323 44	2.2441 57	12300	8640	4.39
UK 317	3.3465 85	7.0866 180	1.8110 46	2.3622 60	13300	9650	5.30
UK 318	3.5433 90	7.4803 190	1.8898 48	2.4803 63	14300	10700	6.20
UK 319	3.7402 95	7.8740 200	1.9685 50	2.5984 66	15300	11800	7.31
UK 320	3.9370 100	8.4646 215	2.1260 54	2.7559 70	17300	14100	8.70
UK 322	4.3307 110	9.4488 240	2.3622 60	3.1496 80	20500	17900	12.2
UK 324	4.7244 120	10.2362 260	2.5197 64	3.3858 86	20700	18500	16.1
UK 326	5.1181 130	11.0236 280	2.6772 68	3.6220 92	22900	21400	18.8
UK 328	5.5118 140	11.8110 300	2.8346 72	3.8583 98	25300	24600	23.9

INSERT BALL BEARINGS

UR2

(NORMAL DUTY)

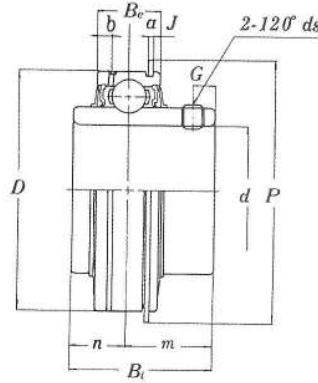


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)							Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d (in.)	d (mm)	D	Bi	Be	n	m	G	ds			
UR 201 201-8 202 202-10 203	1/2 5/8	12 15 17	1.8504 47	1.2205 31.0	0.6299 16	0.5000 12.7	0.7205 18.3	0.1969 5.0	M6 × 0.75 1/4-28UNF	1280	670	0.18
UR 204-12 204	3/4	20	1.8504 47	1.2205 31.0	0.6299 16	0.5000 12.7	0.7205 18.3	0.1969 5.0	M6 × 0.75 1/4-28UNF	1280	670	0.16
UR 205-14 205-15 205 205-16	7/8 15/16 1	25	2.0472 52	1.3425 34.1	0.6693 17	0.5630 14.3	0.7795 19.8	0.2165 5.5	M6 × 0.75 1/4-28UNF	1400	790	0.21
UR 206-18 206 206-19	1 1/8 1 3/16	30	2.4409 62	1.5000 38.1	0.7480 19	0.6260 15.9	0.8740 22.2	0.2362 6.0	M6 × 0.75 1/4-28UNF	1950	1130	0.33
UR 207-20 207-22 207 207-23	1 1/4 1 3/8 1 7/16	35	2.8346 72	1.6890 42.9	0.7874 20	0.6890 17.5	1.0000 25.4	0.2559 6.5	M8 × 1.0 5/16-24UNF	2570	1540	0.49
UR 208-24 208	1 1/2	40	3.1496 80	1.9370 49.2	0.8268 21	0.7480 19.0	1.1890 30.2	0.3150 8.0	M8 × 1.0 5/16-24UNF	2910	1790	0.65
UR 209-26 209-27 209-28 209	1 5/8 1 11/16 1 3/4	45	3.3465 85	1.9370 49.2	0.8661 22	0.7480 19.0	1.1890 30.2	0.3150 8.0	M8 × 1.0 5/16-24UNF	3200	2040	0.69
UR 210-30 210-31 210 210-32	1 7/8 1 15/16 2	50	3.5433 90	2.0315 51.6	0.9055 23	0.7480 19.0	1.2835 32.6	0.3543 9.0	M10 × 1.25 3/8-24UNF	3510	2320	0.81
UR 211-32 211-34 211 211-35	2 2 1/8 2 3/16	55	3.9370 100	2.1890 55.6	0.9843 25	0.8740 22.2	1.3150 33.4	0.3543 9.0	M10 × 1.25 3/8-24UNF	4330	2940	1.12
UR 212-36 212 212-38 212-39	2 1/4 2 3/8 2 7/16	60	4.3307 110	2.5630 65.1	1.0630 27	1.0000 25.4	1.5630 39.7	0.4134 10.5	M10 × 1.25 3/8-24UNF	5240	3610	1.52
UR 213-40 213	2 1/2	65	4.7244 120	2.5630 65.1	1.1417 29	1.0000 25.4	1.5630 39.7	0.4724 12.0	M12 × 1.5 7/16-20UNF	5720	4000	1.85
UR 214-44 214	2 3/4	70	4.9213 125	2.9370 74.6	1.1417 29	1.1890 30.2	1.7480 44.4	0.4724 12.0	M12 × 1.5 7/16-20UNF	6220	4400	2.05
UR 215 215-48	3	75	5.1181 130	3.0630 77.8	1.1811 30	1.3110 33.3	1.7520 44.5	0.4724 12.0	M12 × 1.5 7/16-20UNF	6740	4820	2.12

INSERT BALL BEARINGS

SER2

NORMAL DUTY

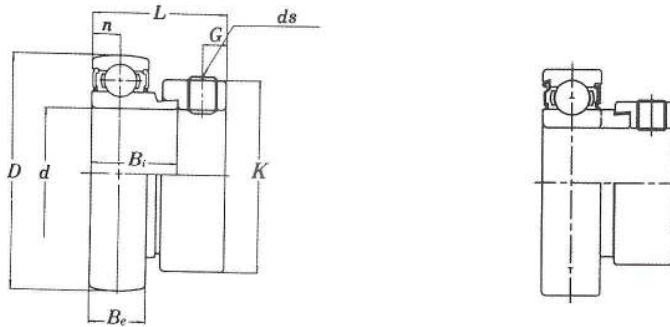


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)												Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)	
	d (in.)	d (mm)	D	B _i	B _e	n	m	a	b	R	J	P	G	ds				
SER 201	1/2	12	1.8504	1.2205	0.6220	0.4055	0.8150	0.0421	0.1575	0.1941	0.0937	2.0669	0.1969	M6 × 0.75	1280	670	0.22	
201-8		15	47	31.0	15.8	10.3	20.7	1.07	4.0	4.93	2.38	52.5	5.0	1/4-28UNF				
202		5/8	17															
202-10																		
SER 204-12	3/4	20	1.8504	1.2205	0.6220	0.4055	0.8150	0.0421	0.1575	0.1941	0.0937	2.0669	0.1969	M6 × 0.75	1280	670	0.21	
204			47	31.0	15.8	10.3	20.7	1.07	4.0	4.93	2.38	52.5	5.0	1/4-28UNF				
SER 205-14	7/8	25	2.0472	1.3425	0.7500	0.5157	0.8268	0.0421	0.1969	0.2374	0.0937	2.2717	0.2165	M6 × 0.75	1400	790	0.27	
205-15	15/16		52	34.1	19.05	13.1	21	1.07	5.0	6.03	2.38	57.7	5.5	1/4-28UNF				
205	1																	
205-16																		
SER 206-18	1 1/8	30	2.4409	1.5000	0.8740	0.6260	0.8740	0.0650	0.2165	0.2421	0.1252	2.6575	0.2362	M6 × 0.75	1950	1130	0.39	
206	1 3/16		62	38.1	22.2	15.9	22.2	1.65	5.5	6.15	3.18	67.5	6.0	1/4-28UNF				
206-19																		
SER 207-20	1 1/4	35	2.8346	1.6890	0.9370	0.6890	1.0000	0.0650	0.2165	0.2815	0.1252	3.0866	0.2559	M8 × 1.0	2570	1540	0.63	
207-22	1 3/8		72	42.9	23.8	17.5	25.4	1.65	5.5	7.15	3.18	78.4	6.5	5/16-24UNF				
207	1 7/16																	
207-23																		
SER 208-24	1 1/2	40	3.1496	1.9370	1.0945	0.7480	1.1890	0.0650	0.2362	0.3602	0.1252	3.4016	0.3150	M8 × 1.0	2910	1790	0.81	
208	1 5/8		80	49.2	27.8	19.0	30.2	1.65	6.0	9.15	3.18	86.4	8.0	5/16-24UNF				
SER 209-26	1 5/8	45	3.3465	1.9370	1.0945	0.7480	1.1890	0.0650	0.2362	0.3602	0.1252	3.5984	0.3150	M8 × 1.0	3200	2040	0.90	
209-27	1 11/16		85	49.2	27.8	19.0	30.2	1.65	6.0	9.15	3.18	91.4	8.0	5/16-24UNF				
209-28	1 3/4																	
209																		
SER 210-30	1 7/8	50	3.5433	2.0315	1.1220	0.7480	1.2835	0.0949	0.2953	0.3303	0.1252	3.7913	0.3543	M10 × 1.25	3510	2320	0.98	
210-31	1 15/16		90	51.6	28.5	19.0	32.6	2.41	7.5	8.39	3.18	96.3	9.0	3/8-24UNF				
210	2																	
210-32																		
SER 211-32	2	55	3.9370	2.1890	1.1850	0.8740	1.3150	0.0949	0.2953	0.3697	0.1252	4.1850	0.3543	M10 × 1.25	4330	2940	1.41	
211	2 3/16		100	55.6	30.1	22.2	33.4	2.41	7.5	9.39	3.18	106.3	9.0	3/8-24UNF				
211-35																		
SER 212-36	2 1/4	60	4.3307	2.5630	1.2480	1.0000	1.5630	0.0949	0.2953	0.4091	0.1251	4.5827	0.4134	M10 × 1.25	5240	3610	1.89	
212	2 7/16		110	65.1	31.7	25.4	39.7	2.41	7.5	10.39	3.18	116.4	10.5	3/8-24UNF				
212-39																		

INSERT BALL BEARINGS

SA2 CSA2

(WITH ECCENTRIC LOCKING COLLAR, NORMAL DUTY)

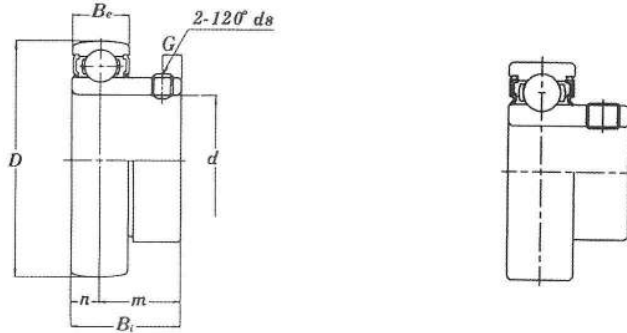


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)								Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d		Be	D	Bi	n	L	K	G	ds			
	(in.)	(mm)											
SA 201 CSA 201-8 202 202-10 203	1/2 5/8	12 15 17	SA 0.4724 12 CSA 0.5118 13	1.5748 40	0.7520 19.1	0.2362 6.0 0.2559 6.5	1.1260 28.6	1.1260 28.6	0.1890 4.8	M6 × 1 1/4-28UNF	960	480	0.13
SA 204-12 CSA 204	3/4	20	0.5512 14	1.8504 47	0.8425 21.4	0.2756 7.0	1.2205 31	1.2598 32	0.1890 4.8	M6 × 1 1/4-28UNF	1280	670	0.15
SA 205-14 CSA 205 205-16	7/8 1	25	0.5906 15	2.0472 52	0.8465 21.5	0.2953 7.5	1.2205 31	1.5000 38.1	0.1890 4.8	M6 × 1 1/4-28UNF	1400	790	0.22
SA 206-18 CSA 206 206-19 206-20	1 1/8 1 3/16 1 1/4	30	0.6299 16	2.4409 62	0.9370 23.8	0.3150 8.0	1.4055 35.7	1.7480 44.4	0.2362 6.0	M8 × 1 5/16-24UNF	1950	1130	0.30
SA 207-20 CSA 207-22 207 207-23	1 1/4 1 3/8 1 7/16	35	0.6693 17	2.8346 72	1.0000 25.4	0.3346 8.5	1.5314 38.9	2.1890 55.6	0.2677 6.8	M8 × 1 5/16-24UNF	2570	1540	0.50
SA 208-24 CSA 208	1 1/2	40	0.7087 18	3.1496 80	1.1890 30.2	0.3543 9.0	1.7205 43.7	2.3740 60.3	0.2677 6.8	M8 × 1 5/16-24UNF	2910	1790	0.63
SA 209-26 CSA 209-27 209-28 209	1 5/8 1 11/16 1 3/4	45	0.7480 19	3.3465 85	1.1890 30.2	0.3740 9.5	1.7205 43.7	2.5000 63.5	0.2677 6.8	M8 × 1 5/16-24UNF	3200	2040	0.65
SA 210-30 CSA 210-31 210 210-32	1 7/8 1 15/16 2	50	0.7874 20	3.5433 90	1.1890 30.2	0.3937 10	1.7205 43.7	2.7480 69.8	0.2677 6.8	M8 × 1 5/16-24UNF	3510	2320	0.75
SA 211-32 CSA 211-34 211	2 2 3/16	55	0.8268 21	3.9370 100	1.2795 32.5	0.4134 10.5	1.9055 48.4	3.0000 76.2	0.3150 8.0	M12 × 1.5 7/16-20UNF	4330	2940	1.00
SA 212-36 CSA 212 212-39	2 1/4 2 7/16	60	0.8661 22	4.3307 110	1.4646 37.2	0.4331 11	2.0906 53.1	3.3110 84.1	0.3150 8.0	M12 × 1.5 7/16-20UNF	5240	3610	1.34

INSERT BALL BEARINGS

SB2 CSB2

(NORMAL DUTY)

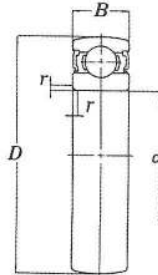


Bearing No.	Bore Dia. of Bearing		Dimensions (in./mm)							Basic Load Rating (kgf)	Basic Static Load Rating (kgf)	Weight (kgf)
	d		Be	D	Bi	n	m	G	ds			
	(in.)	(mm)										
SB 201 CSB 201-8 202 202-10 203	1/2	12 15	0.4724 12	1.5748 40	0.8661 22	0.2362 6.0	0.6299 16.0	0.1890 4.8	M6 × 0.75 1/4-28UNF	960	480	0.10
SB 204-12 CSB 204	3/4	20	0.5512 14	1.8504 47	0.9843 25	0.2756 7.0	0.7087 18.0	0.1890 4.8	M6 × 0.75 1/4-28UNF	1280	670	0.15
SB 205-14 CSB 205 205-16	7/8	25	0.5906 15	2.0472 52	1.0630 27	0.2953 7.5	0.7677 19.5	0.2165 5.5	M6 × 0.75 1/4-28UNF	1400	790	0.16
SB 206-18 CSB 206 206-19	1 1/8	30	0.6299 16	2.4409 62	1.1811 30	0.3150 8.0	0.8661 22.0	0.2362 6	M6 × 0.75 1/4-28UNF	1950	1130	0.27
SB 207-20 CSB 207-22 207 207-23	1 1/4	35	0.6693 17	2.8346 72	1.2598 32	0.3346 8.5	0.9252 23.5	0.2560 6.5	M8 × 1.0 5/16-24UNF	2570	1540	0.35
SB 208-24 CSB 208	1 1/2	40	0.7087 18	3.1496 80	1.3386 34	0.3543 9.0	0.9843 25.0	0.3150 8	M8 × 1.0 5/16-24UNF	2910	1790	0.48
SB 209-26 CSB 209-27 209-28 209	1 5/8	45	0.7480 19	3.3465 85	1.6220 41.2	0.3740 9.5	1.2480 31.7	0.3150 8	M8 × 1.0 5/16-24UNF	3200	2040	0.56
SB 210-30 210-31 210 210-32	1 7/8	50	0.7874 20	3.5433 90	1.7126 43.5	0.3937 10	1.3189 33.5	0.3543 9	M10 × 1.25 3/8-24UNF	3510	2320	0.71
SB 211-32 211 211-34 211-35	2	55	0.8268 21	3.9370 100	1.7835 45.3	0.4134 10.5	1.3700 34.8	0.3543 9	M10 × 1.25 3/8-24UNF	4330	2940	0.96
SB 212-36 212 212-38 212-39	2 1/4	60	0.8661 22	4.3307 110	2.1142 53.7	0.4331 11	1.6811 42.7	0.4134 10.5	M10 × 1.25 3/8-24UNF	5240	3610	1.20

INSERT BALL BEARINGS

SC2

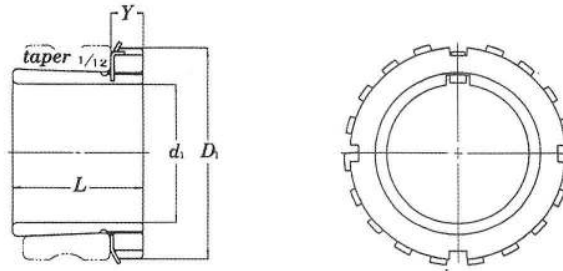
(NORMAL DUTY)



Bearing No.	Bore Dia. of Bearing	Dimensions (in./mm)		Basic Load Rating (kgf)	Basic Static Road Rating (kgf)	Weight (kgf)
	d (in./mm)	B	D			
SC 200	0.3937 10	0.3543 9	1.1811 30	510	240	0.030
SC 201	0.4724 12	0.3937 10	1.2598 32	690	300	0.035
SC 202	0.5906 15	0.4331 11	1.3780 35	760	370	0.040
SC 203	0.6693 17	0.4724 12	1.5748 40	960	480	0.07
SC 204	0.7874 20	0.5512 14	1.8504 47	1280	670	0.11
SC 205	0.9843 25	0.5906 15	2.0472 52	1400	790	0.18
SC 206	1.1811 30	0.6299 16	2.4409 62	1950	1130	0.20
SC 207	1.3780 35	0.6693 17	2.8346 72	2570	1540	0.30
SC 208	1.5748 40	0.7087 18	3.1496 80	2910	1790	0.36
SC 209	1.7717 45	0.7480 19	3.3465 85	3200	2040	0.42
SC 210	1.9685 50	0.7874 20	3.5433 90	3510	2320	0.46
SC 211	2.1654 55	0.8268 21	3.9370 100	4330	2940	0.61
SC 212	2.3622 60	0.8661 22	4.3307 110	5240	3610	0.77

ADAPTER ASSEMBLYS

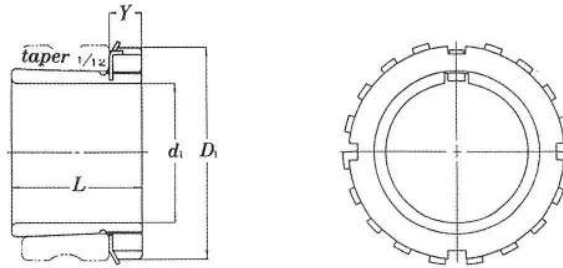
H2300, HS2300, HE2300



Adapter No.	Bore Dia. of Sleeve		Dimensions (in.) (mm)			Sleeve No.	Locknut No.	Washer No.	Weight (kgf)
	d ₁		L	Y	D ₁				
	(in.)	(mm)							
HE 2305X H 2305X	3/4	20	1 3/8 35	3/16 8	1 1/2 38	AE 2305X A 2305X	AN 05	AW 05X	0.085 0.095
H 2306X HE 2306X	1	25	1 1/2 38	3/16 8	1 3/4 45	A 2306X AE 2306X	AN 06	AW 06X	0.13 0.12
HS 2307X H 2307X	1 1/8	30	1 11/16 43	3/8 9	2 1/16 52	AS 2307X A 2307X	AN 07	AW 07X	0.19 0.17
HE 2308X HS 2308X H 2308X	1 1/4 1 3/8	35	1 13/16 46	13/32 10	2 7/32 58	AE 2308X AS 2308X A 2308X	AN 08	AW 08X	0.28 0.22 0.22
HE 2309X H 2309X HS 2309X	1 1/2 1 5/8	40	1 21/32 50	7/16 11	2 9/16 65	AE 2309X A 2309X AS 2309X	AN 09	AW 09X	0.32 0.28 0.25
HE 2310X H 2310X	1 3/4	45	2 2/32 55	15/32 12	2 2/4 70	AE 2310X A 2310X	AN 10	AW 10X	0.37 0.36
HE 2311X H 2311X HS 2311X	1 7/8 2	50	2 2/16 59	15/32 12	2 15/16 75	AS 2311X A 2311X AE 2311X	AN 11	AW 11X	0.50 0.42 0.40
HE 2312X H 2312X	2 1/8	55	2 7/16 62	1/2 13	3 3/32 80	AS 2312X A 2312X	AN 12	AW 12X	0.52 0.48
HE 2313X H 2313X HS 2313X	2 1/4 2 3/8	60	2 2/16 65	17/32 14	3 11/32 85	AE 2313X A 2313X AS 2313X	AN 13	AW 13X	0.69 0.56 0.55
HE 2315X H 2315X	2 1/2	65	2 7/8 73	9/16 15	3 27/32 98	AE 2315X A 2315X	AN 15	AW 15X	1.15 1.05
HE 2316X H 2316X	2 3/4	70	3 1/16 78	21/32 17	4 1/8 105	AE 2316X A 2316X	AN 16	AW 16X	1.3 1.3
H 2317X HE 2317X	3	75	3 3/32 82	11/16 18	4 11/32 110	A 2317X AE 2317X	AN 17	AW 17X	1.45 1.35
H 2318X		80	3 3/8 86	11/16 18	4 23/32 120	A 2318X	AN 18	AW 18X	1.7
HE 2319X H 2319X	3 1/4	85	3 17/32 90	3/4 19	4 29/32 125	AE 2319X A 2319X	AN 19	AW 19X	2.15 1.95
HE 2320X H 2320X	3 1/2	90	3 13/16 97	25/32 20	5 1/8 130	AE 2320X A 2320X	AN 20	AW 20X	2.3 2.2
H 2322X HE 2322X	4	100	4 1/8 105	15/16 21	5 23/32 145	A 2322X AE 2322X	AN 22	AW 22X	2.75 2.55
H 2324X		110	4 13/32 112	7/8 22	6 3/32 155	A 2324X	AN 24	AW 24X	3.2
HE 2326X H 2326X	4 1/2	115	4 3/4 121	29/32 23	6 1/2 165	AE 2326X A 2326X	AN 26	AW 26X	4.7 4.6
H 2328X		125	5 3/32 131	15/16 24	7 3/32 180	A 2328X	AN 28	AW 28X	5.5

ADAPTER ASSEMBLYS

H300, HS300, HE300



Adapter No.	Bore Dia. of Sleeve		Dimensions (in.) (mm)			Sleeve No.	Locknut No.	Washer No.	Weight (kgf)
	d_1		L	Y	D_1				
	(in.)	(mm)							
HE 305X H 305X	$\frac{3}{4}$	20	$\frac{1^3}{32}$ 29	$\frac{3}{16}$ 8	$1\frac{1}{2}$ 38	AE 305X A 305X	AN 05	AW 05X	0.08 0.075
H 306X HE 306X	1	25	$\frac{1^7}{32}$ 31	$\frac{3}{16}$ 8	$1\frac{3}{4}$ 45	A 306X AE 306X	AN 06	AW 06X	0.11 0.105
HS 307X H 307X	$1\frac{1}{8}$	30	$\frac{1^3}{8}$ 35	$\frac{3}{8}$ 9	$2\frac{1}{16}$ 52	AS 307X A 307X	AN 07	AW 07X	0.15 0.14
HE 308X HS 308X H 308X	$1\frac{1}{4}$ $1\frac{3}{8}$	35	$\frac{1^13}{32}$ 36	$\frac{13}{32}$ 10	$2\frac{9}{32}$ 58	AE 308X AS 308X A 308X	AN 08	AW 08X	0.23 0.19 0.19
HE 309X H 309X HS 309X	$1\frac{1}{2}$ $1\frac{5}{8}$	40	$\frac{1^17}{32}$ 39	$\frac{7}{16}$ 11	$2\frac{9}{16}$ 65	AE 309X A 309X AS 309X	AN 09	AW 09X	0.28 0.25 0.23
HE 310X H 310X	$1\frac{3}{4}$	45	$\frac{1^21}{32}$ 42	$\frac{13}{32}$ 12	$2\frac{3}{4}$ 70	AE 310X A 310X	AN 10	AW 10X	0.31 0.30
HE 311X H 311X HS 311X	$1\frac{7}{8}$ 2	50	$\frac{1^25}{32}$ 45	$\frac{15}{32}$ 12	$2\frac{15}{16}$ 75	AS 311X A 311X AE 311X	AN 11	AW 11X	0.41 0.35 0.33
HE 312X H 312X	$2\frac{1}{8}$	55	$\frac{1^27}{32}$ 47	$\frac{1}{2}$ 13	$3\frac{3}{32}$ 80	AS 312X A 312X	AN 12	AW 12X	0.40 0.43
HE 313X H 313X HS 313X	$2\frac{1}{4}$ $2\frac{3}{8}$	60	$\frac{1^29}{32}$ 50	$\frac{11}{32}$ 14	$3\frac{11}{32}$ 85	AE 313X A 313X AS 313X	AN 13	AW 13X	0.56 0.46 0.45
HE 315X H 315X	$2\frac{1}{2}$	65	$\frac{2^5}{32}$ 55	$\frac{9}{16}$ 15	$3\frac{27}{32}$ 98	AE 315X A 315X	AN 15	AW 15X	0.89 0.83
HE 316X H 316X	$2\frac{3}{4}$	70	$\frac{2^9}{16}$ 59	$\frac{21}{32}$ 17	$4\frac{1}{8}$ 105	AE 316X A 316X	AN 16	AW 16X	1.05 1.05
H 317X HE 317X	3	75	$\frac{2^13}{32}$ 63	$\frac{11}{16}$ 18	$4\frac{11}{32}$ 110	A 317X AE 317X	AN 17	AW 17X	1.2 1.1
H 318X		80	$\frac{2^9}{16}$ 95	$\frac{11}{16}$ 18	$4\frac{29}{32}$ 120	A 318X	AN 18	AW 18X	1.4

21. Reference

21.1 Hardness scale conversion table

Approximate conversion from the Rockwell C scale for steel is shown below.

Rockwell C scale hardness	Vickers hardness	Brinell hardness		Rockwell hardness		Shore hardness
		10mm ball, 300Kgf load Standard ball	Tungsten carbide ball	A scale 60 Kgf load brale indenter	B scale 100 Kgf load 1/16 in diameter ball	
68	940			85.6		97
67	900			85.0		95
66	865			84.5		92
65	832		739	83.9		91
64	800		722	83.4		88
63	772		705	82.8		87
62	746		688	82.3		85
61	720		670	81.8		83
60	697		654	81.2		81
59	674		634	80.7		80
58	653		615	80.1		78
57	633		595	79.6		76
56	613		577	79.0		75
55	595		560	78.5		74
54	577		543	78.0		72
53	560		525	77.4		71
52	544	500	512	76.8		69
51	528	487	496	76.3		68
50	513	475	481	75.9		67
49	498	464	469	75.2		66
48	484	451	455	74.7		64
47	471	442	443	74.1		63
46	458	432	432	73.6		62
45	446	421	421	73.1		60
44	434	409	409	72.5		58
43	423	400	400	72.0		57
42	412	390	390	71.5		56
41	402	381	381	70.9		55
40	392	371	371	70.4		54
39	382	362	362	69.9		52
38	372	353	353	69.4		51
37	363	344	344	68.9		50
36	354	336	336	68.4	(109.0)	49
35	345	327	327	67.9	(108.5)	48
34	336	319	319	67.4	(108.0)	47
33	327	311	311	66.8	(107.5)	46
32	318	301	301	66.3	(107.0)	44
31	310	294	294	65.8	(106.0)	43
30	302	286	286	65.3	(105.5)	42
29	294	279	279	64.7	(104.5)	41
28	286	271	271	64.3	(104.0)	41
27	279	264	264	63.8	(103.0)	40
26	272	258	258	63.3	(102.5)	38
25	266	253	253	62.8	(101.5)	38
24	260	247	247	62.4	(101.0)	37
23	254	243	243	62.0	100.0	36
22	248	237	237	61.5	99.0	35
21	243	231	231	61.0	98.5	35
20	238	226	226	60.5	97.8	34
(18)	230	219	219		96.7	33
(16)	222	212	212		95.5	32
(14)	213	203	203		93.9	31
(12)	204	194	194		92.3	29
(10)	196	187	187		90.7	28
(8)	188	179	179		89.5	27
(6)	180	171	171		87.1	26
(4)	173	165	165		85.5	25
(2)	166	158	158		83.5	24
(0)	160	152	152		81.7	24

21.2 Temperature conversion table

① -60°C = -76°F °F = $\frac{9}{5}°C + 32$
 ② 58°F = 14.4°C °C = $\frac{5}{9}(°F - 32)$

①			②								
°C		°F	°C		°F	°C		°F	°C		°F
-62.2	-80	-112.0	13.3	56	132.8	49.4	121	249.8	85.6	186	366.8
-56.7	-70	-94.0	13.9	57	134.6	50.0	122	251.6	86.1	187	368.6
-51.1	-60	-76.0	14.4	58	136.4	50.6	123	253.4	86.7	188	370.4
-45.6	-50	-58.0	15.0	59	138.2	51.1	124	255.2	87.2	189	372.2
-40.0	-40	-40.0	15.6	60	140.0	51.7	125	257.0	87.8	190	374.0
-34.4	-30	-20.0	16.1	61	141.8	52.2	126	258.8	88.3	191	375.8
-28.9	-20	-4.0	16.7	62	143.6	52.8	127	260.6	88.9	192	377.6
-23.3	-10	14.0	17.2	63	145.4	53.3	128	262.4	89.4	193	379.4
-17.8	0	32.0	17.8	64	147.2	53.9	129	264.2	90.0	194	381.2
-17.2	1	33.8	18.3	65	149.0	54.4	130	266.0	90.6	195	383.0
-16.7	2	35.6	18.9	66	150.8	55.0	131	267.8	91.1	196	384.8
-16.1	3	37.4	19.4	67	152.6	55.6	132	269.6	91.1	197	386.6
-15.6	4	39.2	20.0	68	154.4	56.1	133	271.4	91.7	198	388.4
-15.0	5	41.0	20.6	69	156.2	56.7	134	273.2	92.2	199	390.2
-14.4	6	42.8	21.1	70	158.0	57.2	135	275.0	93.3	200	392.0
-14.4	6	42.8	21.7	71	159.8	57.8	136	276.8	98.9	210	410.0
-13.9	7	44.6	22.2	72	161.6	58.3	137	278.6	104.4	220	428.0
-13.3	8	46.4	22.8	73	163.4	58.9	138	280.4	110.0	230	446.0
-12.8	9	48.2	23.3	74	165.2	59.4	139	282.4	115.6	240	464.0
-12.2	10	50.0	23.9	75	167.0	60.0	140	284.0	121.1	250	482.0
-11.7	11	51.8	24.4	76	168.8	60.6	141	285.8	126.7	260	500.0
-11.1	12	53.6	25.0	77	170.6	61.1	142	287.6	132.2	270	518.0
-10.6	13	55.4	25.6	78	172.4	61.7	143	289.4	137.8	280	536.0
-10.0	14	57.2	26.1	79	174.2	62.2	144	291.2	143.3	290	554.0
-9.4	15	59.0	26.7	80	176.0	62.8	145	293.0	148.9	300	572.0
-8.9	16	60.8	27.2	81	177.8	63.3	146	294.8	154.4	310	590.0
-8.3	17	62.6	27.8	82	179.6	63.9	147	296.6	160.0	320	608.0
-7.8	18	64.4	28.3	83	181.4	64.4	148	298.4	165.6	330	626.0
-7.2	19	66.2	28.9	84	183.2	65.0	149	300.2	171.1	340	644.0
-6.7	20	68.0	29.4	85	185.0	65.6	150	302.0	177.7	350	662.0
-6.1	21	69.8	30.0	86	186.8	66.1	151	303.8	182.2	360	680.0
-5.6	22	71.6	30.6	87	188.6	66.7	152	305.6	187.8	370	698.0
-5.0	23	73.4	31.1	88	190.4	67.2	153	307.4	193.3	380	716.0
-4.4	24	75.2	31.7	89	192.2	67.8	154	309.2	198.9	390	734.0
-3.9	25	77.0	32.2	90	194.0	68.3	155	311.0	204.4	400	752.0
-3.3	26	78.8	32.8	91	195.8	68.9	156	312.8	210.0	410	770.0
-2.8	27	80.6	33.3	92	197.6	69.4	157	314.6	215.6	420	788.0
-2.2	28	82.4	33.9	93	199.4	70.0	158	316.4	221.1	430	806.0
-1.7	29	84.2	34.4	94	201.2	70.6	159	318.2	226.7	440	824.0
-1.1	30	86.0	35.0	95	203.0	71.1	160	320.0	232.2	450	842.0
-0.6	31	87.8	35.6	96	204.8	71.7	161	321.8	237.8	460	860.0
0.0	32	89.6	36.1	97	206.6	72.2	162	323.6	243.3	470	878.0
0.6	33	91.4	36.7	98	208.4	72.8	163	325.4	248.9	480	896.0
1.1	34	93.2	37.2	99	210.2	73.3	164	327.2	254.4	490	914.0
1.7	35	95.0	37.8	100	212.0	73.9	165	329.0	260.0	500	932.0
2.2	36	96.8	38.3	101	213.8	74.4	166	330.8	265.6	510	950.0
2.8	37	98.6	38.9	102	215.6	75.0	167	332.6	271.1	520	968.0
3.3	38	100.4	39.4	103	217.4	75.6	168	334.4	276.7	530	986.0
3.9	39	102.2	40.0	104	219.2	76.1	169	336.2	282.2	540	1004.0
4.4	40	104.0	40.6	105	221.0	76.7	170	338.0	287.8	550	1022.0
5.0	41	105.8	41.1	106	222.8	77.2	171	339.8	293.3	560	1040.0
5.6	42	107.6	41.7	107	224.6	77.8	172	341.6	298.9	570	1058.0
6.1	43	109.4	42.2	108	226.4	78.3	173	343.4	304.4	580	1076.0
6.7	44	111.2	42.8	109	228.2	78.9	174	345.2	310.0	590	1094.0
7.2	45	113.0	43.3	110	230.0	79.4	175	347.0	315.6	600	1112.0
7.8	46	114.8	43.9	111	231.8	80.8	176	348.8	321.1	610	1130.0
8.3	47	116.6	44.4	112	233.6	80.6	177	350.6	326.7	620	1148.0
8.9	48	118.4	45.0	113	235.4	81.1	178	352.4	332.2	630	1166.0
9.4	49	120.2	45.6	114	237.2	81.7	179	354.2	337.8	640	1184.0
10.0	50	122.0	46.1	115	239.0	82.2	180	356.0	343.3	650	1202.0
10.6	51	123.8	46.7	116	240.8	82.8	181	357.8	348.9	660	1220.0
11.1	52	125.6	47.2	117	242.6	83.3	182	359.6	354.4	670	1238.0
11.7	53	127.4	47.8	118	244.4	83.9	183	361.4	360.0	680	1256.0
12.2	54	129.2	48.3	119	246.2	84.4	184	363.2	365.6	690	1274.0
12.8	55	131.0	48.9	120	248.0	85.0	185	365.0	371.1	700	1292.0

21.3 Kgf-lbf conversion table

① 3kgf=6.614 lbf
② 36 lbf= 16.329kgf

1kgf=2.2046lbf
1lbf=0.45359kgf

①			②					
kgf		lbf	kgf		lbf	kgf		lbf
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	11.023	17.236	38	83.776	32.205	71	156.53
2.722	6	13.228	17.690	39	85.980	32.658	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
4.989	11	24.251	19.958	44	97.003	34.926	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	56	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	37.194	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	116.85	39.009	86	189.60
9.525	21	46.297	24.494	54	119.05	39.462	87	191.80
9.979	22	48.502	24.947	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	27.215	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	29.483	65	143.30	44.452	98	216.05
14.969	33	75.752	29.937	66	145.51	44.905	99	218.26

21.4 kgf-N conversion table

① 3kgf=29.420 N
② 36N=3.6710kgf

1kgf=9.80665N
1N=0.101972kgf

①			②					
kgf		N	kgf		N	kgf		N
0.1020	1	9.8066	3.4670	34	333.43	6.8321	67	657.05
0.2039	2	19.613	3.5690	35	343.23	6.9341	68	668.85
0.3059	3	29.420	3.6710	36	353.04	7.0360	69	676.66
0.4079	4	39.227	3.7729	37	362.85	7.1380	70	686.47
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	68.647	4.0789	40	392.27	7.4439	73	715.89
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	421.69	7.7499	76	745.31
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	451.11	8.0558	79	774.73
1.4276	14	137.29	4.7927	47	460.91	8.1577	80	784.53
1.5296	15	147.10	4.8946	48	470.72	8.2597	81	794.34
1.6315	16	156.91	4.9966	49	480.53	8.3617	82	804.15
1.7335	17	166.71	5.0986	50	490.33	8.4636	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	509.95	8.6676	85	833.57
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	8.8715	87	853.18
2.2434	22	215.75	5.6084	55	539.37	8.9735	88	862.99
2.3453	23	225.55	5.7104	56	549.17	9.0755	89	872.79
2.4473	24	235.36	5.8124	57	558.98	9.1774	90	882.60
2.5493	25	245.17	5.9144	58	568.79	9.2794	91	892.41
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	598.21	9.5853	94	921.83
2.9572	29	284.39	6.3222	62	608.01	9.6873	95	931.63
3.0591	30	294.20	6.4242	63	617.82	9.7893	96	941.44
3.1611	31	304.01	6.5262	64	627.63	9.8912	97	951.25
3.2631	32	313.81	6.6282	65	637.43	9.9932	98	961.05
3.3651	33	323.62	6.7301	66	647.24	10.095	99	970.86

21.6 Shaft dimension tolerance table

(Unit : 0.001mm)

Dimension range(mm)		g		h					js			j			k		m		n
over	incl	g5	g6	h5	h6	h7	h8	h9	js5	js6	js7	j5	j6	j7	k5	k6	m5	m6	n6
10	18	-6 -14	-6 -17	0 -8	0 -11	0 -18	0 -27	0 -43	±4	±5.5	±9	+5 -3	+8 -3	+12 -6	+9 -1	+12 +10	+15 +7	+18 +7	+23 +12
18	30	-7 -16	-7 -20	0 -9	0 -13	0 -21	0 -33	0 -52	±4.5	±6.5	±10	+5 -4	+9 -4	+13 -8	+11 +2	+15 +2	+17 +8	+21 +8	+28 +15
30	50	-9 -20	-9 -25	0 -11	0 -16	0 -25	0 -39	0 -62	±5.5	±8	±12	+6 -5	+11 -5	+15 -10	+13 +2	+18 +2	+20 +9	+25 +9	+33 +17
50	80	-10 -23	-10 -29	0 -13	0 -19	0 -30	0 -46	0 -74	±6.5	±9.5	±17	+6 -7	+12 -7	+18 -12	+15 +2	+21 +2	+24 +11	+30 +11	+39 +20
80	120	-12 -27	-12 -34	0 -15	0 -22	0 -35	0 -54	0 -87	±7.5	±11	±17.5	+6 -9	+13 -9	+20 -15	+18 +3	+25 +3	+28 +13	+35 +13	+45 +23
120	180	-14 -32	-14 -39	0 -18	0 -25	0 -40	0 -63	0 -100	±9	±12.5	±20	+7 -11	+14 -11	+22 -18	+21 +3	+28 +3	+33 +15	+40 +15	+52 +27
180	250	-15 -35	-15 -44	0 -20	0 -29	0 -46	0 -72	0 -115	±10	±14.5	±23	+7 -13	+16 -13	+25 -21	+24 +4	+33 +4	+37 +17	+46 +17	+60 +31
250	315	-17 -40	-17 -49	0 -23	0 -32	0 -52	0 -81	0 -130	±11.5	±16	±26	+7 -16	+16 -16	+26 -26	+27 +4	+36 +4	+43 +20	+52 +20	+66 +34
315	400	-18 -43	-18 -54	0 -25	0 -36	0 -57	0 -89	0 -140	±12.5	±18	±28	+7 -18	+18 -18	+29 -28	+29 +4	+40 +4	+46 +21	+57 +21	+73 +37
400	500	-20 -47	-20 -60	0 -27	0 -40	0 -63	0 -97	0 -155	±13.5	±20	±31	+7 -20	+20 -20	+31 -32	+32 +5	+45 +5	+50 +23	+63 +23	+80 +40

21.7 Bore dimension tolerance table

(Unit : 0.001mm)

Dimension range(mm)		G		H						JS			J			K		M	
over	incl	G5	G6	H5	H6	H7	H8	H9	H10	JS5	JS6	JS7	J6	J7	J8	K6	K7	M6	M7
10	18	+17 +6	+24 +6	+8 0	+11 0	+18 0	+27 0	+43 0	+70 0	±4	±5.5	±9	+6 -5	+10 -8	+15 -12	+2 -9	+6 -12	-4 -15	0 -18
18	30	+20 +7	+28 +7	+9 0	+13 0	+21 0	+33 0	+52 0	+84 0	±4.5	±6.5	±10	+8 -5	+12 -9	+20 -13	+2 -11	+6 -15	-4 -17	0 -21
30	50	+25 +9	+34 +9	+11 0	+16 0	+25 0	+39 0	+62 0	+100 0	±5.5	±8	±12	+10 -6	+14 -11	+24 -15	+3 -13	+7 -18	-4 -20	0 -25
50	80	+29 +10	+40 +10	+13 0	+19 0	+30 0	+46 0	+74 0	+120 0	±6.5	±9.5	±15	+13 -6	+18 -12	+28 -18	+4 -15	+9 -21	-5 -24	0 -30
80	120	+34 +12	+47 +12	+15 0	+22 0	+35 0	+54 0	+87 0	+140 0	±7.5	±11	±17	+16 -6	+22 -13	+34 -20	+4 -18	+10 -25	-6 -28	0 -35
120	180	+39 +14	+54 +14	+18 0	+25 0	+40 0	+63 0	+100 0	+160 0	±9	±12.5	±20	+18 -7	+26 -14	+41 -22	+4 -21	+12 -28	-8 -33	0 -40
180	250	+44 +15	+61 +15	+20 0	+29 0	+46 0	+72 0	+115 0	+185 0	±10	±14.5	±23	+22 -7	+30 -16	+47 -25	+5 -24	+13 -33	-8 -37	0 -46
250	315	+49 +17	+69 +17	+23 0	+32 0	+52 0	+81 0	+130 0	+210 0	±11.5	±16	±26	+25 -7	+36 -16	+55 -26	+5 -27	+16 -36	-9 -41	0 -52
315	400	+54 +18	+75 +18	+25 0	+36 0	+57 0	+89 0	+140 0	+230 0	±12.5	±18	±28	+29 -7	+39 -18	+60 -29	+7 -29	+17 -40	-10 -46	0 -57
400	500	+60 +20	+83 +20	+27 0	+40 0	+63 0	+97 0	+155 0	+250 0	±13.5	±20	±31	+33 -7	+43 -20	+66 -31	+8 -32	+18 -45	-10 -50	0 -63

21.8 Metallic material's physical and mechanical properties

(unit : Kgf/mm²)

Material	Composition	Specific gravity	Modulus of elasticity E×10 ⁴	Elastic limit σ _s	Maximum strength		
					Tensile strength, Kt	Compressive strength, Kc	Shear strength, Ks
Gray cast iron(under Fc15)		7.1~7.3	0.7	3.0	12	60	11
Gray cast iron(under Fc20)		7.1~7.3	1.0	9.0	14~22	75	21
Gray cast iron(under Fc25)		7.1~7.3	1.05	9.0	18~32	90	21
White heart malleable cast irngs	Remaining C under 1.6%	7.1~7.3	1.61	20	32~40	84	39
Black heart malleable cast irngs		7.1~7.6	1.61	20	28~40	84	39
Carbon steel	Regular	7.1~7.8	2.0~2.2	18~25	32~85	equivalent	—
Extremely soft steel	C0.04~0.15%	7.8	2.0	12	under38	to tensile	0.8Kt
Soft steel	C0.15~0.25%	7.8	2.08	16	38~40	strength,	0.75Kt
Medium hard steel	C0.25~0.40%	7.8	2.1	25~30	50~60	in case of	0.75Kt
Hard steel	C0.50~0.70%	7.8	2.2	35	60~70	disregard	0.7Kt
Maximum hard steel	C0.18%heat stripped.	7.8	2.2	38	70~85	of buckling	0.65Kt
Soft steel	oil quenched, 700°C tempered	7.8	2.1	18	43		32
Hard steel	C0.16~0.16% quenched	7.8	2.1	35	60		47
Tool steel		7.8	2.2	45	67		84
Cast steel	Regular	7.8~7.9	2.1~2.15	18~25	35~61	35~61	29~39
Cast steel	C0.15~0.22%	7.8~7.9	2.1	20	37~44	37~44	29
Cast steel	C0.22~0.30%	7.8~7.9	2.15	23	40~50	40~50	34
Cast steel	C0.30~0.50%	7.9	2.15	25	50~60	50~60	39
Nickel steel	C0.25~0.35% Ni2~5%	7.85	2.1~2.2	34	65~85	65	41
Chromium steel	C0.15~0.5% Cr0.8~1.2%	7.85	2.1~2.2	—	80~100	—	—
Nickel-Chromium steel	C, Ni, Cr alloy	7.85	2.1~2.2	—	75~100	—	39~51
Chromium-Molybdenum steel	C, Cr, Mo alloy	7.85	2.1~2.2	—	85~100	—	—
Chromium-Vanadium steel	C, Cr, V alloy	7.85	2.1~2.2	—	60~165	—	—
Manganese steel		7.85	2.1~2.2	—	45~110	—	—
Spring steel	C0.2~1% Mn1~1.4%	7.85	2.2	75	110~170	170	—
Stainless steel	C, Cr, Ni alloy	7.75	2.1~2.2	—	63	—	42
Brass, cast	Cu60% Zn40%	8.5	0.7	—	18~22	11	15
Brass(forged sheet)	Cu60% Zn40%	8.4	0.8~1.0	—	28~40	32	21
Brass(forged sheet)	Cu60% Zn40%	8.4	0.84	—	53	32	32
Phosphorous bronze cast	Cu90% Sn10% P0.1%	8.8	0.95~1.05	—	20~30	14	18
Phosphorous bronze(forged)	Cu90% Sn10% P0.1%	8.8	1.35	—	30~100	21	39
Gun metal	Cu87% Sn10% ZN 3%	8.6	0.95	—	21	—	—
Tin		7.28	0.4~0.55	—	2.75	—	—
Lead		11.34	0.15~0.17	—	2	—	—
Zinc		7.1	0.8~1.3	—	8~18	—	—

Material	Tensile stress			Compressive stress		Bending stress			Shear stress			Torsion stress		
	a	b	c	a	b	a	b	c	a	b	c	a	b	c
Cast iron(Cast steel)	3.0~3.5	2.0~2.3	1.0~1.2	9.0~10	6.0~6.6	4.6~6.0	3.1~4.0	1.5~2.0	3.0~3.5	2.0~2.3	1.0~1.2	2.7~3.5	1.8~2.3	9.0~12
Cast iron(mechanical use)	3.0~3.5	2.0~2.3	1.0~1.2	9.0~10	6.0~6.6	5.6~7.2	—	—	3.0~3.5	2.0~2.3	1.0~1.2	2.7~3.5	1.8~2.3	9.0~12
Malleable cast iron	4.5~7.0	4.5~4.7	1.5~2.3	6.0~9.0	4.0~6.0	4.6~10	3.0~4.7	1.5~2.3	—	—	—	3.0~4.0	2.0~2.7	1.0~1.3
Cast steel	6.0~12	4.0~8.0	2.0~4.0	9.0~15	6.0~10	7.5~12	5.0~8.0	2.5~4.0	4.8~9.6	3.2~6.4	1.6~3.2	4.8~9.6	3.2~6.4	1.6~3.2
Mild steel	10~16	6.7~10.7	3.3~5.3	10~16	6.7~10.7	9.0~15	6.0~10	3.6~5.0	8.0~13	5.3~8.7	2.7~4.3	8.0~14	5.3~9.3	2.7~4.7
Medium hard steel	12~18	8.0~12	4.0~6.0	12~18	8.0~12	12~18	8.0~12	4.0~6.0	9.6~14	6.4~9.6	3.2~4.8	9.0~14	6.0~9.6	3.0~4.8
Nickel steel	12~18	8.0~12	4.0~6.0	12~18	8.0~12	12~18	8.0~12	4.0~6.0	9.6~14	6.4~9.6	3.2~4.8	9.0~14	6.0~9.4	3.0~4.8
Carbon steel castag	9.0~12	6.0~8.0	3.0~4.0	9.0~12	6.0~8.0	9.0~12	6.0~8.0	3.0~4.0	7.2~9.5	4.8~6.4	2.4~3.2	3.6~4.8	2.4~3.2	1.2~1.6
Brass(rolling)	1.0~6.0	2.7~3.6	1.3~2.0	1.0~6.0	2.7~4.0	4.0~6.0	2.7~4.0	1.3~2.0	3.2~4.8	2.1~3.2	1.1~1.6	3.2~4.8	2.1~3.2	1.1~1.6
Bronze, gun metal	3.0~4.0	2.0~2.7	1.0~1.3	3.0~4.0	2.0~2.7	3.0~4.0	2.0~2.7	1.0~1.3	—	—	—	—	—	—
phosphorous bronze	6.0~9.0	4.0~6.0	2.0~3.0	6.0~9.0	4.0~6.0	6.0~9.0	4.0~6.0	2.0~3.0	4.5~7.0	3.0~4.7	1.5~2.3	4.5~7.0	3.0~4.7	1.5~2.3
	1.0~1.2	0.7~0.8	0.2~0.4	—	—	1.5~2.0	1.0~1.3	0.5~0.7	—	—	—	—	—	—

Remarks 1. a : Static load, b : Dynamic load, c : Combined load

2. The bending stress kb and torsion stress kd numbers for cast-iron is for round cross sectional pieces with safety factors from 5 to 6.

21.9 Interchange table for major manufacturers unit ball bearings and bearing units

JIB	SST	FAFNIR	NTN	FYH	NSK	Remark
UC205-16	UC205-16	GC1100KRRB	UC205-100D1	UC205-16	UC205-16S	Unit ball bearing
HC205-16	HC205-16	G1100KRRB	UEL205-100D1	NA205-16F	EW205-16S	
UCX05-16	UCX05-16		UCX05-100D1	UCX05-16	—	
SB205-16	SB205-16	YA100RRB	AS205-100	SB205-16	UB205-16S	
SA205-16	SA205-16	RA100RRB	AEL205-100	SA205-16	EN205-16S	
SER205-16	SER205-16	GC1100KRRG-2	UCS205-100DINR	ER205-16	—	
UR205-16	CUC205-16	—	—	RB205-16	UR205-16S	
UCP205-16	UCP205-16	RASC1	UCP205-100T	UCP205-16	UCP205-16S	Pillow unit
SBLP205-16	SBLP205-16	—	—	BLP205-16	UBLP205-16J	
UCPX05-16	UCPX05-16	RAKH1	UCPX05-100T	UCPX05-16	UCPX05-16S	
UCPA205-16	UCPA205-16	—	UCUP205-100T	UCPA205-16	UCPA205-16S	
HCP205-16	HCP205-16	—	UEL205-100T	HCP205-16	EWP205-16S	
SALP205-16	SALP205-16	—	—	ALP205-16	ENLP205-16J	
UCFL205-16	UCFL205-16	RCJCT1	UCFL205-100T	UCFL205-16	UCFL205-16S	Flange unit
SBPLF205-16	SBLF205-16	—	ASFD205-100	BLF205-16	UBLF205-16BJ	
HCNFL205-16	HCFT205-16	RCJT1	UELFLU205-100T	NANFL205-16	EWFL205-16	
SALF205-16	SALF205-16	FLCT1	AELFD205-100	ALF205-16	ENLF205-168J	
UCF205-16	UCF205-16	RCJC1	UCF205-100T	UCF205-16	UCF205-16	
UCFX05-16	UCFX05-16	RCJ01	UCFX05-100T	UCFX05-16	UCFX05-16S	
HCNF205-16	HCFS205-16	—	UEL205-100T	NANF205-16	EW205-16S	
SBPP205-16	SBPP205-16	—	ASPP205-100	SBPP205-16F	UBPP205-16S	Stamped steel unit
SAPP205-16	SAPP205-16	BP1	AELPP205-100	SAPP205-16F	ENPP205-16S	
SBPFL205-16	SBPFL205-16	—	ASPFL205-100	SBPFL205-16	UBPFL205-16	
SAPFL205-16	SAPFL205-16	RAT1	AELPFL205-100	SAPFL205-16	ENPFL205-16S	
SBPF205-16	SBPF205-16	—	ASPF205-100	SBPF205-16	UBPF205-16S	
SAPF205-16	SAPF205-16	RA1	AELPF205-100	SAPF205-16	ENPF205-16S	
UCT205-16	UCST205-16	—	UCT205-100T	UCT205-16	UCT205-16S	Take-up unit
UCFC205-16	UCFC205-16	RFC1	UCFC205-100T	UCFC205-16	UCFC205-16S	Round flange unit
UCHA205-16	UCSH205-16	—	UCHB205-100T	UCHA205-16	UCEH205-16S	Hanger unit

▶ **SILVER SERIES**
▶ **STAINLESS SILVER SERIES**



■ **Special Feature**

1. **COMPACT & LIGHT-WEIGHTED**
Available for fitting into the narrow space and more space-saving machine.
2. **HIGH SPEED OPERATION**
Useful for High-speed operation.
3. **EASY & QUICK TO MOUNT**
Ensure to locking of bearing shaft fast and positively by Eccentric locking collar & Set screw.
4. **HIGH ANTI-CORROSION(STAINLESS SILVER series)**
Suitable for applications under adverse environmental conditions.

■ **Application**

Foodstuffs, chemicals, fiber, chemistry, paving machine and agricultural machine back.

■ **Materials**

Series	SILVER	STAINLESS SILVER
Unit No.	USAP000, USBFL000, USCP000	MUSAP000, MUSBFL000, MUSCFL000
Bearing	High carbon chromium bearing steel (STB2=SUJ2)	Stainless steel (STS440C=SUS440C)
Rubber seal	NBR	
Eccentric locking collar	Machine use carbon steel (SM25C=S35C)	
	Black oxide treatment	Nickel Chromium plating
Housing	Zinc alloys die casting (ZDC)	
	-----	Nickel Chromium plating

※ **Tolerances**

In conformity with ISO 9628(=KS B 2049=JIS B 1558) on ball bearings for units and ISO 3228(=KS B 2050=JIS B 1559) on housings for bearing units.

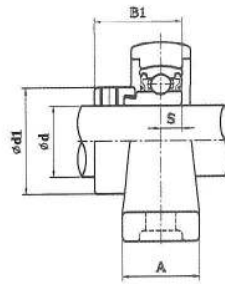
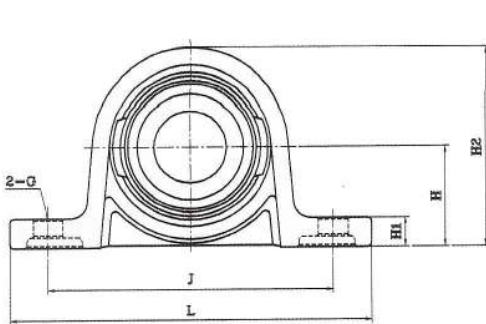
■ **Shaft selection**

Unit : μm

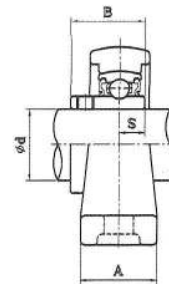
Shaft dia(mm)		js7	h7
Over	Incl.		
6	10	±7.5	0~-15
10	18	±9.0	0~-18
18	30	±10.5	0~-21
30	50	±12.5	0~-25

※ Use tight fit for applications involving high speed and vibration.

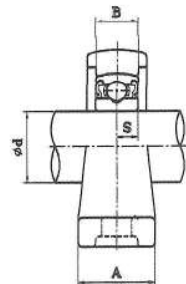
► **UP/MUP Type**



USAP/MUSAP



USBP/MUSBP



USCP/MUSCP

Unit No.	Shaft Dia(mm)	Dimensions (mm)										Mounting Bolt Size	Bearing No.	Basic load ratings(kgf)		Housing No.	Weight (g)
		H	L	A	J	H1	H2	B/B1	s	G	Cr			Cor			
USAP/MUSAP 08	8	15	55	13	42	5	29	15	3.5	4.8	M4	USA/MUSA 08	260	136	P/MP 08	47	
USAP/MUSBP 08								12.5	4.0			USB/MUSB 08				42	
USAP/MUSCP 08								7	3.5			USC/MUSC 08				38	
USAP/MUSAP	000	10	18	67	16	53	6	35	17.5	4	7	M6	USA/MUSA000	465	200	P/MP000	77
									15	5			USB/MUSB000				70
									8	4			USC/MUSC000				63
	001	12	19	71	16	56	6	38	17.5	4	7	M6	USA/MUSA 001	520	245	P/MP 001	91
									15	5			USB/MUSB 001				80
									8	4			USC/MUSC 001				77
002	15	22	80	16	63	7	43	18.5	4.5	7	M6	USA/MUSA002	570	290	P/MP002	125	
								16.5	5.5			USB/MUSB002				120	
								9	4.5			USC/MUSC002				113	
USBP/MUSBP	003	17	24	85	18	67	7	47	20.5	5	7	M6	USA/MUSA003	610	335	P/MP003	156
									17.5	6			USB/MUSB003				140
									10	5			USC/MUSC003				131
USCP/MUSCP	004	20	28	100	20	80	9	55	24.5	6	10	M8	USA/MUSA004	955	515	P/MP004	230
									21	7			USB/MUSB004				210
									12	6			USC/MUSC004				198
	005	25	32	112	20	90	10	62	25.5	6	10	M8	USA/MUSA005	1030	595	P/MP005	294
									22	7			USB/MUSB005				270
									12	6			USC/MUSC005				249
006	30	36	132	26	106	11	70	26.5	6.5	13	M10	USA/MUSA006	1350	840	P/MP006	454	
								24.5	7.5			USB/MUSB006				410	
								13	6.5			USC/MUSC006				376	

■ **Recommended tightening torque of eccentric self-locking collar and axial load capacity**

Applicable bearing NO.	Set-screw No.	Hexagon socket screw key No.	Tightening torque(kgf-cm)	Axial load capacity(kgf)
USA08,MUSA08	M3×0.5	1.5	7	40
USA000~003,MUSA000~003	M4×0.7	2.0	15	90
USA004~006,MUSA004~006	M5×0.8	2.5	30	180

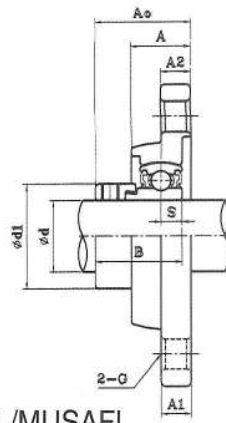
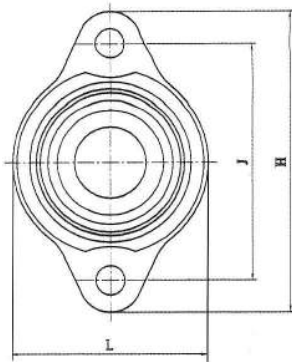
※ As the operating load increases, the axial load carrying capacity also increases.

■ **Recommended tightening torque of set-screws and axial load capacity**

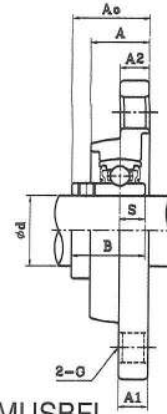
Applicable bearing NO.	Set-screw No.	Hexagon socket screw key No.	Tightening torque(kgf-cm)	Axial load capacity(kgf)
USB08,MUSB08	M2.5×0.35	1.25	3.5	25
USB000,001,MUSB000,001	M3×0.35	1.5	6	35
USB002,003,MUSB002,003	M4×0.50	2	15	43
USB004~006,MUSB004~006	M5×0.50	2.5	30	72

※Operating temperature range : -10℃~+80℃ For operating temperature beyond this range, please consult us.

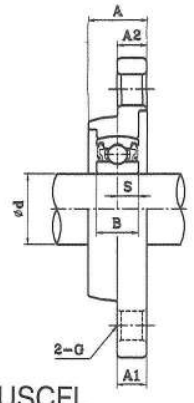
► **UFL/MUFL Type**



USAFL/MUSAFL



USBFL/MUSBFL



USCFL/MUSCFL

Unit No.	Shaft Dia(mm)	Dimensions (mm)										Mounting Bolt Size	Bearing No.	Basic load ratings(kgf)		Housing No.	Weight (g)
		H	J	A1/A2	A	A0	L	B/B1	s	G	Cr			Cor			
USAP/MUSAP08	8	48	37	4.5	9.5	13	29	12.5	4	4.8	M4	USA/MUSA 08	260	136	FL/MFL 08	26	
USBP/MUSBP08												USB/MUSB 08					
USCP/MUSCP08												USC/MUSC 08					
USAP/MUSAP	10	60	45	6	12	19.5	36	17.5	4	7	M6	USA/MUSA000	465	200	FL/MFL000	65	
						16		15	5			7				USB/MUSB000	65
	001	12	63	48	6	12	19.5	38	17.5	4	7	M6	USA/MUSA 001	520	245	FL/MFL001	76
							16		15	5			7				USB/MUSB 001
	002	15	67	53	6.5	13	20.5	42	18.5	4.5	7	M6	USA/MUSA002	570	290	FL/MFL002	100
							17.5		9	4.5			7				USC/MUSC002
	USBP/MUSBP	17	71	56	7	14	22.5	46	20.5	5	7	M6	USA/MUSA003	610	335	FL/MFL003	130
							18.5		17.5	6			7				USB/MUSB003
	USCP/MUSCP	20	90	71	8	16	26.5	55	24.5	6	10	M8	USA/MUSA004	955	515	FL/MFL004	205
							22		21	7			10				USC/MUSC004
	005	25	95	75	8	16	27.5	60	25.5	6	10	M8	USA/MUSA005	1030	595	FL/MFL005	245
							23		22	7			10				USB/MUSB005
006	30	112	85	9	18	29	70	26.5	6.5	10	M10	USA/MUSA006	1350	840	FL/MFL006	355	
						26		24.5	7.5			10				USB/MUSB006	340
						-		13	6.5			USC/MUSC006				280	

■ **Mechanical composition of zinc alloy die castings (ISO301= KS D 6005 = JIS H 5301 = ASTM B 86)**

Type	No.	Alloy	Tensile test		Impactness N-m/cm ²	Hardness HB(10 / 500)
			Tensile strength N/mm ²	Tensile rate %		
class 2	ZDC2	Zn-Al	285	10	140	82

■ **Chemical composition of zinc alloys die castings(%)**

Type	No.	Al	Cu	Mg	Fe	Zn	Impurities		
							Pb	Cd	Sn
class 2	ZDC2	3.5~4.3	0.25 incl.	0.02~0.06	0.1 incl.	balance	0.005 incl.	0.004 incl.	0.003 incl.

* The impurities should not be over 0.01% in total because of corrosion.



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 **Treatment with Care**

- Please do not disassemble this products at will
- Please treat this products cautiously.It can be caused the damage due to dropping or impact.
- Please use this products under the right condition of temperature and load.In case of using this products on the off-condition, please feel free to ask it to JIB.
- In case of using at the particular conditions such as High-speed rotation, Low-High temperature and Clean-room and so on, please feel free to contact JIB.
- This products is supplied under full-filled grease.Please do not use with over-filled grease and inappropriate grease.

※ Appearances and Features can be adjusted for improvement without notice.



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